

European Scientific Journal, *ESJ*

January 2021

European Scientific Institute, ESI

The content is peer reviewed

ESJ Social Sciences

January 2021 edition vol. 17, No. 1

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ISSN: 1857-7431 (Online)

ISSN: 1857-7881 (Print)

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European Scientific Journal, ESJ
January 2021 edition Vol.17, No.1

ISSN: 1857-7881 (Print) e - ISSN 1857-7431

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The Virtuous Circle of Intellectual Capital and Corporate Environmentalism: Evidence from the Food Industry

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[Doi:10.19044/esj.2021.v17n1p1](https://doi.org/10.19044/esj.2021.v17n1p1)

Submitted: 16 October 2020

Accepted: 07 December 2020

Published: 31 January 2021

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Cite As:

D'Angelo, E., Gangi F., Daniele L.M. & Varrone N. (2021). *The Virtuous Circle of Intellectual Capital and Corporate Environmentalism: Evidence from the Food Industry*. European Scientific Journal, ESJ, 17(1), 1. <https://doi.org/10.19044/esj.2021.v17n1p1>

Abstract

The purpose of this paper is to address the relationship between intellectual capital and corporate environmentalism, assuming that intellectual capital may be an important precondition to foster environmental commitment and that, on the other side, corporate environmentalism may positively determine the level of intellectual capital in a reciprocal and virtuous circle. To address this topic, we conducted two OLS regression analysis on a worldwide sample of 235 firms operating in the food industry, over an eight years' time horizon (2010-2017), with 1,686 firm-year observations gathered from Asset-4ESG and Worldscope. Results confirm our hypotheses thus providing important theoretical and managerial implications.

Keywords: Intellectual capital, Corporate environmental responsibility, Food industry

Introduction

This study is a first answer to the call by Martín-de Castro & Salmador (2019) for a deeper investigation concerning the relation between intellectual capital and corporate environmentalism. Undeniably, both of these themes of research are raising their prominence in the management field and combining

them together may be extremely interesting for both theoretical and practical implications.

Indeed, since the Conference of Parties (COP) in the mid-90s, the entire world is improving its concern about environmental protection. In the last 20 years this commitment and awareness has led, on one side, to important negotiations such as the Kyoto Protocol (1995) or the Paris Agreement (2015) and, on the other side, to a higher non-normative pressure of the entire community on companies behavior (Albertini, 2018; Martín-de Castro et al., 2016). Furthermore, in 2020 the world is commemorating the 75th anniversary of the United Nations and this is giving the chance to assess the progress we are making towards the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda. Most of these goals (clean water, affordable and clean energy, climate action, life below water and life on land), actually, are directly or indirectly related to the environment protection and, for this reason, corporate environmentalism will take more and more momentum from the moment on.

In this context, companies are implementing environmental strategies to respond to stakeholders' pressures or to gain a sustainable competitive advantage due to eco-innovations or cost reduction, but still there are several open questions when it comes to effective corporate environmentalism determinants and effects.

The purpose of this study is, therefore, to shed more light on these insights, assuming that intellectual capital may be an important prerequisite to turn environmental commitment in environmental performance and that, on the other side, corporate environmentalism may positively affect intellectual capital in a reciprocal and virtuous circle.

To test the aforementioned hypothesis, this work provides an empirical investigation in a highly concerned industry for environmental issues, such as the food. The remaining part of this work is organized as follows. The second section reviews previous literature, the third one formalizes the research hypothesis and the design of the empirical strategy. The fourth section of the study summarizes the results and the last section concludes, synthesizing the value and originality of the study and providing further research opportunities.

Literature review

Examining corporate social responsibility in a specific sector is certainly an approach to which literature is giving growing importance (Dabic et al., 2016). Sectoral characteristics affects stakeholder and community pressures in a substantial way and, therefore, they influence at the same time the prominence of the CSR topic (both theoretically and practically), the level of CSR engagement and the way firms orient their social and environmental practices (O'Connor and Shumate, 2010) and disclosure (Holder-Webb et al. 2018).

Sectoral studies concerning CSR are raising their prominence because some industries, more than others, are facing scandals that potentially can hit the all value chain and not only single corporations. Is the case, for instance, of the automotive sector or of the financial one (Siano at al., 2017; Gangi et al., 2019a).

In other cases, industry studies have raised their importance because they deal with primary human needs, for example, of the healthcare one (O’riordan & Fairbrass, 2008).

In this perspective, it is evident that studying the food sector, more than other ones, can be important since it is characterized by a set of weaknesses depending both on endogenous and on exogenous factors and, therefore, is highly exposed to risks deriving from the unsustainable behavior.

The food sector has, indeed, both the previously mentioned characteristics to become an essential area of research when it comes to the CSR topic and particularly to the environmental pillar. On one side it has experienced a number of scandals in the last decades and, on the other, it is a crucial sector for environmental and social issues. In China, for example, scandals regarded the production of milk (2008), meat (2009-2013-2014), oil (2010) and noodles (2011). European and US food companies have experienced this kind of problems as well, particularly with reference to meat production (Bovine Spongiform Encephalopathy and the Pathogenic Avian Influenza), between 2005 and 2013 (Zhang & Morse, 2018). Furthermore, the World Health Organization has many times stated that foodborne and waterborne disease kill millions of people annually (Aidara-Kanem, 2018). Therefore, is evident that environmental and social issues, in this sector, are highly interrelated and, for this reason, food companies’ behavior is becoming of major interest (Hartmann, 2011).

Moreover, food firms typically have low margins, short products shelf lives and high short-term financial debt (particularly for companies that deal with seasoning production). Furthermore, natural calamities, diseases, weather vulnerability, animal diseases and volatility in commodity prices are all factors that can negatively affect the food sector strength and stability (Manning, 2016).

Additionally, the all food value chain extensively exploits the environment, probably more than other sectors (Maloni & Brown, 2006). First, the agricultural sub-sector considerably employs natural resources, such as water and land, and therefore has an influence on the environment in terms degradation, biodiversity loss, climate change, toxic emissions and waste. Second, the processing sub-sector heavily impacts the environment too, mainly because of gas emissions and energy consumption. Finally, retailers also have an effect on the environment mostly because of packaging, waste and transportation.

In order to guarantee sustainable production in the food industry, as mentioned in the previous section, authorities have set a bundle of regulations and procedures which may result, when it comes to consumers choices, in a “black box” vision of food products. In other words, consumers shouldn’t care about food safety and pollution, since a higher level of supervision is in place. However, in this sector, where production is globalized (Ala-Harja, 2016), this will result in a major distance between producer and consumers. For these reasons, recently, consumers are responding by orienting their buying habits towards local producers, since local production is generally associated with some attributes such as freshness, seasonality and, finally, with a perceived higher degree of control (Brunori, 2016), despite the fact that small and local firms mostly lack in CSR engagement due to minor pressure from stakeholders (particularly of consumers, for the aforementioned “pretense of knowledge”), to a lack of resources and to the inconclusive cost-benefit relation between CSR engagement and economic performances.

Therefore, when there is a food scandal or just a simple concern, consumers begin to beware of the effectiveness of regulations and the mentioned lack of information turns into a lack of trust. For these reasons, consumers are more and more asking for additional information regarding CSR policies employed especially by big players in the food sector, in order to open the aforementioned black box and better orient their consumption habits, with evident effects on the importance of CSD (Gangi & D’Angelo, 2016) and of reputation.

The CSR engagement, in the food industry, is therefore perceived to be a challenge mostly for big, global and listed companies than for small, unlisted and local ones. This statement is confirmed by previous researches that have demonstrated a significant effect of firm size on CSD even if some other authors state that, in order to mislead consumers, in response to their continuous request of information, significative green washing practices are also put in place in the food sector (Bazillier, 2013).

As we have seen, when it comes to CSR in the food sector, the issue of agricultural producers, processors and retailers cannot be treated separately, but rather has to be considered together and implemented through a wider sustainable value chain governance (Porter & Kramer, 2011; Petit, 2018). Indeed, when a problem concerning social or environmental issues invest a single producer, it will be probably spread through the entire subsector (Våland & Heide, 2005; Wiese & Toporowski, 2013) and, therefore, assumes importance for the entire supply chain (Jorgensen et al. 2008; Meynard et al., 2017) that can be weakened or, in some cases, renovated. All the actors of the value chain have, therefore, a role in ensuring the sustainability of a food product in order to better integrate the impacts of their interactive activities, to facilitate a complex process which suffers a lack in data availability and to

share the KPIs (Key Performance Indicators) to be monitored (Porter & Kramer, 2011). Previous works confirm this broader view, highlighting that there is not significant correlation between the position in the supply chain and the level of CSD.

For all the aforementioned reasons, sustainability in the food sector is no more a desirable approach, but rather an imperative (Ala-Harja, 2016).

Furthermore it seems that there is a need for additional investigation in this sector also because previous contributions regarding CSR and particularly environmental responsibility, in the food industry, paid attention to several topics, such as efficiency (eco-innovation, resource reduction or emission reduction) or consumer behavior, but still, to the best of our knowledge, there are some important research gaps to be filled, particularly concerning determinants and effects of environmental performances.

From a theoretical point of view, CSR and, consequently, corporate environmentalism has been studied moving from the contrasting positions of Friedman and Freeman. Friedman stated that the only responsibility for managers was to make as much money as possible to maximize shareholder wealth. Assuming that responsible behavior is costly, in this perspective, firms should limit their commitment to environmental issues prescribed by law, because other kinds of behavior will imply managers acting as a State and imposing taxes to the shareholder (Friedman, 1970). This vision is clearly common with the opportunistic behavior described by agency theory (Jensen & Meckling, 1976) and with the overinvestment and overconfident thesis (Goel & Thakor, 2008; Barnea & Rubin, 2010). On the other hand, as mentioned before, the stakeholder theory states that companies have responsibilities towards “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984). This broader vision, which is consistent with the communitarian position (Lashgari, 2004) and with the corporate responsibility continuum (Bhimani & Soonwalla, 2005), assumes that firms are not anymore essentially perceived as a legal fiction and, therefore, it is not the formal contract between the firm and its stakeholders that shapes firms’ need to satisfy stakeholders’ expectations (Dunlop, 1998, Kendall, 1999) but, according to Mitchel et al. (1997), their power, legitimacy and urgency. As stated by Sharma & Henriques, (2005) this vision is consistent with the one of Frooman (1999), who sees in the resource interdependence (Pfeffer & Salancik, 1978) the capability of a stakeholder to affect corporate environmentalism directly or indirectly. For example government and regulators, in this view, are able (“have the power”) to impose behavior to companies in a direct way, designing environmental regulation to encourage innovation (Porter & van del Linde, 1995).

In this perspective, differently from Friedman's one, a firm can be defined socially responsible if it goes beyond the compulsory requirements

given by law provisions and integrates social, environmental, ethical, human rights and consumer concerns into its strategies (Crifo et al., 2018). There is a wide body of literature investigating why firms should operate this way. Hart (1995), inspired by the resource-based view (Barney, 1991) and competitive advantage theory (Porter, 1980; Porter, 1985) formulated the Natural Resource Based View (NRBV). According to the resource-based perspective, firms can benefit from a sustainable competitive advantage (steaming from cost leadership or differentiation) only if its capabilities (such as technology, design, procurement, production distribution and service) are supported by valuable, firm specific and not easily imitable resources. Hart suggested that because of environmental growing concerns, the resource-based perspective needed a “natural” shift to remain relevant. This shift can be succeeded if firms are able to govern key resources to competitive advantage (continuous improvement, stakeholder integration and shared vision) in order to succeed in pollution prevention, product stewardship and sustainable development.

Synthesizing, there are two main reasons why companies enforce their environmentalism. On one side because they are subject to, direct and indirect, pressures from powerful stakeholders and, on the other side, because they perceive environmental engagement as a source of competitive advantage.

Both these motivations are strong, actual and consistent, especially in the food industry. However, there is still a missing link in shaping different kinds of behavior between firms operating in the same environment and, therefore, exposed to same pressures and having the same chances of creating competitive advantage through eco-innovations and resource and emission reduction.

The link between Corporate Environmentalism and Intellectual Capital

In our opinion, the aforementioned missing link may be found in the level of intellectual capital. Intellectual capital refers to human, structural and social capital of firms (Stewart, 1997; Youndt & Snell, 2004) and it has the same structure when it comes to green intellectual capital (Chen, 2008). Human capital refers to employee’s knowledge, abilities and skills that are essential for them to achieve their daily objectives. Social capital, on the other hand, refers to procedures and routines embedded in corporate culture. Relational capital deals with the value of relationships between the firm and the external environment (Gangi et al. 2019b).

All these aspects are firm specific in the way they are held by human resources, by the organization itself, or, finally, in the way they aid each other in interacting with the external environment. All these aspects are also rare and difficult to imitate thus completing all the RBV elements to determine a competitive advantage in the knowledge economy.

Furthermore, it is evident that proactive management, oriented to competitive advantage, towards environmental practices is not the only reason why firms behave differently. The new institutional theory (DiMaggio & Powell, 1983) states that firms, by conforming to the dominant practices can obtain legitimacy. However, Delmas & Toffel (2008), when investigating corporate engagement to environmental concerns, contributes to this approach emphasizing that organizational characteristics affect the way firms respond to stakeholders' requirements, thus shaping differences among firms exposed to the same level of pressure (that is the case of the same sector for instance). Additionally, firms that do not have well-developed quality management processes could face barriers to pollution prevention because these strategies need the involvement of a large number of people, which is fundamental also for a sustainable development vision. On the other hand, product stewardship needs the involvement in the process of key stakeholders (suppliers and consumers).

Research hypotheses and empirical strategy

A higher level of intellectual capital, according to the NRBV, may assure companies to be able to lower their costs or to differentiate through eco-innovations (Martin-de Castro, 2016) and, according to the institutional theory, may contribute to improve firms' capacity to react to external environment. These reasons lead us to hypothesize that:

Hp1. The level of intellectual capital positively affects the level of environmental performance

However, this direct and one-way relation between intellectual capital and environmental engagement is not the only way to look at these two companies' attributes (Gangi et al., 2019b). According to Brekke & Nyborg (2004) environmental commitment allows companies to attract, develop and retain better skilled human capital. In this way firms can achieve a double effect in terms of intellectual capital. On one side, they can improve the general level of knowledge of the workforce and, on the other side, they may improve long-term relations, thus favouring corporate culture and routines. Moreover, environmental engagement may improve firms' capability to interact and to be recognized by the external environment as a good citizen, thus improving relational capital. For these reasons, we formulate our second hypothesis as follows:

Hp2. The level of environmental performance positively affects the level of intellectual capital

The aforementioned two hypotheses, together, form a virtuous circle between intellectual capital and corporate environmentalism that results in a bidirectional relation. To test our hypotheses, we gathered longitudinal panel data from two databases. We employed the Asset4-ESG database (Thomson

Reuters) for intellectual capital and environmental performance information and the Worldscope database to collect financial ones. However, financial data regarding food producer and retailer companies were available for a higher number of international public firms (333 with 2.592 firm-year observations) but, according to the purpose of the study, we had to combine the financial dataset with the ESG one, thus reducing our final sample to 235 firms, over an eight years' time horizon (2010-2017), with 1.686 firm-year observations. Furthermore, because of lagged variables, our final sample employed in the regression models consisted of 1,200 firms-year observations.

Asset4-ESG provides an overall score that measures corporate social responsibility, but also allows disentangling the comprehensive score in pillars such as environmental, corporate governance, social and economic ones. We exploit this possibility to gather measures that can proxy the level of intellectual capital and corporate environmental performance. In particular we measured our variables as follows.

ENV = The Environmental score is a variable that varies between 0 and 100. It “measures a company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems.” It measures “how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities in order to generate long term value” (ASSET4 ESG Data Glossary, 2018). This score weight for the 33% of the comprehensive ESG score, synthesizing and standardizing 70 measures related to three environmental sub-pillars, such as product innovation, resource reduction and emission reduction. The product innovation score measures the company's commitment and effectiveness towards R&D in the area of eco-efficient products. It reflects a company's ability to reduce environmental costs and drains for its consumers and thus generating new opportunities through environmental technologies or eco-designed products. The resource reduction score measures a company's commitment and efficacy towards attaining an efficient use of natural resources in its processes. It reveals the company's capability to reduce the use of materials, energy or water, and to find more eco-efficient solutions improving the supply chain. The last indicator measures the company's management commitment and effectiveness towards reducing environmental emission in its processes. It exposes the company's ability to reduce emissions, waste, water discharges and its impacts on biodiversity in the local or global community.

Furthermore, we measured our intellectual capital variable using the mean of three pillars, such as human capital, social capital and relational capital. Once again, with the awareness that IC measurement is still a questionable topic (Pedrini, 2007) we used Asset4-esg sub-pillars of economic

and social variables to get adequate proxy measures for intellectual capital. In particular, the intellectual capital variable has been measured as follows.

$$IC = (\text{Training and Development} + \text{Employment Quality} + \text{Community})/3$$

Training and Development = The Training and Development score is a variable that varies between 0 and 100. It measures the company's commitment and effectiveness towards providing training and development for its workers. It reflects a company's ability to raise its intellectual capital, its workforce loyalty and productivity providing an adequate development for its workforce's skills and competences. We assume that this is a good proxy for human capital because the higher is the training and development commitment, the higher will be employees' skills.

Employment Quality = The Employment Quality score is a variable that varies between 0 and 100. This variable measures a company's commitment and effectiveness towards offering high-quality employment welfare and work environments. It reveals the company's capacity to increase the workforce loyalty and productivity through ensuring adequate rewarding and fair employment treatment. Furthermore, it gives information concerning firms' long-term employment growth and stability. We assume that this variable can measure social capital because the higher is employment quality, the higher will be workers stability thus improving corporate long-term culture and routines.

Community = The Community score is a variable that varies between 0 and 100. It measures a company's commitment and effectiveness towards maintaining the company's reputation within the local and global community. It reflects a company's capability to maintain its license to operate by being a good citizen, defending public health and respecting business ethics. We believe that this variable can adequately measure relational capital because the higher is firm reputation and citizenship, the higher is the capability of a firm to interact with the external environment.

Moreover, in line with previous studies in the field, we controlled for several aspects that could have an effect on both dependent variables. Company's size (Size) measured with the log transformation of total assets; Growth opportunities (Growth), measured with the year over year sales growth. We controlled also for the availability of extra-resources that may provide a higher opportunity to discretionary employ funds (to intellectual capital improvement or to environmental activities). In line with previous studies, we measured available slack in two ways: (A-slack1) with the return on asset (Waddock & Graves, 1997) and (A-Slack2) with the working capital scaled by total asset, similarly to Arora & Dharwadkar (2011). Furthermore, we measured the potential slack (P-slack), where potential slack refers to company's capability to raise additional cash resources, with the debt to equity

ratio (Navarro, 1988). Furthermore, we controlled for heterogeneity in firms' operational activities, introducing a dummy variable (Subsector), which assumes the value of 1 if the company belongs to the food producer subsector and 0 if the company is a retailer. Finally, we controlled for year and country effects.

The statistical analysis includes the use of linear regression models (OLS) to analyse relations between the environmental performance (ENV) and the intellectual capital (IC). According to the purpose of the paper and to previous research (Gangi & D'Angelo, 2016; Nelling & Webb, 2008), dependent and explanatory variables have been measured with one-year lag. The following regression models summarizes this approach:

- Model 1: $ENV_{t+1} = \alpha + \beta_1 IC_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 A-Slack1_t + \beta_5 A-Slack2_t + \beta_6 P-Slack_t + \beta_7 Subsector + TimeEffects + GeographicalEffects + \mu$
- Model 2: $IC_{t+1} = \alpha + \beta_1 ENV_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 A-Slack1_t + \beta_5 A-Slack2_t + \beta_6 P-Slack_t + \beta_7 Subsector + TimeEffects + GeographicalEffects + \mu$

In which, α represents the intercept, β_i represents the coefficients of different explanatory variables, and μ represents the error term.

Results

In the next table (table 1), we report the correlation matrix for the entire sample used in this study. In particular, we are interested in the correlations between the environmental performance and measures of intellectual capital. As we can see ENV and IC are positively correlated. The following correlation analysis provides preliminary confirmation that ENV and IC are directly related. Furthermore, we can see that no high correlation has been found between dependent variables and control variables.

Table 1. Correlation Matrix

		A-slack1	P-slack	Size	Growth	A-slack2
A-slack1	P-values	1				
	Sig					
P-slack	P-values	-,045	1			
	Sig	,082				
Size	P-values	,042	,100**	1		
	Sig	,104	,000			
Growth	P-values	,084**	,010	,028	1	
	Sig	,001	,701	,268		
A-slack2	P-values	,364**	-,137**	-,017	-,040	1
	Sig	,000	,000	,517	,117	
Subsector	P-values	-,017	,040	-,010	-,012	,179**
	Sig	,501	,115	,705	,629	,000
ENV	P-values	,038	,141**	,066**	-,054*	-,091**
	Sig	,137	,000	,009	,034	,000
IC _{t+1}	P-values	,062*	,032	,032	-,035	-,042
	Sig	,028	,259	,255	,218	,141
ENV _{t+1}	P-values	,043	,139**	,031	-,052	-,156**
	Sig	,135	,000	,274	,068	,000
IC	P-values	,070**	,047	,049	-,043	-,045
	Sig	,006	,067	,052	,091	,080

		Subsector	ENV	IC _{t+1}	ENV _{t+1}	IC
A-slack1	P-values					
	Sig					
P-slack	P-values					
	Sig					
Size	P-values					
	Sig					
Growth	P-values					
	Sig					
A-slack2	P-values					
	Sig					
Subsector	P-values	1				
	Sig					
ENV	P-values	-,023	1			
	Sig	,348				
IC _{t+1}	P-values	-,041	,254**	1		
	Sig	,133	,000			
ENV _{t+1}	P-values	-,003	,932**	,268**	1	
	Sig	,922	0,000	,000		
IC	P-values	-,071**	,297**	,623**	,268**	1
	Sig	,004	,000	,000	,000	

To address the association between intellectual capital and environmental engagement we performed two OLS regressions. Table 2 shows results coming from the regression that has as dependent variable the environmental performance and as independent variable the intellectual capital. Results show that intellectual capital measured at time t is a positive and significant predictor of the environmental performance at time t+1 (St. Beta = 0,235). Therefore, H_{p1} is confirmed.

Furthermore, the model shows a positive association between environmental performance and some of the control variables such as country,

size and subsector. In particular we can see that bigger firms and producers are more likely to have superior environmental performance. Furthermore, two out of three measures of slack resources are significant. In particular, liquidity is a negative predictor and leverage is a positive predictor of environmental engagement.

Table 2. OLS regression of corporate environmental performance and intellectual capital (Model 1)

Model 1 (ENV _{t+1} as dependent variable)	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	Beta	Std Error	Beta		
α	14,361	27,711		,518	,604
IC	0,347**	,039	0,235**	8,892	,000
y1	-25,334	26,573	-,283	-,953	,341
y2	-26,842	26,565	-,308	-1,010	,312
y3	-27,752	26,563	-,326	-1,045	,296
y4	-26,931	26,561	-,322	-1,014	,311
y5	-20,309	26,561	-,244	-,765	,445
y6	-20,960	26,553	-,267	-,789	,430
y7	-21,313	26,565	-,253	-,802	,423
Geo1	16,066**	4,864	0,114**	3,303	,001
Geo2	-6,406	3,513	-,099	-1,824	,068
Geo3	20,507**	3,715	0,298**	5,520	,000
Geo4	12,332**	3,613	0,186**	3,414	,001
Geo5	3,172	4,387	,030	,723	,470
Growth	-1,679	1,172	-,037	-1,433	,152
Size	2,168**	,419	0,183**	5,174	,000
A-slack1	-,008	,104	-,002	-,075	,941
P-slack	0,016*	,008	0,057*	2,096	,036
A-slack2	-26,607**	5,719	-0,140**	-4,653	,000
Subsector	7,990**	1,831	0,127**	4,364	,000
N = 1.209; R-squared = 0,21; F = 16,564; sig = 0,000					
Significance levels: *p<.05; **p<.01					

Table 3, on the other side, shows that environmental engagement, measured at time t, is a positive predictor of the intellectual capital measured at time t+1 (St. Beta = 0,244), thus confirming Hp2. In this case only one control variable (country) resulted positively associated to intellectual capital and there is no significant effect of size, financial slack, growth opportunities and sectoral characteristics.

Table 3. OLS regression of corporate environmental performance and intellectual capital (Model 2)

Model 2 (IC _{t+1} as dependent variable)	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	Beta	Std Error	Beta		
α	45,759	12,292		3,723	,000
ENV	0,160**	,020	0,244**	8,172	,000
y1	6,787	11,076	,113	,613	,540
y2	4,467	11,079	,076	,403	,687
y3	4,419	11,081	,077	,399	,690
y4	3,628	11,074	,065	,328	,743
y5	8,072	11,075	,145	,729	,466
y6	5,302	11,064	,101	,479	,632
y7	3,331	11,072	,059	,301	,764
Geo1	1,086	3,498	,012	,310	,756
Geo2	1,829	2,525	,042	,725	,469
Geo3	-1,065	2,706	-,023	-,394	,694
Geo4	2,141	2,616	,048	,818	,413
Geo5	-9,090**	3,137	-0,129**	-2,897	,004
Growth	-,672	,838	-,022	-,802	,423
Size	-,257	,303	-,033	-,850	,396
A-slack1	,124	,074	,048	1,680	,093
P-slack	,000	,005	-,001	-,050	,960
A-slack2	1,954	4,082	,015	,479	,632
Subsector	-1,883	1,305	-,045	-1,442	,149
N = 1.212; R-squared = 0,10; F = 7,144; sig = 0,000					
Significance levels: *p<.05; **p<.01					

The overall results of this preliminary study concerning the relation between intellectual capital and firms' environmental performance seems to confirm that there is a kind of virtuous circle between them.

Conclusion

Our findings contribute to existing literature both theoretically and empirically. First of all, the paper provides additional progress to prior literature analyzing the relation between intellectual capital and corporate environmentalism in a novel way. In particular, to the best of our knowledge, no one has previously investigated the possibility of a reciprocal effect between these two. Different works, as we've seen in the previous sections, tried to demonstrate that, alternatively, intellectual capital may be seen as a prerequisite for environmental performance or that this latter can be seen as a predictor of the former. Our work provides a new theoretical framework in management studies, linking together the two previously investigated constructs that apparently were in contrast one another, defining a virtuous circle of capability and resources management.

Furthermore, empirically, the study provides evidence of the mentioned relation in a highly concerned industry such as the food one, that has not previously been investigated, linking together intellectual capital and corporate environmentalism. In particular, differently from previous studies in the field, we decided to investigate the sector as a whole (producers and retailers) in order to have a comprehensive view in terms of the entire value chain. Moreover, our results are supported by 1,200 firm-year observations that undoubtedly give robustness in confirming our results. Additionally, we used new proxies for intellectual capital defining a vector of measures that can proxy human, structural and relational capital.

Of course, this is a preliminary study and therefore has several limitations that can serve as future research objectives. In particular a more robust statistical analysis should be performed in order to provide confirmation of results. Moreover, alternative ways of measuring intellectual capital and environmental performance may be useful. For example, VAIC (Value-Added Intellectual Coefficient, developed by Pulic, 1998) may be used as a proxy of intellectual capital to confirm results according to more widely used measures. Moreover, a deeper investigation of the relation between intellectual capital and environmentalism could be done disentangling the two measures in sub-pillars. It would be interesting, for example, to see the relation between eco-product innovation, resource reduction and emission reduction on intellectual capital and, similarly, the effects of human, structural and relational capital on the environmental performance.

References:

1. Aidara-Kane, A., Angulo, F. J., Conly, J. M., Minato, Y., Silbergeld, E. K., McEwen, S. A., & Collignon, P. J. (2018). World Health Organization (WHO) guidelines on use of medically important antimicrobials in food-producing animals. *Antimicrobial Resistance & Infection Control*, 7(1), 7.
2. Ala-Harja, H., & Helo, P. (2016). Food supply chain sustainable performance in plant decision. *International Journal of Advanced Logistics*, 5(1), 1-18.
3. Albertini, E. (2018). The contribution of management control systems to environmental capabilities. *Journal of Business Ethics*, 1-18.
4. Arora, P., & Dharwadkar, R. (2011). Corporate governance and corporate social responsibility (CSR): The moderating roles of attainment discrepancy and organization slack. *Corporate governance: an international review*, 19(2), 136-152.
5. Bansal, P., & Roth, K. (2000). Why companies go green: a model of ecological responsiveness. *Academy of Management Journal*, 43, 717-736

6. Barnea, A., & Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of business ethics*, 97(1), 71-86.
7. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
8. Bhimani, A., & Soonawalla, K. (2005). From conformance to performance: The corporate responsibilities continuum. *Journal of Accounting and Public Policy*, 24(3), 165-174.
9. Brekke, K. A., & Nyborg, K. (2004). Moral hazard and moral motivation: Corporate social responsibility as labor market screening (No. 2004, 25). Memorandum.
10. Brunori, G., & Galli, F. (2016). Sustainability of local and global food chains: Introduction to the special issue. *Sustainability* 2016, 8, 765.
11. Chen, Y. S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of business ethics*, 77(3), 271-286.
12. Crifo, P., Escrig-Olmedo, E., & Mottis, N. (2018). Corporate governance as a key driver of corporate sustainability in France: The role of board members and investor relations. *Journal of Business Ethics*, 1–20.
13. Dabic, M., Colovic, A., Lamotte, O., Painter-Morland, M., & Brozovic, S. (2016). Industry-specific CSR: Analysis of 20 years of research. *European Business Review*, 28(3), 250-273.
14. Delmas, M. A., & Toffel, M. W. (2008). Organizational responses to environmental demands: Opening the black box. *Strategic Management Journal*, 29(10), 1027-1055.
15. DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review*, 147-160.
16. Dunlop, A. (1998). *Corporate governance and control*. Cima.
17. Friedman, M. (1970). A Friedman doctrine: The social responsibility of business is to increase its profits. *The New York Times Magazine*, 13(1970), 32-33.
18. Frooman, J. (1999). Stakeholder influence strategies. *Academy of management review*, 24(2), 191-205.
19. Gangi, F., & D'Angelo, E. (2016). The virtuous circle of corporate social performance and corporate social disclosure. *Modern Economy*, 7(12), 1396-1418.
20. Gangi, F., Meles, A., D'Angelo, E., & Daniele, L. M. (2019a). Sustainable development and corporate governance in the financial system: Are environmentally friendly banks less risky? *Corporate*

- Social Responsibility and Environmental Management, 26(3), 529-547.
21. Gangi, F., Salerno, D., Meles, A., & Daniele, L. M. (2019b). Do Corporate Social Responsibility and Corporate Governance Influence Intellectual Capital Efficiency? Sustainability, 11(7), 1899.
 22. Goel, A. M., & Thakor, A. V. (2008). Overconfidence, CEO selection, and corporate governance. The Journal of Finance, 63(6), 2737-2784.
 23. Hart, S. (1995). A natural resource-based view of the firm. Academy of Management Review, 20, 986-1014.
 24. Hart, S. L. (1995). A natural-resource-based view of the firm. Academy of management review, 20(4), 986-1014.
 25. Hartmann, M. (2011), "Corporate social responsibility in the food sector", European Review of Agricultural Economics, Vol. 38 No. 3, pp. 297-324.
 26. Holder-Webb, L., Cohen, J.R., Nath, L. and Wood, D. (2008), "The supply of corporate social responsibility disclosures among US firms", Journal of Business Ethics, Vol. 84 No. 4, pp. 497-527.
 27. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of financial economics, 3(4), 305-360.
 28. Jørgensen, A., Le Bocq, A., Nazarkina, L., & Hauschild, M. (2008). Methodologies for social life cycle assessment. The international journal of life cycle assessment, 13(2), 96.
 29. Kendall, N. (1999). Good corporate governance. Institute of Chartered Accountants in England and Wales.
 30. Lashgari, M. (2004). Corporate governance: theory and practice. The Journal of American Academy of Business, 5(1/2), 46-51.
 31. Maloni, M.J. and Brown, M.E. (2006), "Corporate social responsibility in the supply chain: an application in the food industry", Journal of Business Ethics, Vol. 68 No. 1, pp. 35-52
 32. Manning, L., & Soon, J. M. (2016). Building strategic resilience in the food supply chain. British Food Journal, 118(6), 1477-1493.
 33. Martín-de Castro G. and Salmador M. (2019). Intellectual Capital and Corporate Environmentalism. Special issue call for papers from Journal of Intellectual Capital.
 34. Martín-de Castro, G., Amores-Salvadó, J., & Navas-López, J. (2016). Environmental management systems and firm performance: improving firm environmental policy through stakeholder engagement. Corporate Social Responsibility and Environmental Management, 23, 243-256.

35. Martín-de Castro, G., Delgado-Verde, M., Navas-López, J. and López-Sáez, P. (2011). 'Towards an intellectual capital-based view of the firm: origins and nature'. *Journal of Business Ethics*, 98, 649-662.
36. Martín-de Castro, G., Amores-Salvadó, J., & Navas-López, J. E. (2016). Environmental management systems and firm performance: improving firm environmental policy through stakeholder engagement. *Corporate social responsibility and Environmental Management*, 23(4), 243-256.
37. Meynard, J.-M., Jeuffroy, M.-H., Le Bail, M., Lefèvre, A., Magrini, M.-B., Michon, C., 2017. Designing coupled innovations for the sustainability transition of agrifood systems. *Agric. Syst.* 157, 330–339.
38. Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, 22(4), 853-886.
39. Navarro, P. (1988). Why do corporations give to charity?. *Journal of business*, 61(1), 65.
40. Nelling, E., & Webb, E. (2009). Corporate social responsibility and financial performance: the “virtuous circle” revisited. *Review of Quantitative Finance and Accounting*, 32(2), 197-209.
41. O’riordan, L., & Fairbrass, J. (2008). Corporate social responsibility (CSR): Models and theories in stakeholder dialogue. *Journal of business ethics*, 83(4), 745-758.
42. O’riordan, L., & Fairbrass, J. (2008). Corporate social responsibility (CSR): Models and theories in stakeholder dialogue. *Journal of business ethics*, 83(4), 745-758.
43. Pedrini, M. (2007). Human capital convergences in intellectual capital and sustainability reports. *Journal of intellectual capital*, 8(2), 346-366.
44. Pedrini, M. (2007). Human capital convergences in intellectual capital and sustainability reports. *Journal of intellectual capital*, 8(2), 346-366.
45. Pfeffer, J., & Gerald, R. (1978). Salancik. 1978. The external control of organizations: A resource dependence perspective.
46. Porter M. E., & van der Linde. C. 1995. Green and competitive: Ending the stalemate. *Harvard Business Review*, 73(5): 120-134.
47. Porter M.E. (1980). *Competitive Strategy*. New York: Free Press.
48. Porter M.E. (1985). *Competitive advantage*. New York: Free Press.
49. Porter, M. E., & Kramer, M. R. (2011). The Big Idea: Creating Shared Value. How to reinvent capitalism—and unleash a wave of innovation and growth. *Harvard Business Review*, 89(1-2).
50. Porter, M., & van der Linde, C. (1995). Green and competitive: ending the stalemate. *Harvard Business Review*, Sep-Oct, 120-134.

51. Pulic, A. (1998). Measuring the performance of intellectual potential in knowledge economy. In 2nd McMaster Word Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential (pp. 1-20).
52. Sharma, S., & Henriques, I. (2005). Stakeholder influences on sustainability practices in the Canadian forest products industry. *Strategic management journal*, 26(2), 159-180.
53. Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). “More than words”: Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research*, 71, 27-37.
54. Stewart, T.A. (1997). *Intellectual Capital: The New Wealth of Organizations*; Doubleday/Currency: New York, NY, USA.
55. Våland, T., & Heide, M. (2005). Corporate Social Responsiveness: Exploring the Dynamics of “Bad Episodes”. *European Management Journal*, 23(5), 495-506.
56. Waddock, S. A., & Graves, S. B. (1997). The corporate social performance–financial performance link. *Strategic management journal*, 18(4), 303-319.
57. Wiese, A., & Toporowski, W. (2013). CSR failures in food supply chains—an agency perspective. *British Food Journal*, 115(1), 92-107.
58. Youndt, M. A., & Snell, S. A. (2004). Human resource configurations, intellectual capital, and organizational performance. *Journal of managerial issues*, 337-360.
59. Zhang, D., Ma, Q., & Morse, S. (2018). Motives for corporate social responsibility in Chinese food companies. *Sustainability*, 10(1), 117.



ESJ Social Sciences

The Case Study on Significance of Daylight in Classroom Setting at Sarajevo Campus

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[Doi:10.19044/esj.2021.v17n1p19](https://doi.org/10.19044/esj.2021.v17n1p19)

Submitted: 05 December 2020

Accepted: 12 January 2021

Published: 31 January 2021

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Cite As:

Obralic, A. & Jeghel S. (2021). *The Case Study on Significance of Daylight in Classroom Setting at Sarajevo Campus*. European Scientific Journal, ESJ, 17(1), 19.

<https://doi.org/10.19044/esj.2021.v17n1p19>

Abstract

When designing schools, universities, or any educational centers, daylight in classrooms is usually one of the essential issues that take the architect's attention. Its importance comes from the fact that daylight can impact students' health, mood, and visual performance. Providing an appropriate amount of uniformly distributed light with glare protection is a significant factor in classroom design (Zomorodian Z S, 2016). This study is based on a literature review, studies, and articles researching the effect of daylight in a classroom environment on students' performance. It tends to define the significance of daylight design in the learning environment. This paper also deals with specifying and exploring all the conditions, factors, and elements that contribute to creating this successful daylight design in classrooms. Besides, it investigates the daylight design of the buildings at the campus of Sarajevo that will, later on, contribute to the creation of a design manual of all the considerations that need to be taken for schools and educational centers' daylight design. The study is conducted at the campus of Sarajevo in the academic year 2019. The literature review, data study, and previous studies define the significance of daylight in the classroom environment and show the correlation between daylight and students' achievement in the classroom environment. It defines the elements and conditions of successful daylight design in classroom settings. The study explored the current state of the daylight design at the campus of Sarajevo detecting its lacks and obstacles regarding adequate illumination. Based on the

literature review, an appropriate solution for the investigated classroom environment has been designed.

Keywords: Architectural Faculty, Architectural design, Daylight, Daylight design, Students' performance, Classroom design

Introduction

The aim of educational facilities, in achieving the best outcome of students learning, cannot be accomplished only through its curriculum, teaching approaches, instructional materials, assessment or the institute management coordination, but also the physical environment which surrounds the students, in classrooms and corridors can have an important role as well (Pulay, 2010). Many elements can be part of the educational physical environment, starting with building form and structure, to follow with color, furniture, materials, light, and view. In many cases, light can have a bigger influence on the environment than other elements. By developing a better understanding of the relationship between light and the learning process, designers and architects can enhance the interior design and improve the academic performance of students (Samani & Samani, 2012).

The process of creating successful daylight in classrooms requires very deep consideration of many aspects and from the very beginning of the project because it involves studying the building's location, climate, functional requirements, orientation, making decisions about the arrangement of building openings (doors and windows), shading systems, glazing materials, shading systems, and artificial lighting systems (Ander, 2015). Humans' psychology and physiology both are deeply affected by daylight, and its influence on mood, awareness, vision, and circadian rhythms cannot be denied, as well as its role in the learning course, what makes poorly lit classrooms negatively affect students' health and learning ability (Mott, Robinson, Walden, Burnette, & Rutherford, 2012). Even Wurtman (1975) emphasized the importance of light as food and water in directing our physical functions.

In designing a functional space such as a classroom, where its purpose is essentially dependent on visualization and observation, daylight can have a crucial role in this process, concerning its influence on the visual performance, learning, and the health of the students. Therefore, the designers' job should be directed towards creating an adequate amount of evenly distributed daylight with taking glare and undesirable radiation into consideration (Zomorodian, Korsavi & Tahsildoost, 2016).

This paper deals with daylight and its factors for so many reasons, the importance of daylight is wide enough to involve many aspects, it provides for us as humans information about the outside world just as valuable as the energy of its radiation, since the human body grew in the diversion of day and

night, darkness and light, summer, and winter. Having daylight doesn't only connect people with the space around them, it also relates them to the time of the day and fulfills their need to be in touch with the outside world. These day-night, light-dark changes are what regulates the interior clock of the human body, and balance its circadian rhythms, which can cause immediate influence on alertness, sleep, and cognitive performances (Tregenza & Wilson, 2013). And even though overexposure to sunlight can carry the risk of skin damage, receiving an adequate amount of it will produce vitamin D, which in turn is associated with various beneficial effects, like reducing the risk of cancer and cardiovascular disease (Holick, 2008). The day can also produce serotonin and positively affect the mood (Lansdowne & Provost, 1998). Besides the daylight advantages on humans' psychologically and physiologically, it can have sustainable and economic benefits as well. Since the proper presence of daylight substitutes any need for electrical light, not only electricity costs will be reduced, it also saves energy, and minimizes carbon dioxide gas emission by using less non-renewable energy sources (Molinski, 2009).

In the learning process, many elements in the physical environment can be influential, such as noise level, thermal comfort, classroom dimensions and volume, walls color, daylight, and illumination. Certainly, all these elements are worth investigating while designing schools to create the best learning atmosphere, thus the research concerns the daylight as a significant part of this environment.

In this regard the following questions are proposed: Is daylight a significant factor in the classroom environment?; What are the elements and conditions of successful daylight design in classroom settings?; Is there an appropriate project design solution for the detected daylight design lacks and obstacles at the faculties of the Sarajevo campus?.

Defining the significance of the daylight for students' academic performance, and understanding the conditions and factors of successful daylight design can help the management boards in schools and educational centers, as well as designers and architects to pay more attention to it, while creating learning environments, what will help to realize their purpose in achieving the best possible outcomes in academic performance of students. Caring about the educational environment is a crucial element in building the countries' infatuation, which will eventually have a valuable reflection on society as well as the countries' development.

Literature review

Background of the study

In respect of the growing concern about green architecture, daylight has become an important design issue (Boubekri, Cheung, Reid, Wang, & Zee, 2014). Other than the environment's need for natural sources for energy like

daylight, humans need it as well. Through thousands of years, the human body has evolved through the circle of day and night, light and dark, and is regulated according to the spectrum of the sun's radiation. Human beings respond to daylight in various ways, it can influence their health, and arouse reactions in them that could be traced to their basic need for safety and survival; it can even affect the way they interact with each other, and shape the simplicity in which they can accomplish visual tasks, what makes the light more than a flow of constant light but something dynamic, which can change according to time and place (Tregenza & Wilson, 2013). All these together make daylight an essential part of architectural design. This is especially enhanced in the case of schools and classrooms to create an optimal environment for students and to improve their ability to concentrate and pay attention, especially since visual tasks like reading and writing are important and take a good amount of their time inside these classrooms. This study also highlights the relationship between daylight and students' academic performance. Also, it is conducted to create a clear understanding of the relationship between architecture and daylight, how daylight and architecture are integrated at each stage of building design.

2.2. Significance of the Daylight

With the recent growing concern about global warming, the environment, carbon emission, and the creation of sustainable design, relying on daylight for non-commercial buildings has become a crucial step in the direction of energy-efficient buildings. This is achieved by minimizing the use of artificial lighting and controlling thermal loss and gain. The pursuit of advanced, creative daylighting systems and strategies can significantly decrease the consumption of electricity and enhance daylight level within the building. The importance of daylight can be found in literature and researches as much as in the observation of human behavior and the interior arrangement of home and office spaces (Ruck, et al., 2000).

Windows are considered important for the view it provides, which connects the inside with the outside environment. Daylight is also essential because of its lighting quality, changeability, and spectral composition. A study on human's reaction to interior environment revealed that daylight is preferred to fulfill two primary human's necessities: first like providing the visual comfort for accomplishing a task or see the interior space, and second to be able to experience some environmental stimulation (Boyce, 1998). Spending long hours in schools or workplaces working under electrical lighting conditions is believed to be harmful to health. Also, daylight can help lower stress and create a more comfortable environment. Daylight can originate conditions for good vision by providing a high level of luminance and allowing excellent color recognition and color rendering. But still,

daylight design without proper considerations about shading and protection can be the reason for high luminance and uncomfortable glare (Ruck, et al., 2000).

Along those lines, Lam & Ripman (1992) suggest that "... when all buildings were designed around a single, fixed light source (the sun) the difference between great architecture and mere building could be measured to a large degree by the skill with which that source was used. The shapes and sizes of rooms, and the materials and details in them, were determined largely by the appearance the room would take on when rendered by daylight" (p.11).

2.2.1. Significance of the Daylight: Providing View

Having access to the natural view is believed to be advantageous in a wide range of ways. According to research in the field of physical well-being and health care, natural views that are attainable through windows can positively affect the occupants' health outcomes (Devlin & Arneill, 2003).

For providing the view, windows' details like their size, position, frame, or other elements concerning the occupants' eye level should be carefully considered. Also, the daylight design could affect the view. And when providing visual contact with the outside environment is not a priority in daylight design, the exterior shading elements can block the occupant view. Therefore, advanced daylight strategies can pay attention to this issue, assigning different functions to the suitable areas of the facades for maintaining view windows without compromising them to other functions (Ruck et al., 2000).

The study done by Benfield, Rainbolt, Bell, & Donovan (2015) is intended to examine the differences between college writing course students in two identically designed classrooms, but the first one has a view of nature while the second one has a view of a concrete retaining wall. As suspected results indicated, that students in the classroom with a natural view not only rated the course more positively, they also scored higher results at the end of the semester, compared to other students in the classroom with the view of a retaining concrete wall. These findings point out that classrooms with natural views can offer positive influences. Besides, natural elements in the classroom can increase students' level of perception and their academic performance.

Also Kaplan (1993) had reported two different studies regarding the presence and the absence of natural view windows. In the first one, workers in the office with natural view windows revealed less common health issues during the 6-month work period, while expressed more job satisfaction. And in the other study, natural view windows were related to a growing sensation of privacy and comfort. It is also reported to be linked with decreasing the level of anxiety and frustration, with promoting patience and task enthusiasm.

Coherent with many other studies in schools, residence buildings, offices, and hospitals, enough evidence has been gathered to confirm the advantages of natural view on the occupants' psychology as well as their physical health. These findings can be used in architectural designs, especially in the case of schools and workplaces, for their role in improving humans' performance (Devlin & Arneill, 2003).

2.2.2. Significance of the Daylight: Health

Through thousands of years, the human body developed and evolved in the day-night diurnal cycle, and it is even possible to state that the human body is tuned to the sun radiation. We react to daylight in different ways; the surrounding environment can influence our well-being and provoke reactions that can be related to our primitive need for safety and survival. Through its stimulation and changeability during the day, daylight is believed to decrease stress levels and enhance productivity (Tregenza & Wilson, 2013).

The sun radiation can be both harmful and beneficial for the human body. The harmful influence can be either immediate such as sunburn, or long-term disease, like the stimulation of cancer growth. Therefore, there needs to be a balance in the level of sun exposure for the body to get valuable benefits while avoiding the risk (Aries, Aarts, & van Hoof, 2015).

The importance of daylight is concealed in the natural 24-hour cycle of dark-light, which regulates the body's daily particular order of physiological changes starting from hunger, sleep, body temperature, attentiveness, and most of the hormone production. In mammals' bodies, circadian rhythms are working like 'clocks' managing these changes. Disturbing them can cause sleep disorders and feelings of jetlag. There can even be more severe long-term sequels, for example in prisons windowless cells can be partly responsible for mental health disorders (Tregenza & Wilson, 2013).

2.2.3. Significance of the Daylight: Psychology

For psychologists, there has been a long-lasting and constant concern with the relationship between the outdoor environment and the behavior of human beings at different life stages, in schools, workplaces, homes, prisons, and hospitals (Veitch & Galasiu, 2012). Recently there has been accumulated evidence regarding the alertness effect of lighting, besides its role in regulating the circadian system. Due to the technological progress in fMRI (functional magnetic resonance imaging), it has been possible to discover the regular form of brain activity as a reaction to light exposure which some researchers of previous generations were not able to present. Even though they always believed in the role of light in inciting cognitive functions Gifford, Hine, & Veitch (1997) organized a meta-analysis of studies concerning the correlation between light and workers performance in office space with findings of a mild

connection between them, but this relationship was attenuated because of existing possibility for adapting to the level of light. The studies done by fMRI revealed that daylight exposure during the daytime would raise subjective attentiveness and improve functions in the posterior thalamus, separately from visual responses; it can even motivate action in cortical areas in charge of performance on an auditory task (Vandewalle et al., 2006).

Moreover, the areas of the brain activated by light can change depending on the light intensity level and the length of the exposure. In higher intensity and longer exposure, brain activation would last longer (Vandewalle, Gais et al., 2007; Vandewalle, Schmidt et al., 2007). Even though a high level of light directed on a task can improve visibility, erratic light spread in the eye would cause discomfort and deteriorate visibility.

The literature and researches (Dubois, 2009; Pineault & Dubois, 2008) about the relationship between glazing type and interior perceptions distinguished the existence of a paradox, which reveals that the same environmental conditions regarding daylight which generated feelings of beauty and pleasantness, were also associated with feelings of discomfort. This paradox can cause design conflict in architecture regarding daylight, except in cases where users can control the shading systems, during different times of the day, depending on their need.

A series of applied and fundamental studies in 2003, assured the CIE that the exposure of people in industrialized countries to the high level of daylight would enhance their mood (Veitch & Galasiu, 2012). Also, worth mentioning seasonal affective disorder (SAD) which is described as a depressive illness, varies according to the seasonal change during the year. It usually starts during autumn and continues until the end of winter. Accompanied with the usual symptoms of mental depression like lack of energy, mood change, overeating and oversleeping, and the disorder is found mainly among young adults, it can also affect older ones, and it is more likely to influence women than men (Tregenza & Wilson, 2013).

SAD can be explained by the neurotransmitter serotonin, whose activity increases after being exposed to high luminance. A study was done on genially seasonal women (women whose scores on personality inventory imply that they get mild levels of unhappy feelings during cold season) investigated the influence of light on their system, after inducing their acute tryptophan depletion. The results revealed that their mood dropped when being exposed to dim light (10lx) but it did not drop while being exposed to strong light (3000lx)(aan het Rot, Benkelfat, Boivin, & Young, 2008).

To sum up, daylight can increase the ability of workers and people to focus by increasing their alertness besides improving their visual tasks. Light can reduce depression levels and improve cognitive performances according to place and time of the day.

2.2.4. Sustainable Significance of the Daylight

Other than the beneficial characteristics of daylight on humans' psychology and well-being, its sustainable role in saving energy and electrical energy costs has made it increasingly popular among architects and designers. The world has been recently attentive to the issues of carbon emission, global warming, and sustainability. The planned use of daylight in buildings has become an essential step toward improving energy efficiency, through cutting down artificial lighting as well as heating and cooling loads. Integrating smart, innovative daylighting strategies in the building architectural design would significantly reduce electricity consumption while enhancing the light quality of the interior environment (Ruck et al., 2000).

By exchanging the buildings' reliance on natural resources (such as daylight) instead of fossil fuels, it would be possible to significantly decrease the burning of greenhouse gases. Luminance is considered one of the biggest consumers of electricity, which makes it one of the main reasons for the emission of carbon dioxide. Lighting consumption of electricity is almost the same as the amount produced by all gas fires generation and around 15% more than that generated by hydro or nuclear power (Velux, 2016).

It is described that the biggest consumer of lighting electrical energy are the tertiary-sector buildings. For their interior illumination, it spends as much as residential and industrial sectors combined. "On average, lighting accounts for 34% of tertiary-sector electricity consumption and 14% of residential consumption in OECD countries, and in non-OECD countries, these shares are usually higher"(OECD. Publishing, & International Energy Agency, 2006, para.14).

2.3. Background studies

Many studies and experiments in schools investigated the effect of daylight on students' academic outcomes. Some of them were specifically analyzing the daylight effect, while others were broader, and studied the effect of the physical environment on students' academic performance while covering daylight.

The study done by Tanner (2008) was intended to examine the effect of school design on students' academic performance. The study compared the achievement of students in three design categories: movement and circulation, daylighting, and views. To quantify the effect of the physical environment on the students' academic results, the study has been conveyed through a reliable set of data. A sample of 71 schools was used, and the measure of these three different school designs was attained by a ten-point Likert scale. Students' outcomes were determined through six parts of the Iowa Test of Basic Skills (ITBS), by assessing reading comprehension, reading vocabulary, language arts, mathematics, social studies, and science. Through its finding, this study

was able to mark by mathematical scores the positive effect of daylighting on both science and reading vocabulary outcomes. It managed, through employing the concepts, rationale, and methods, to complement other previous researches made to elucidate the impact the physical environment has on students' learning. Through these study findings, which were obtained from its sample, it was proven that schools are much more than boxes where education occurs, but the architectural design can make a difference in a student's academic achievements.

Another study is one of the most important researches done regarding this topic. Research by Heschong, Wright, & Okura (1999) has been done to find out whether there is a clear relationship between the presence of daylight in schools and students' academic performance. Through multivariate linear regression analysis, the study analyzed the daylighting conditions in more than 2,000 classrooms, and went through 21,000 school records, from 3 schools in 3 different American states examining the performance of students in similar buildings but different daylighting conditions. When studying the impact of daylight on human behavior, schools are the ideal place to go, because of the pre-existing productivity records that can be analyzed and compared between different schools and classrooms with or without skylights, and with various range of daylight conditions. The most important thing was finding ideal organizations that can provide information and data sets that are susceptible to analysis. In findings, the data revealed that students in most daylighted classrooms advanced 20% faster in math tests and 26% in reading tests throughout a year than those with least daylit classrooms. Likewise, in classrooms with the largest windows, students progressed 15% faster in math and 23% in reading, than students in classrooms with small windows. And in classrooms with openable windows, students advance from 7 to 18 percent than students in classrooms with fixed windows, regardless of air-conditioning. These results presented to be solid and consistent regardless of teaching skills or curricula. A regularly positive and highly significant correlation between students' performance and the presence of daylight in all three districts was found. Daylight accessible from skylights distinct from all other apertures linked with windows has a positive effect on human behavior. In all the examinations and observations done in schools, it was obvious and clear that successful daylight design was careful about allowing direct sunlight into classrooms, and more concerned with protecting the students from glare and uncomfortable high illumination. Mostly, designers of the schools intended to make sure for classrooms' windows to be deeply protected by shading systems. In some well-designed daylit classrooms, the users were able to gradually modify daylight accessibility through operable blinds.

The study conducted by Nicklas & Bailey (1996) also had the aim to investigate daylight effect in a classroom environment on the performance of

students in elementary and middle school in three days lit schools which are known for their innovative design for Johnson County Schools in North Carolina. These schools are designed in a way to maximize daylight availability in the building by using south-facing roof monitors and permitting controlled daylight entering all the important used spaces within the schools. The roof monitors were applied to provide superior daylight from the top during two-thirds of the time when the schools' spaces are occupied. In any way, these roof monitors were protected by baffles from allowing glare accessing into the interior of the building. Also, the artificial lights are controlled by light sensors, for saving electrical energy. There were also small windows added to the design for providing a view, but they weren't included in the study as a notable component of daylight strategies. The study was mainly concerned with reviewing students' performance improvement in each school, from one year to the next one. It also analyzed students' performance relative improvement in one new middle school but has a non-day lit design. It is constructed in the county around the same time as these three daylight schools. Standardized tests taken from the county school system were assessed and findings showed that students in daylight schools advance the students in non-day lit schools by 5 to 14 percent counting on whether it is considered for long or short-term effects. When examining the improvement rate in all the reference classes in all three daylight schools, the average enhancement of students' outcomes was 4.7%, but the pupils were followed up over a longer time, and the impact was even more.

Küller & Lindsten (1992) examined the influence of daylight versus a kind of fluorescent light on school students' production of stress hormones, classroom performance, growth of the body, and getting sick. In this study, 90 school children took part in the study in two different schools. They were observed in their environment for one year long. The schools are located in the southern part of Sweden, in a quiet suburb of Malmo, a few hundred meters apart. This zone is known for having cloudy and rainy weather during autumn and winter, and longer days of clear sky, in summer and spring. In this region daylight difference between summer and winter is more than ten hours. The children were distributed into four classrooms, which vary in daylight conditions and type of artificial lighting. The methodology used in this research incorporates observation and the analysis of students' morning urine for inspecting the level of the stress hormone cortisol. These investigations were executed regularly throughout the year, and also records of growth and sick leaves were attained and analyzed at the end of the study. Measurements were obtained in the middle or second half of every school week. Findings indicated that students in windowless classrooms or classrooms that lack adequate lighting may suffer from a disturbance in their chronobiological system which regulates the production of hormones. Students who experience

more daylight in their classrooms have higher values of cortisol than students in windowless classrooms. This can affect their body growth as well as their health since it was also revealed that students with a higher level of cortisol were linked with lower rates of sick leave. This can be explained by the role of cortisol as a tool to mobilize the body's defense system.

Methodology

This research study takes the form of a descriptive method and site observation. The descriptive method is based on the observation and analysis of three faculties placed at the campus of Sarajevo.

3.1. Method of Data Collection

Data of this case study has been collected through direct observation and site visits. A collection of photos taken from the site, investigating the target buildings, and presenting the important design features are presented in this study. Through data analyzes and literature reviews finding all design issues regarding daylight in these buildings were detected.

Case Study: Architectural faculty

Project Location

Sarajevo is the capital of Bosnia and Herzegovina, considered to be the largest city with a population of 275,524 placed within its administrative limits. Due to its rich history, Sarajevo is largely known for its diversity culturally and religiously, and even called sometimes as "Jerusalem of Europe" or "Jerusalem of the Balkans". One of the few cities in the world where you have a Catholic church, Orthodox church, a mosque, and synagogue within the same locality (Augustyn, 2019). Sarajevo described having a humid continental climate, experiencing large seasonal temperature differences. It is also influenced by oceanic zones, causing it to experience uniformly spread precipitation, along the four seasons. The average yearly temperature is 10 °C (50 °F), with January (-0.5 °C (31.1 °F) on average) being the coldest month of the year and July (19.7 °C (67.5 °F) on average) the warmest (IgorLacan, 2009).

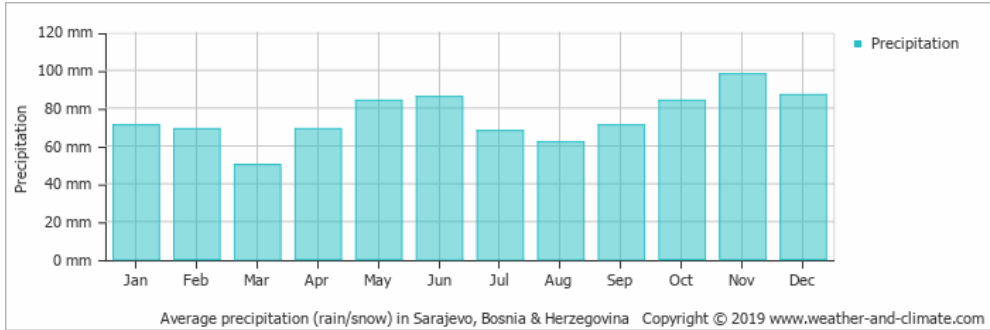


Figure 1. Sarajevo Precipitation Chart

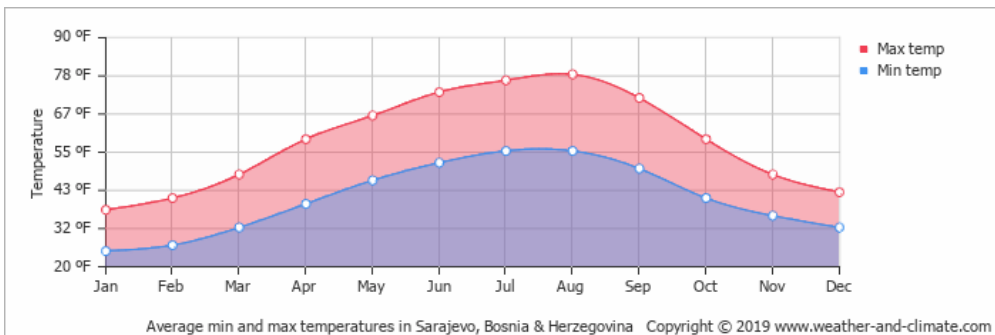


Figure 2. Sarajevo Temperature Chart

When it comes to cloudiness, Sarajevo can be described as a partly cloudy area, with an average year-round value of 59%. The cloudiest month to be in December 75%, while August would be the least. With December to have 41 sunny hours and August to have 270 sunny hours, according to the year-round average, Sarajevo has 1830 hours of sunny hours, which classify it as a medium sunny city (weather-and-climate, 2019).

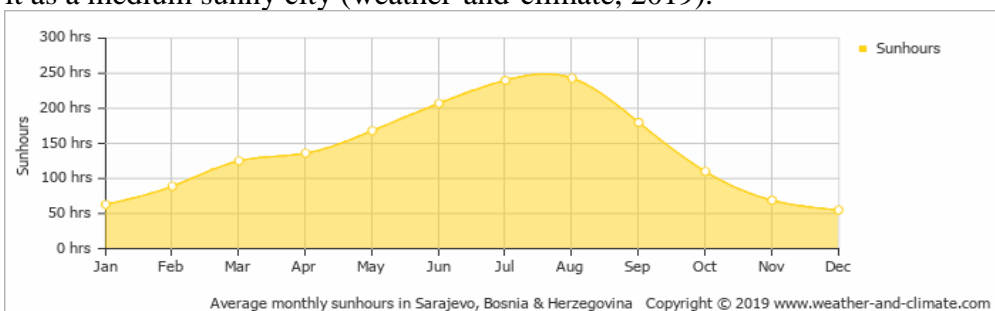


Figure 3. Sarajevo Sun Hours Chart

4.2. Site Analysis

The project is located on a flat site of 181.70m long and 47.45 wide. The location has shaped like a rectangle with an area of 10,014m². Situated on the Northern part of the campus of the University of Sarajevo, opposite to

the faculty of agriculture and food science, along Put Života street. The project site has a very good location near the center of the city. Most of the surrounding buildings in the same location were built in the Austro-Hungarian period, many of them are still devastated from the last war. Currently is surrounded by the following Educational institutes.

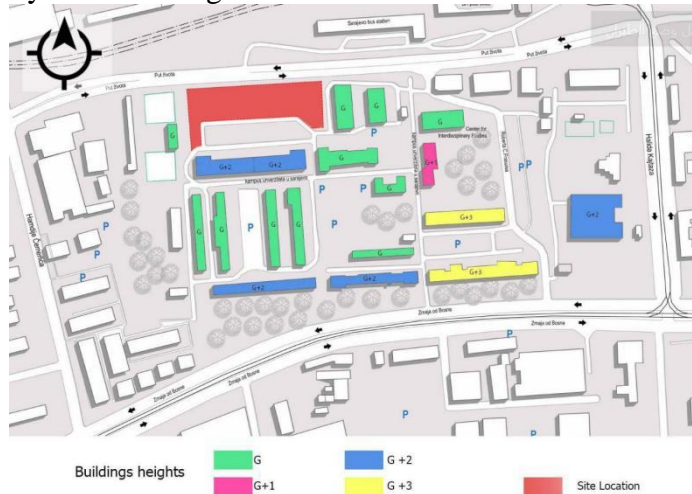


Figure 4. Site Analysis – Building Heights

Most of the surrounding buildings are low rise, no more than two or three floors, which restrict this project to a certain level of heights.

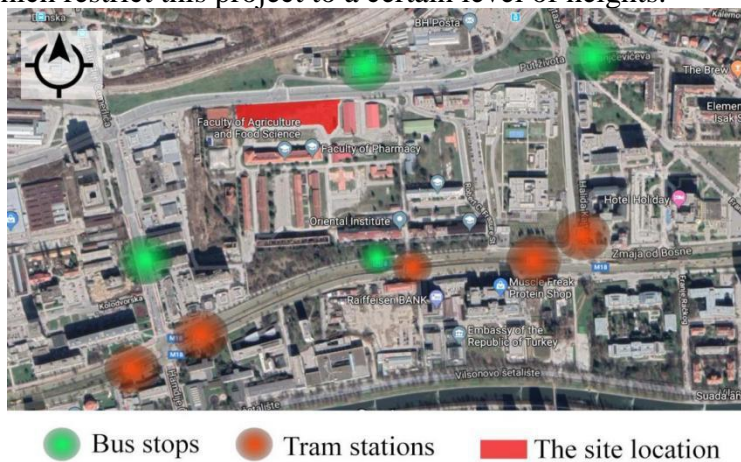
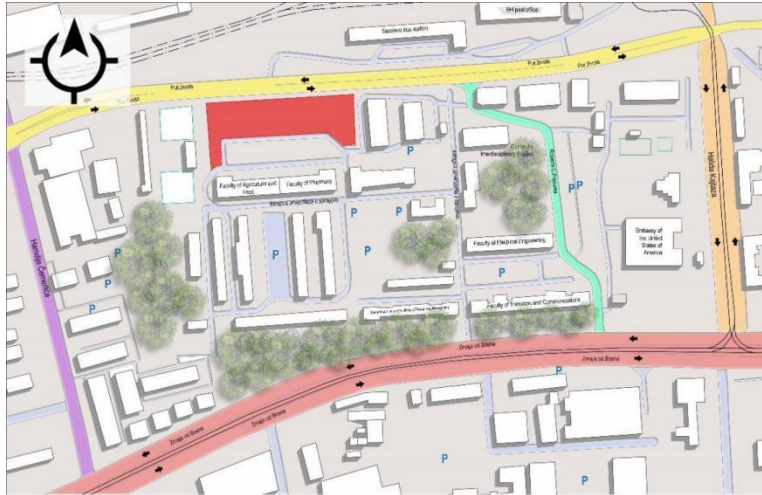


Figure 5. Site Analysis – Bus and Tram Stations



- The Project location
- Important street around the site:**
- Zmaja od Bosne ■ Haljda Kajtaza ■ Hamdije Čemerlića
- Put Života ■ Roberta C. Frasure

Figure 6. Site Analysis – Circulation

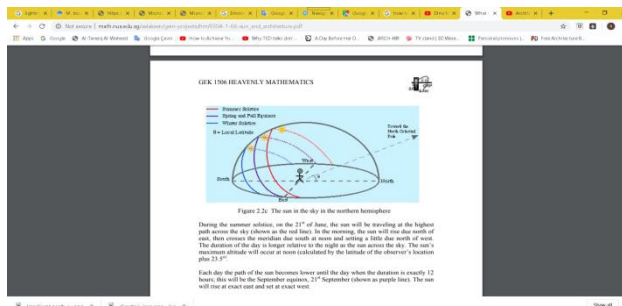


Figure 7. The Sun in the Sky in Northern Hemisphere

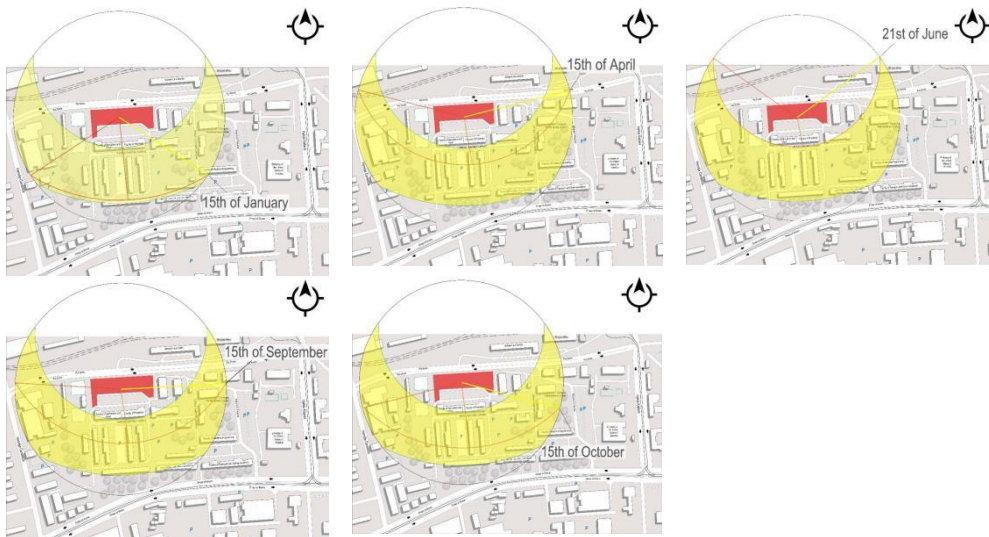


Figure 8. Sun Diagram: January 15th, April 15th, June 15th, September 15th and October 15th.

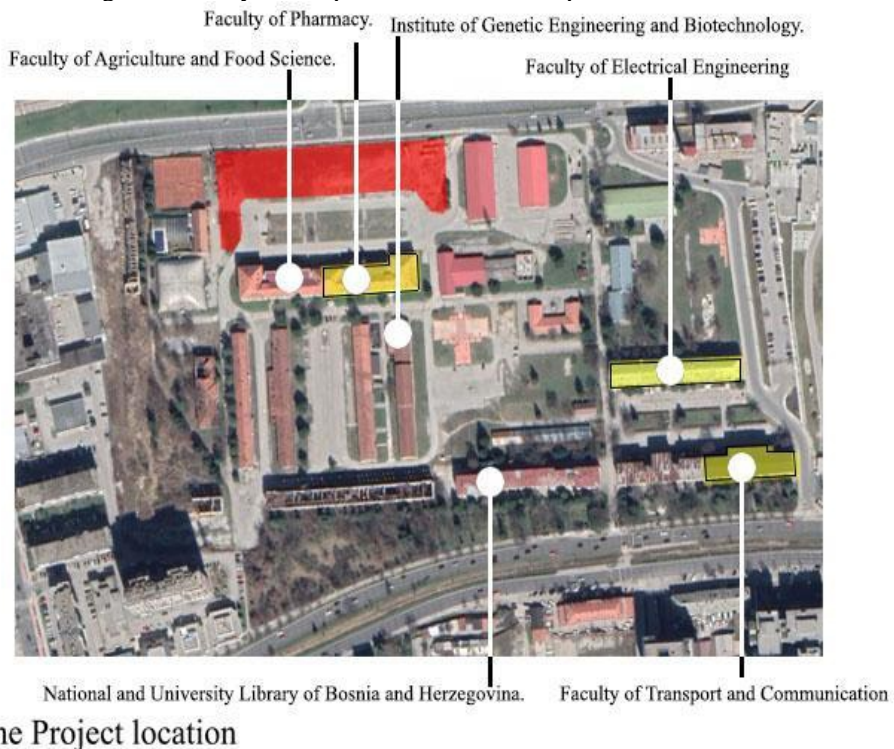


Figure 9. Critical Analyze of Daylight Design at the Campus of Sarajevo

4.3. Architectural Faculty

Architectural faculty at the campus of the University of Sarajevo is designed according to the site analysis, in respect of the climate, the

surrounding buildings, and circulation. Using the previous research as well as the appropriate architectural methods and strategies, to provide comfort and fulfill occupants' needs showed the elements that have a major impact on the design and the interior organization such as daylight, accessibility, flexibility, and spaciousness.

The building was designed in a way to feel lit, big, and spacious, avoiding long and dark corridors which feels very depressing during the cold winter. Therefore, three interior courtyards were added to the building, for providing light while connecting the inside with the outdoors.

The project consists of two parts which are connected through the main entrance lounge. On the right part there are:

On the ground floor: classrooms, offices and three interior courtyards.

On the first floor: offices, studios, exhibition and stationery store.

On the third floor: offices, studios, two amphitheatres and a gallery.

And on the left part of the building there are:

On the ground floor: the main amphitheater, offices and the restaurant.

On the first floor: offices, library and computer rooms.

On the third floor: offices and two studios, connected with the right part of the building through a long hall.

4.4. Faculty's Lighting Design Strategies Buildings' Orientation

Due to the project site and its rectangular shape, it was possible to orient the faculty along the east-west axis which allows the building to have the maximum benefits from both south and north façades. According to the literature review and articles, the southern façade is the best option for classrooms to have an efficient and uniform amount of daylight during the day [Figure 15]. It also allows the building to absorb the sun's heat energy during winter, minimizing the need for heating. Therefore, all classrooms and studios of the faculty were placed along the south façade of the building.

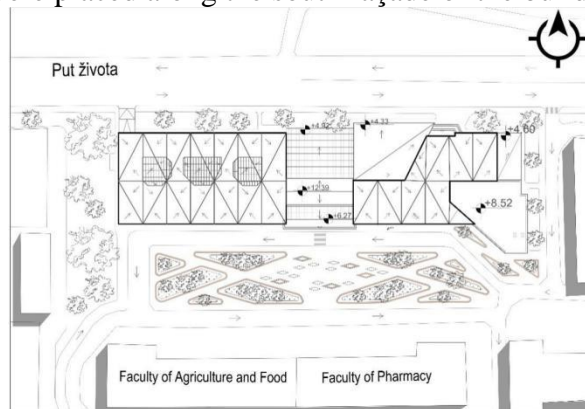


Figure 10. Project Site Plan.

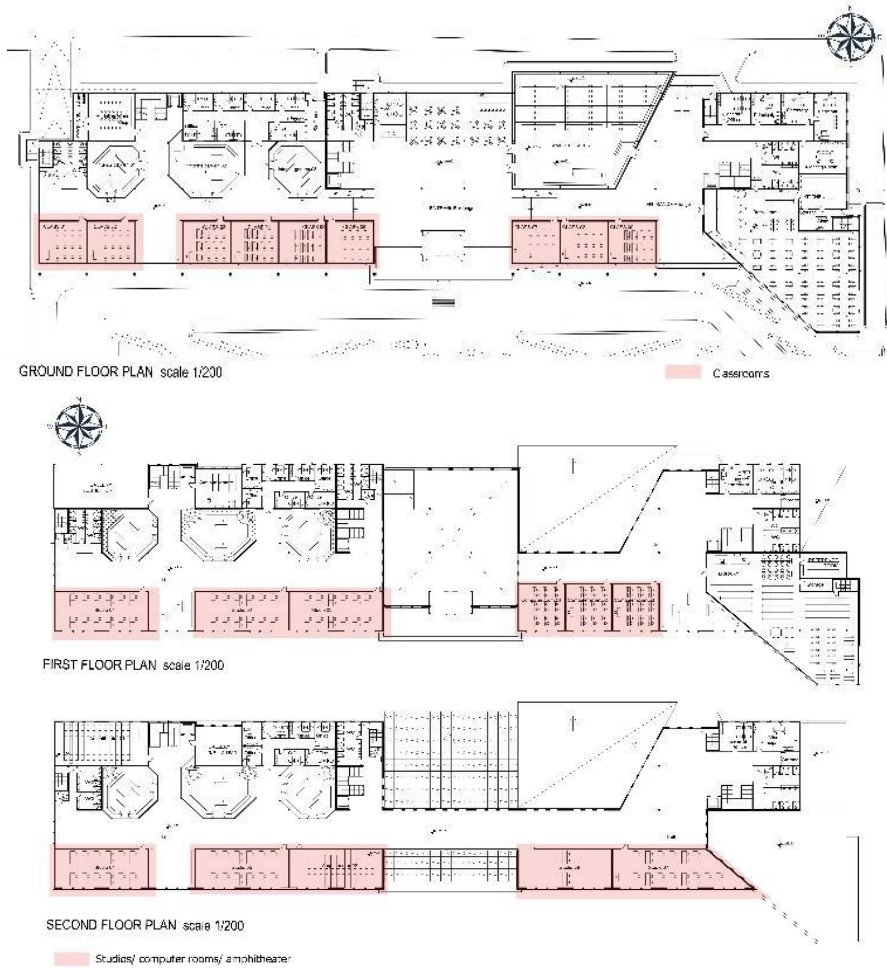


Figure 11. Orientation – Project Plans.

For the classrooms windows' proportions, in the literature review, it was advised to increase WWR to reach 35, 40, or 50%, but in this study the WWR in the classroom is 33%, keeping in mind windows act as heat bridge, and increasing WWR will cause more heat loss.

Windows in classrooms were divided into two parts, view windows which are the bigger part 1,75 x 6m, split equally into three parts, with low visible transmittance (Tvis) 40%. It has a parapet of 60cm. while the light window is high and has a more slender shape 0.5 x 6m, with high visible transmittance (Tvis)70%. it has a parapet of 2,05m above floor level.

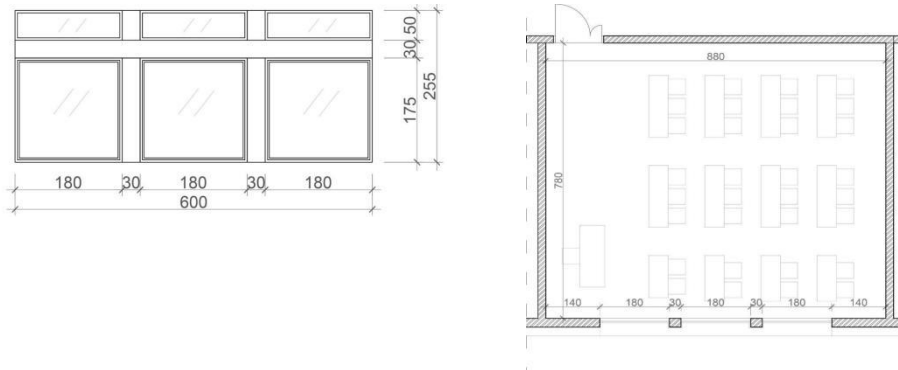


Figure 12. Classrooms Windows' Proportions and Faculty Classrooms – Ground Floor.



Figure 13. Classroom Render - Interior.

Windows made of low-E double glazed glass and polyvinyl chloride frame are used throughout the building. Its low U-value makes it more energy-efficient, allowing daylight while protecting the building from overheating during summer, and preventing heat loss during winter.

Used for the entrance lounge, a very good lighting strategy for big spaces, the lounge height is about 7m. Other than providing light skylights give the feeling of openness and connection with the outside environment.

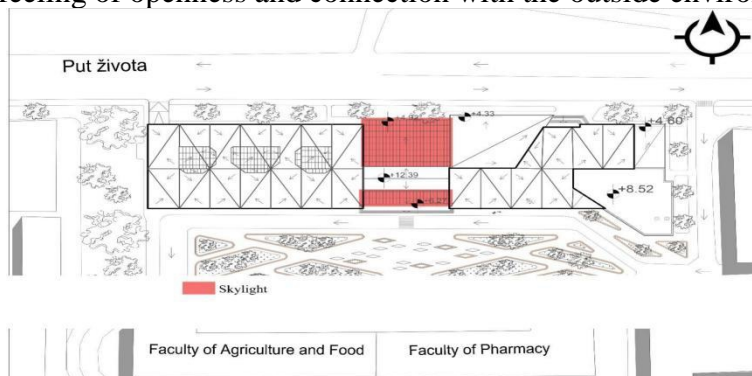


Figure 14. Site Plan - Skylights.



Figure 15. Project Render – Reception Lounge, Skylight.

Three atriums are added to the building through interior courtyards, to lighten the Faculty halls and avoid cold, long, and dark halls.

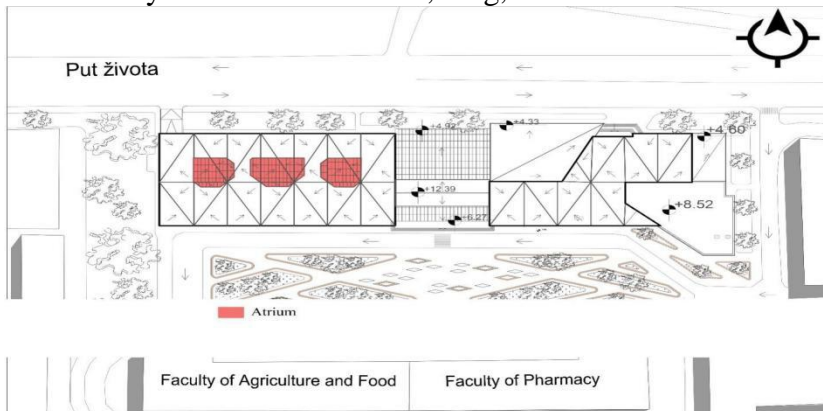


Figure 16. Site Plan - Atriums.



Figure 17. Faculty Render – Hallway, Atrium.

For south facade classrooms, exterior and interior light shelves are used, the exterior ones are for protection from overheating, while interior light shelves are used for reflecting light into the interior of the room. For eastern

and western facades vertical shading elements are used along with the windows, to protect the building from overheating in the morning and afternoon.

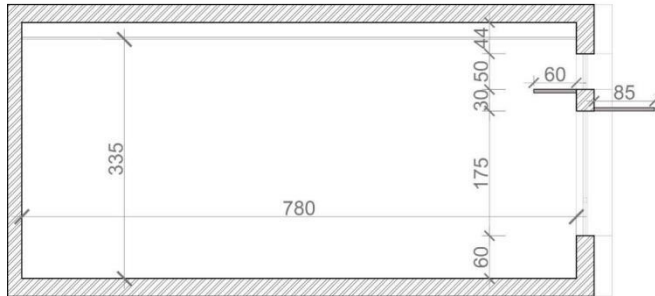


Figure 18. Classroom Section – Light Shelf.



Figure 19. Faculty Render – South Façade, Shading Elements.

Even if the school has a good lighting design it still needs an artificial lighting system for rainy and cloudy days, also for late evening classes. This Architectural Faculty will be using direct-indirect luminaires, which is advised for classrooms in the literature review (Benya, 2001). LED lights are used throughout the Faculty, for their good lighting quality and energy efficiency (mentioned previously).

The presence of daylight in classrooms is usually associated with visual comfort, which is largely needed for all the visual tasks that take place in classrooms. As proved through literature the presence of daylight in classrooms can significantly impact students' health. Underexposure to daylight is associated with vitamin D deficiency, which is connected to other serious illnesses other than bone frailty. Also, daylight's role in regulating sleep, increasing attention, alertness, cognitive performances, and physical activity gives it great importance in classroom design (Shishegar & Boubekri, 2016).

Discussion and Conclusion

In all the studies done by Tanner (2008), Heschong, Wright, & Okura (1999), and Nicklas & Bailey (1996) investigating the effect of daylight on students in classrooms' settings, it was shown that daylight is significant. Daylight can be significant for students' attentiveness and concentration which will eventually enhance their academic performance. Through a literature review, it was also stated and proved that the effect of daylight is not only significant for visual performance but also the mental and physical health of students. The study done by Küller & Lindsten (1992) proves that daylight is significant for students' hormone levels, which can affect their growth and sick leaves. These findings and information would lead architects and designers to understand the importance of daylight in classrooms, since controlling the amount of daylight accessibility have a significant effect on students' well-being as well as their learning outcomes.

Successful daylight design is deeply integrated with architectural design and needs to be thought about from the very beginning of the architectural process. It begins by studying the site location and shape, the surrounding buildings and vegetation, going through building regulations and standards. After that, the designing process begins, where the architect starts making decisions about the building shape and orientation for the building to make use of the location in the best way possible. Then organizing internal spaces and designing appropriate fenestration systems which covers the windows' sizes, glazing materials and type of openings (roof monitors, skylight, atrium...) is considered. After that, appropriate shading systems (interior and exterior) and artificial lighting are added. Once the designing process is over, the designer needs to follow up and supervise the construction and installation process to avoid mistakes and misinterpretation.

After site observation and analysis, problems, and issues regarding daylight design have been detected and found like inappropriate fenestration systems and shading elements, classrooms on north façades, long and dark hallways.

The purpose of architecture goes far beyond creating a shelter and putting a roof above people's heads. It has a lot to do with creating comfort when a building is made its role not only to stand and be safe but to create an appropriate environment which serves the building mission whether it is educational, commercial, or residential. Paying attention to architectural details like the color of the walls, the windows' sizes and location, thermal comfort, ventilation, and proportional spaces are essential and need to be carefully considered. This paper merely put the spotlight on one of these aspects, to assert the effect of daylight on education, and all the details that should be thought throughout the designing process. Through the literature review, it was shown that daylight design and architectural design are deeply

connected from the beginning to the end. Besides, previous studies indicate that well-daylight classrooms can increase students' performance because of its positive impact on visual comfort, mood, and physical health.

In the end, some of the most important recommendations should be regarded and considered for enhancing the daylight design of the building (Ander, 2015):

- High windows, clerestories, or roof monitors that allow sunlight penetration from high spaces permit light deeper into space while preventing an extravagant amount of uncomfortable luminance.
- Reflecting natural light through appropriate methods or materials will increase the interior luminance and minimize the need for electrical light. Light shelves if designed right can be a good strategy for this.
- The use of sloped ceilings can help introduce more sunlight into a room.
- Avert direct sunlight for important visual tasks, intense luminance will cause discomfort and poor visibility.
- Direct light can be prevented through shading systems, which can also help to distribute it.
- Understanding orientations, and the use of shading elements. For example, light shelves are highly effective for south facades, but not so much for east or west facades.

References:

1. Aan Het Rot, M., Benkelfat, C., Boivin, D. B., & Young, S. N. (2008). Bright light exposure during acute tryptophan depletion prevents a lowering of mood in mildly seasonal women. *European Neuropsychopharmacology*, 18(1), pp. 14-23.
2. American Institute of Architects. (1982). *Daylighting*. The Institute.
3. Ander, G. D. (2015, 09 15). *Daylight* Retrieved 08 21, 2019, from <https://www.wbdg.org/resources/daylighting>
4. Antonius, R. (2003). *Interpreting Quantitative Data with SPSS*. Sage Publications Ltd.
5. Aries, M. B., Aarts, M. P., & van Hoof, J. (2015). Daylight and health: A review of the evidence and consequences for the built environment. *Lighting Research & Technology*, 47(1), pp. 6-27.
6. Augustyn, A. (2019). *Sarajevo NATIONAL CAPITAL, BOSNIA, AND HERZEGOVINA*. Retrieved August 09, 2019, from Britannica: <https://www.britannica.com/place/Sarajevo>
7. Boubekri, M., Cheung, I. N., Reid, K. J., Wang, C. H., & Zee, P. C. (2014). Impact of windows and daylight exposure on overall health and sleep quality of office workers: a case-control pilot study. *Journal of clinical sleep medicine*, 10(06), pp. 603-611.

8. Boyce, P. (1998). Why daylight. In Proceedings Daylight 98, *International Conference on Daylighting Technologies for Energy Efficiency in Buildings*, Ottawa, Ontario, Canada.
9. Boyd, R. A. (1957). *U.S. Patent No. 2,812,691*. Washington, DC: U.S. Patent and Trademark Office.
10. Cammarano, S., Pellegrino, A., Lo Verso, V. R. M., & Aghemo, C. (2015). Assessment of daylight in rooms with different architectural features. *Building Research & Information*, 43(2), pp. 222-237.
11. Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*. Sage Publications Ltd.
12. Crossman, A. (2018). *What Is Qualitative Research?*. Retrieved from <https://www.thoughtco.com/qualitative-research-methods-3026555>
13. De Luca, F., Voll, H., & Thalfeldt, M. (2016). Horizontal or vertical? Windows' layout selection for shading devices optimization. *Management of Environmental Quality: An International Journal*, 27(6), pp. 623-633.
14. Devlin, A. S., & Arneill, A. B. (2003). Health care environments and patient outcomes: A review of the literature. *Environment and Behavior*, 35, pp. 665-694.
15. Dubois, M. C. (2009). *Effect of glazing types on daylight quality in interiors: conclusions from three scale model studies*. Experiencing Light.
16. Dubois, M. C., Cantin, F., & Johnsen, K. (2007). The effect of coated glazing on visual perception: A pilot study using scale models. *Lighting Research & Technology*, 39(3), pp. 283-304.
17. Edwards, L., & Torcellini, P. (2002). *Literature review of the effects of natural light on building occupants* (No. NREL/TP-550-30769). National Renewable Energy Lab., Golden, CO.(US).
18. Efficient Windows Collaborative. (2019). *WINDOW TECHNOLOGIES: Glass*. Retrieved 10 12, 2019, from commercial windows. org: <https://www.commercialwindows.org/vt.php>
19. Gifford, R., Hine, D. W., & Veitch, J. A. (1997). Meta-analysis for environment-behavior research, illuminated with a study of lighting level effects on office task performance. In G. T. Moore & R. W. Marans (Eds.), *Advances in environment, behavior, and design* (Vol. 4). New York: Plenum. pp. 223-253.
20. Godhamgaonkar, A. (2005). Improving Daylight Illumination and Energy Efficiency Using an Atrium in a Mixed-Use Building. Published Master thesis, The University of Arizona.
21. Green Passive Solar Magazine. 2012. *Orientation / South Facing Windows*. Accessed09

- 09,2019.<https://greenpassivesolar.com/passivesolar/buildingcharacteristics/orientation-south-facing-windows/>.
22. Cohen, S., Kessler, R. C., & Gordon, L. U. (1997). Strategies for measuring stress in studies of psychiatric and physical disorders. In S. Cohen, R. C. Kessler & L. U. Gordon (Eds.), *Measuring stress: A guide for health and social scientists* (pp. 3-26). New York: Oxford University Press.
 23. Haglund, K. L. (2010, April). Window selection methodologies and optimization in high-performance commercial buildings. In *Building Enclosure Science & Technology Conference (BEST2), Fenestration (Vol. 1)*, pp. 12-24.
 24. Hathaway, W. E., Hargreaves, J. A., Thompson, G. W., & Novitsky, D. (1992). *A study into the Effects of Light on children of Elementary School Age*. Alberta Education.
 25. Hee, W. J., Alghoul, M. A., Bakhtyar, B., Elayeb, O., Shameri, M. A., Alrubaih, M. S., & Sopian, K. (2015). The role of window glazing on daylighting and energy saving in buildings. *Renewable and Sustainable Energy Reviews*, 42, pp. 323-343.
 26. Heschong, L., Wright, R. L., & Okura, S. (2002). Daylighting impacts on human performance in school. *Journal of the Illuminating Engineering Society*, 31(2), pp. 101-114.
 27. Holick, M. F. (2008). Photobiology and non-calcemic actions of vitamin D. In *Principles of Bone Biology* (pp. 795-811). Academic Press.
 28. Ibrahim, N., & Hayman, S. (2005, April). Daylight design rules of thumb. In *Conference on Sustainable Building South East Asia (Vol. 11, p. 13)*.
 29. Ibrahim, N., & Zain-Ahmed, A. (2007, September). Daylight availability in an office interior due to various fenestration options. In *2nd PALENCIA Conference and 28th AIVC Conference on Building Low Energy Cooling and Advanced Ventilation Technologies in the 21st Century*, Crete island, Greece (Vol. 1), pp. 436-440.
 30. Kaplan, R. (1993). *The role of nature in the context of the workplace*. *Landscape and Urban Planning*, 26, pp. 193-201.
 31. Kingspan insulation UK. (2016, 10 5). *What are U-values, R-values, and lambda values?* Retrieved 09 12, 2019, from kingspan.com: <https://www.kingspan.com/gb/en-gb/products/insulation/kingspan-insight/articles-and-advice/what-are-u-values-r-values-and-lambda-values>
 32. Küller, R., & Lindsten, C. (1992). Health and behavior of children in classrooms with and without windows. *Journal of Environmental Psychology*, 12(4), 305-317.

33. Lacan, I., & McBride, J. R. (2009). War and trees: The destruction and replanting of the urban and peri-urban forest of Sarajevo, Bosnia and Herzegovina. *Urban Forestry & Urban Greening*, 8(3), pp. 133-148.
34. Lam, W. M. C., Ripman, C. H. (1992). *Perception and lighting as formgivers for architecture*. New York: Van Nostrand Reinhold.
35. Lansdowne, A. T., & Provost, S. C. (1998). Vitamin D3 enhances mood in healthy subjects during winter. *Psychopharmacology*, 135(4), pp. 319-323.
36. Littlefair, P. J. (1995). Light shelves: computer assessment of daylighting performance. *International Journal of Lighting Research and Technology*, 27(2), pp. 79-91.
37. Lorie. 2018. *Daylight & Sustainable Design*. 08 28. Accessed 09 06, 2019. <https://homeenergyheroes.com/2018/08/28/daylighting-sustainable-design/>.
38. Mangkuto, R. A., Rohmah, M., & Asri, A. D. (2016). Design optimization for window size, orientation, and wall reflectance with regards to various daylight metrics and lighting energy demand: A case study of buildings in the tropics. *Applied energy*, 164, pp. 211-219.
39. McLeod, A. (2017). *Types of Research Approaches*. Retrieved from https://www.google.ba/search?source=hp&ei=u8tAXJLhDMWhsAH63qn4CA&q=mcleod+2017+types+of+research&btnK=Google+Search&oq=mcleod+2017+types+of+research&gs_l=psy-ab.3...100743.111005..111230...14.0..0.379.5175.0j37j1j1.....0....1..gws-wiz.....6..35i39j0j0i67j0i10j0i22i30j33i160j33i13i21j33i21j33i22i29i30.4FnI5Zq2BB0
40. Molinski, M. 2009. *Daylighting: Overcoming Glare and Heat Challenges*. 1 1. Accessed 09 04, 2019. <https://www.facilitiesnet.com/lighting/article.aspx?id=10448&off10448>
41. Mott, M. S., Robinson, D. H., Walden, A., Burnette, J., & Rutherford, A. S. (2012). *Illuminating the effects of dynamic lighting on student learning*. Sage Open, 2(2), 2158244012445585.
42. Navvab, M. & Selkowitz, S. (1984). Daylighting data for atrium design. *Proceedings of the 9th National Passive Solar Conference*, Columbus, OH, pp. 495-500.
43. Nicklas, M. H., & Bailey, G. B. (1996). Analysis of the performance of students in daylit schools. *Research Report, Innovative Design*, pp.6.
44. O'Brien, W., Kapsis, K., and Athienitis, AK. (2013), Manually-operated window shade patterns in office buildings: a critical review, *Building and Environment*, Vol. 60, February, pp. 319-338.

45. OECD. Publishing, & International Energy Agency. (2006). *Energy technology perspectives: Scenarios and strategies to 2050*. Organization for Economic Co-operation and Development.
46. Olgyay, V. & Olgyay, A. (1957), *Solar Control and Shading Devices*, Princeton University Press, Princeton, NJ.
47. Ott, J. N. (1976). Influence of fluorescent lights on hyperactivity and learning disabilities. *Journal of Learning Disabilities*, 9(7), pp. 417-422.
48. Parmar, R. (2019). *Importance of Building Orientation in Architecture*. Retrieved July 30, 2019, <https://gharpedia.com/importance-of-building-orientation-in-architecture/>
49. Parpairi, K., Baker, N., & Steemers, K. (2000). Daylighting quality through user preferences: Investigating libraries. In *Proceedings of PLEA*, pp. 611-616.
50. Plympton, P., Conway, S., Epstein, K. (2000). Daylighting in Schools: Improving student performance and health at a price schools can afford. *American Solar Energy Society Conference*. Madison, Wisconsin, National Renewable Energy Laboratory.
51. Pulay, A. S. (2010). *Awareness of Daylighting on Student Learning in an Educational Facility*. University of Nebraska - Lincoln, Lincoln.Rea, M. S. (2000). The IESNA lighting handbook: reference & application.
52. Robbins, C. L. (1985). Daylighting. *Design and analysis*. United States. Van Nostrand Reinhold, New York, NY , pp. 3-188.
53. Ruck, N., Aschehoug, O., Aydinli, S., Christoffersen, J., Courret, G., Edmonds, I., ... & Michel, L. (2000). *Daylight in Buildings-A sourcebook on daylighting systems and components*. Lawrence Berkeley National Laboratory, 9910-47493.
54. Samani, S. A., & Samani, S. A. (2012). The impact of indoor lighting on students' learning performance in learning environments: A knowledge internalization perspective. *International Journal of Business and Social Science*, 3(24).
55. SEPCO. (2013). *The Advantages of LED Lights for the Environment*. Retrieved July 31, 2019, from [sepco-solar lighting: https://www.sepco-solarlighting.com/blog/bid/145611/the-advantages-of-led-lights-for-the-environment](https://www.sepco-solarlighting.com/blog/bid/145611/the-advantages-of-led-lights-for-the-environment)
56. Shishegar, N., & Boubekri, M. (2016, April). Natural light and productivity: Analyzing the impacts of daylighting on students' and workers' health and alertness. In *Proceedings of the International Conference on "Health, Biological and Life Science"*(HBLs-16), Istanbul, Turkey, pp. 18-19.

57. Tanner, C. K. (2008). Explaining relationships among student outcomes and the school's physical environment. *Journal of advanced academics*, 19(3), pp.444-471.
58. Urlaub, S. & Grün, G. & Foldbjerg, P. & Sedlbauer, K. (2016). *The impact of ventilation and daylight on learning in schools – a summary of the actual state of knowledge*.
59. Vandewalle, G., Balteau, E., Phillips, C., Degueldre, C., Moreau, V., Sterpenich, Peigneux, P. (2006). Daytime light exposure dynamically enhances brain responses. *Current Biology*, 16(16), pp.1616-1621.
60. Vandewalle, G., Gais, S., Schabus, M., Balteau, E., Carrier, J., Darsaud, A., & Maquet, P. (2007). Wavelength-dependent modulation of brain responses to a working memory task by daytime light exposure. *Cerebral cortex*, 17(12), pp.2788-2795.
61. Vandewalle, G., Schmidt, C., Albouy, G., Sterpenich, V., Darsaud, A., Rauchs, G., ... & Maquet, P. (2007). *Brain responses to violet, blue, and green monochromatic light exposures in humans: the prominent role of blue light and the brainstem*. PloS one, 2(11), e1247.
62. Velux. (2016). *Benefits of Daylight*. Retrieved July 31, 2019, from Velux: <https://www.velux.com/our-company/privacy-statement>
63. Veitch, J. A., & Galasiu, A. D. (2012). *The physiological and psychological effects of windows, daylight, and view at home: review and research agenda*. Research Report. National Research Council of Canada. Institute for Research in Construction.
64. Veitch, J. A., & Newsham, G. R. (1998). Lighting quality and energy-efficiency effects task performance, mood, health, satisfaction, and comfort. *Journal of the Illuminating Engineering Society*, 27(1), pp.107-129.
65. Wurtman, R. J. (1975). The effects of light on the human body. *Scientific American*, 233(1), pp. 68-79.
66. Zomorodian, Z. S., Korsavi, S. S., & Tahsildoost, M. (2016). *The effect of window configuration on daylight performance in classrooms: A field and simulation study*. دانشگاه علم و صنعت ایران, 26(1), pp. 15-24.



“Soft” TQM and Performance of Local Government (A Case Study of Municipality of Tirana, Albania)

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[Doi:10.19044/esj.2021.v17n1p46](https://doi.org/10.19044/esj.2021.v17n1p46)

Submitted: 08 September 2020

Accepted: 12 January 2021

Published: 31 January 2021

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Cite As:

Hasanaj K. R., Manxhari M., Ozuni E. & Sinaj Z. (2021). “Soft” TQM and Performance of Local Government (A Case Study of Municipality of Tirana, Albania). European Scientific Journal, ESJ, 17(1), 46. <https://doi.org/10.19044/esj.2021.v17n1p46>

Abstract

Nowadays, the philosophy of organizational management with the client at the center of managerial policies and operations, has been mastered not only by profitable organizations but also non-profit ones. Central and local government bodies, mainly in developed countries, have successfully applied consumer-oriented management philosophy. Quality management is one of the disciplines, equipped with all the theoretical and practical arsenal for the successful implementation of this orientation. It is being used as a productive and innovative tool, to achieve the objectives of profit and non-profit organizations. Providing quality services by local units means increasing the satisfaction of service beneficiaries (individual or organization), creating trust through transparent processes, accountability and democratic dialogue. The aim of this study is to assess the level of implementation of "soft" elements of Total Quality Management [TQM] according to the perception of employees in local units in the city of Tirana and its impact on performance.

Keywords: TQM, soft elements, performance, local government

1.1 Introduction

Local institutions offer a variety of services, the importance of which is undisputed for all stakeholders such as firms, institutions and individuals. Precisely for this reason, the focus of their activity should be the improvement of local services towards achieving optimal standards. The Municipality of Tirana is a local institution that offers a large number of services, generally accessible to citizens, physical and legal entities, but also to local visitors and foreign tourists. This institution has its focus on improving the quality of local services towards achieving optimal standards, to become the EU (Municipality of Tirana, 2018).

The Municipality of Tirana, is the largest local unit in the country, serving about 1/3 of individuals and companies operating in the country. According to data from the Institute of Statistics for regional GDP, the Tirana region is the engine of the Albanian economy, generating over 36% of the value added at the national level (INSTAT, 2018). In the Municipality of Tirana, a series of initiatives, investments and projects have been undertaken in order to improve services and implant new services, which are specifically expressed in the provision of improved services, accessible services, and integrated services, reducing opportunities for corruption and strengthening ethics in the provision of public services (Tirana Municipality, 2018).

Local government assessment studies show that although service planning and service systems have begun to take root in the municipality, the quality of some of its services have not yet reached the projected levels. Transparency and performance tracking systems are judged to be inappropriate (DAP, 2018). From the global dimensions of local, total quality management results as a successful and widely used tool for improvements in service delivery.

Total Quality Management (TQM) remains one of the most discussed issues to improve quality in the United States as well Europe. Developments and changes in the public sector made the need for quality not just a concern for production. Public institutions are also facing the same reality and challenges as well. In the context of political, socio-economic and demographic changes, the challenge of providing quality services becomes even more important. These developments have also influenced the public organization to consider quality concepts.

Numerous debates have been provoked whether quality concepts from the manufacturing or private sector could be transferred to the public sector. TQM proponents argue that large private companies and large public authorities face the same bureaucratic problems, while critics support the idea

that the private and public sectors operate under different frameworks and conditions (Dobrin, 2008).

The focus on the citizen began to dominate the quality management in the public sector. This new perspective of the needs and requirements of citizens as consumers, developed parallel with the plans for the restructuring of public services, through decentralization.

In Albania, the quality of the public sector is not at satisfactory levels (DAP, 2018).

“Good local government is the backbone of democracy as it directly affects the daily lives of citizens by the way it interacts and serves them. From this perspective, effective local government requires two-way communication between government and citizens (IDRA & Chatterjee, 2018).”

The importance of the role of local government has often been examined by numerous literatures. Numerous theorists take a critical view of centralism and focus on local government as a counterweight or alternative to the growing power of central government. According to Morphet (2008), local government can only be seen or understood within the first state as a whole. The restructuring of local government cannot be undertaken without changing the nature of the general state.

The Municipality has its focus on improving the quality of services it offers towards achieving optimal standards, in order to become a European model capital (Municipality of Tirana, 2019). But given its complexity and high concentration of the population, it makes it difficult to achieve high quality services, pushing the municipality to undertake a series of initiatives, projects and investments that are carried out for the first time, or to improve the existing ones to improve the quality of life and the provision of services for the citizen.

Undoubtedly, a large number of the population has turned Tirana into a city that suffers from concreting and for this reason the municipality has invested in green spaces, as well as in reducing the number of nuclear power plants by creating lanes for citizens who use bicycles, in order to minimize pollution created. This initiative has been joined by well-known figures to raise awareness among citizens. The municipality has also created policies, projects, investment to improve the quality of life of citizens and some of them are:

1.2 TQM in the Municipality of Tirana:

As a local institution, the Municipality of Tirana mentioned in the Star2 Project report, have undertaken a series of initiatives and projects for local services to be effective, quality oriented, participatory and inclusive.

Starting from the main element of TQM, the focus on the citizens [citizens satisfaction], to better understand the citizen [individual or

organizational consumer], the municipality conducts periodic surveys through the Civil Opinions Sector in the Directorate of Communication with Citizens. The perception of the citizen is measured on the changes or improvements of the services provided by the municipality (Municipality of Tirana, 2019). The Municipality of Tirana, with the support of UNDP, uses the Open Data portal, to increase transparency in the municipality and to increase the trust of the citizens (Municipality of Tirana, 2020). Also, a number of departments in the municipality, have included in their strategy the term continuous improvement of quality or to continuously improve the quality of life of the citizen, (Municipality of Tirana, 2020), considering another element of TQM.

Training and conferences conducted to adapt to changes in systems or processes, as well as expand the knowledge of municipal employees, including managers by improving management skills; this is an important part of this to improve the quality of service. Thus, it has been noted to play an important part in TQM.

Benchmarking is another approach used by organizations, adopted by TQM philosophy, which measures performance through the national comparison system for selected administrative/public services [benchmarking]. Benchmarking is often treated as an ongoing process in which organizations constantly seek to challenge their dimensions. The inclusion of such a system allows organizations to develop plans to improve or adopt best dimensions in order to increase performance. (STAR2 Progress Report, 2019). The adoption of such a philosophy shows the adoption of TQM in the municipality of Tirana.

1.3 Total Quality Management Dimensions

As a measure of the "soft" elements of TQM, three dimensions have been selected as the most suitable for the objectives of the study: leadership, human resources and focus on the citizen. Similar selections are found in other analogous studies (Saleh, et. al., 2013).

According to Ishikawa and Deming, leadership together with customer focus make up two key elements of a better implementation of TQM. Human resource management is as well, an important element according to the gurus of TQM, who consider the participation, growth and training of all workforce essential for quality management (Singha, et.al., 2018).

Leadership directly affects the success of TQM by ensuring the TQM concepts can be implemented in the organization, but according to Ishwakwa the senior management level is responsible for cultivating a TQM culture for the organization. High levels of management also play a key role in quality efforts (Hessing, 2018). In the 14 points of Deming, high management functions are explained to create an environment where customers are satisfied, the workforce is trained, involved in decision making and

empowered to contribute to customer satisfaction and continuous improvement. According to Deming, high managerial level is responsible for 94% of quality-related problems (Deming, 1986). According to the researcher, the inclusion of high managerial level is essential in quality management and consequently the creation of a higher quality performance (Flynn et al, 1995; Ahire et al., 1996; Juran, 1989). The senior management acts as a promoter of TQM implementation, setting values, goals and systems to meet customer needs and expectations and improve organizational performance (Ahire et al., 1996; EFQM Award, MBQA).

Human resource management is a key element, which addresses the effectiveness of human resources in the organization in relation to training and development, teamwork and motivation. Garavan, et al. (2020) argued that human resources have the deepest impact on organizational performance. Human resource development and management is part of the “soft” elements of quality management. This element examines “the effectiveness of the organization's efforts to develop and realize the full potential of the workforce, including management, while maintaining a favorable environment for full participation, quality leadership and organizational growth (Evans & Lindsay 201)”.

Customer focus is an element that shows how attentive the organization is to the needs and expectations of the client and how effective it is in terms of managing customer relationships. Conversion of a customer-oriented organization has become one of the main challenges facing organizations today. Adapting and implementing strategies aimed at improving customer satisfaction should be at the heart of any organization (Armstrong, 2006).

All quality experts agree on the importance of exploring customer needs and expectations so that they are satisfied. According to Deming, “the client is the most important part of the production line (Deming, 1986).” Deming encourages organizations to understand the needs and wants of customers in the present and the future, so that products and services can be designed in such a way to meet exactly those needs and wants. He also argues that dissatisfied customers are detrimental to business performance.

1.3.1 Organizational performance

TQM is often used as a multidimensional approach to measuring organizational performance. The Main Performance Results, in the EFQM Excellence Model (2010) are defined as “the measure of the organization's achievements in relation to its planned performance (EFQM, 2010).” The results document the relationship between what organizations do in terms of quality management dimensions and results achieved, results that are obtained in several different ways. Quality assessment models view key organizational

performance measurements as multiple dimensions, including product and service outcomes, financial and market outcomes, customer-focused outcomes, process effectiveness outcomes, workforce-focused outcomes and leadership outcomes (Jaafreh & Al-abedalla, 2012; Shafiq, et. Al., 2017).

2. Research Methodology

Initially this paper provides a theoretical scheme of the "soft" elements of TQM, analyzing the extent of implementation of these elements and the impact they have on organizational performance. Also, the study made an assessment of the quality of services taking into account the expectations and organizational consumer perceptions, with particular focus on reform in local units in Municipality of Tirana. Specifics of the study undertaken considered the questionnaire as a suitable instrument for collecting primary data. Then the structured questionnaire was used as a research tool. Administration was carried out by field distribution. To assess the level of implementation of the "soft" elements of TQM in the municipality and the impact it has on organizational performance, was distributed in the municipality of Tirana and measured through three independent variables, which were defined as the "soft" dimensions of TQM [leader, human resource practices and citizen focus], as well as the five dependent variables of organizational performance. The data was then analyzed with SPSS-AMOS software.

2.1 Study Population

For the evaluation of "soft" dimensions of TQM, the Municipality of Tirana has been elected as a representative. Questionnaires were distributed by hand to each respondent and collected later after their completion. A total of 260 questionnaires were distributed, 11 of which were returned to unfilled. This number was calculated based on the formula.

2.2 Analysis and Results

Initially, this analysis was subjected to 30 questions, which were constructed to measure the level of 'soft' TQM in the Municipality. The appropriateness of the data for factor analysis was then assessed. From Table 30, Annex II, it is noted that the value of Kaiser-Meyer-Okin is exceeding the recommended value of 0.665, which in this case indicates that the questions are predicted by each factor. Also, from the Bartlett test, it is observed that $p = .000$. This indicates that the variables have a sufficiently high correlation to provide reasonable grounds for factor analysis. From the exploratory analysis for x, the Rotated Component Matrix was used. It is reported greater and seen by the matrix that nine components were detected of variance than 1 which are: leadership, teamwork, training and development, motivation, citizen focus.

In terms of organizational performance (y) there is 1 factor out of 5 tested in artificial variables. An assessment of the appropriateness of the data for factor analysis; it is noted that the Kaiser-Meyer-Okin value is exceeding the recommended value of 0.676. Also, from the Bartlett test, it is observed that $p = .000$, the variables have a sufficiently high correlation.

2.3 Reliability and Validity of the Questionnaire

Reliability is an assessment of the degree of consistency between multiple measurements of a variable and the reliability coefficient that assesses the consistency of the whole scale, with alpha Cronbach (Hair, et al., 2006; Sekaran & Bougie, 2009). Among the indicators used for internal consistency, the Cronbach alpha coefficient is the most common indicator (Pallant, 2007). In this study, internal Cronbach's consistency alpha measurement was undertaken to assess the overall reliability of the measurement scale, where the alpha gives an estimate of the percentage of total variance that is not due to the error representing the reliability of the scale (Oppenheim, 1992).

In relation to the questionnaire, the data of the questionnaires collected during the pilot test were processed and used to judge the internal validity through the Cronbach's Alpha Test. The validity of the questionnaire was tested by factor analysis.

In this case, the internal validity resulted in an unacceptable level at $p = 05$.

As a start a reduction of questions was made, eliminating questions which had the same meaning. Also, the questions that were important were asked after the demographic data. After identifying the problem and correcting it, the internal reliability was again assessed, resulting in 0.78; It is at acceptable levels.

In order to perform data analysis, in this study, various statistical methods were used, such as: factorial exploratory analysis (EFA), linear regression, etc. These analyzes have been based on literature review (Saleh & Hasan, 2015; Shaukat, et. al.; 2000).

2.4 Data analysis method

After collecting the data, their coding was performed and then the database was created, using the SPSS program. The instrumental factor structure was first extracted and then the Cronbach alpha coefficients were measured to see the reliability of the internal consistency of the scales used in this study. Subsequently, normalization tests (asymmetry and excess) were performed as well as the control for the lost data was performed.

To answer the first question of the study, a descriptive analysis was conducted:

- What is the level of application of the “soft” elements of TQM in the Municipality of Tirana? These include sample size, frequencies,

averages, variances, and standard deviations to describe the sample and distribution of the sample.

The linear regression model was used to answer the study's 2, 3, and 4 question:

- Does leadership as a dimension of “soft” of TQM affect organizational performance?
- Does human resources as a dimension of “soft” TQM affect organizational performance?
- Does focus on the citizen as a dimension of “soft” TQM affects organizational performance?

Exploratory factor analysis (EFA) was used in this study. It is performed when the researcher is unsure of the number of factors that may exist between the numbers of variables mentioned above.

2.5 Descriptive Analysis

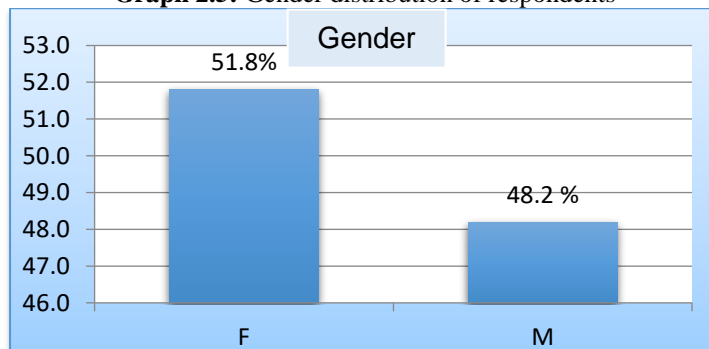
General Characteristics of the Population

The primary purpose of this section is to describe the demographic structure of participants with indicators such as: (a) Gender, (b), Age (c) Education and (d) Experience etc. Descriptive information, which includes simple statistics and distribution measures, is presented in the following figures.

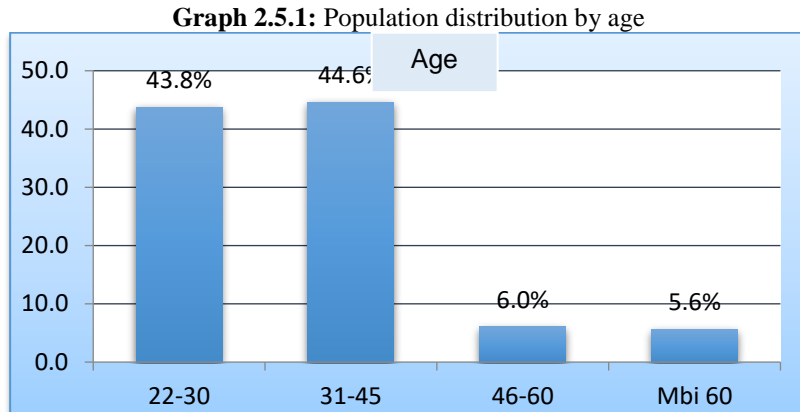
Sample characteristics

Such demographic factors as gender, age, educational level, experience and position in the Municipality, which profile the respondents are presented with the following figures.

Graph 2.5: Gender distribution of respondents



As can be seen in Graph 2.3.5, which refers to gender distribution, the majority of respondents in the Municipality of Tirana are female (51.8%), while males in a smaller percentage (48.2%).



Regarding the age of the respondent, most of the respondents (44.6%) are between the ages of 31-45 years, (43.8%) the age of 22-30 years, 6% of the respondents are aged 46-60 years old and 5.6% over the age of 60 years. The age of 31-45 is the largest percentage of respondents.

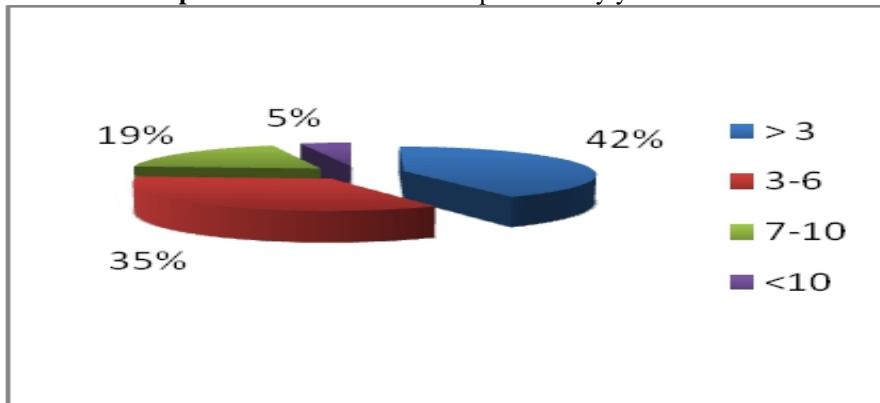
Graph 2.5.2: Distribution of respondents according to the field of graduation



According to the completed education, the largest percentage is occupied by employees of the Municipality, Tirana, who have a degree in Master. (39%) of individuals have higher university education, (14%) of individuals have completed the second cycle studies-Professional Master and (43%) of individuals have completed the second cycle of Master of Science studies. Only 4% of this population has a scientific degree "Phd".

- While the distribution of respondents by years of work is shown in Figure 2.5.3

Graph 2.5.3: Distribution of respondents by years of work



It is noted that (42%) of respondents have less than three years of work in the Municipality, (34%) have 3-6 years of work, (19%) of respondents have 7-10% while (5%) have over 10 years working in the Municipality. The turnover of employees in the Municipality is high due to the influence of politics in the local sector and not only. As a result of the frequent changes of employees or employment policies prompted by politics, a relative instability of staff in institutions has been created and in many cases the employment of individuals who support political parties is carried out.

To identify the characteristics of the population, questions were also asked about the position of respondents in the Municipality, where most employees had the position of Specialists with 64.30%, with the position of Deputy Minister 25.30% and the position of Director 10.40% of them.

After a presentation of the general characteristics of the study population, the following will be an analysis of the "soft" elements of TQM in the Municipality of Tirana, to answer the research question.

Q1: What is the reality of the implementation of "soft" elements of total quality management in the municipality, according to staff perception?

To answer the research question 1, the elaboration of the three elements of TQM explained in detail in the theoretical part has been done. Table 2.3.4 summarizes the minimum, maximum and average values of the dimensions taken in the study.

Table 2.3.4: Descriptive data of "soft" elements of TQM in the Municipality

	N	Min	Max	Means	DS
Leadership	249	1	5	3.49	0.40
HRM	249	1	5	3.28	0.37
Customer focus	249	1	5	3.43	0.35

From the processing of the data obtained from the survey with questionnaires made with the help of the statistical package SPSS 25, it is noticed that:

City leaders are presented with average and standard deviation ($M = 3.49$, $Ds = .4$);

HRM are presented with a mean and standard deviation, respectively ($M = 3.28$, $Ds = .37$);

Citizen focus is presented with an average and standard deviation ($M = 3.43$, $Ds = .35$).

From these values the level of application of these elements is above the average level (variables are presented according to the Likert scale 1. very low, 2. low, 3. average, 4. high and 5. very high) which means that in the Municipality of Tirana these elements have been implemented in a relatively satisfactory way. Also, it is noticed that all the constituent components have an average approximate level and also a standard approximate deviation which shows that not only these elements are in the same degree of application, but also that the estimates have the same degree of volatility.

So, the assessments that have been made have an average level in the values of 3.28 to 3.49 (3 "average level" and 4 "high level") and it is noticed that the highest level is the assessment for the leaders of the municipality.

Also the Standard Deviation ranges from 0.35 to 0.40, which indicates not only very low volatility of estimates by respondents but also the same volatility for all subcomponents presented in the table above.

2.6 Exploratory factor analysis

One of the main uses of factor analysis is to summarize data to make the information more complete, making it easier to test hypotheses (Tabachnick & Fidell, 2007). Field (2009) stated that there are three main reasons to use factor analysis:

- understand the structure of a group of variables;
- construct a questionnaire to measure an important variable;
- reduce variables to a manageable size by storing as much original information as possible.

In this study, factor analysis was used to identify the "soft" TQM in the Municipality of Tirana.

The most widely used method of factor analysis is the main component analysis, and the most common factor rotation method is Varimax rotation (Zikmund et al., 2010; Gray & Kinnear, 2012). Factor rotation is also used as a method to interpret factors, showing the variables grouped together (Pallant, 2010), where factor rotation identifies a smaller group of factors with

eigenvalues greater than or equal to 1.0. This includes each of the variables that is strongly charged to only one factor (component) and each factor (component) represented by a number of important factors. Thus, this method groups the factors so that together they are more important as explanatory factors by eliminating (removing insignificant factors) or by grouping the approximate factors that have little impact (together these approximate factors have a greater impact). From the cited authors, the value 1 is calculated as the floor (the minimum level to consider that factor as a consideration) of the influence of these factors.

According to (Zikmund et al., 2010) loads of factors represent the correlation of the variable explained with the factor (or factors). Hair et al. (1998) determine the load of factors such as: the correlation between the initial variables, which is the key to understanding the nature of a particular factor. So, according to him, the nature of a factor (important or not important) is determined through modeling. Each particular factor that exceeds the minimum level is taken into account.

Based on the above as far as our study is concerned, the sample size is 249 (i.e., greater than 100 units and smaller but close to the level of 300 units) and the total number of elements to measure all variables for the current study is 4.

For the practice of “soft” dimensions of TQM, the indicators in the composition of the factors are the leader (10 indicators), human resources (3 indicators), and the focus on the citizen (5 indicators). The dependent variable that is organizational performance consists of a total of 5 indicators.

Based on the above explanations and on the recommendations made by the cited authors (Nunnally, 1967), in this study, only traders weighing more than 0.50 in one factor were kept for further analysis. In this study, those indicators have been preserved that the factors have had a value of 0.5 or greater.

Factor analysis contains two main variables:

First, the independent variables which consist of “soft” TQM dimensions;

Second, the dependent variable;

Table 2.4 shows the final set of indicators for "soft" TQM dimensions. Only two elements are considered important for the leadership dimension: (transparency and communication), which, therefore, will be included in the hypothesis testing. From a careful look at the table these two factors turn out to have a greater impact compared to other factors. The aforementioned authors suggest that the scope of the analysis in all other less important factors greatly expands the basis of the study, which makes the analysis fade and complicate and loses focus on the main factors and the assessment of their

impact. According to Madumo, the Municipality is responsible for ensuring the promotion of collective efforts that community members would consider appropriate. This gives importance to the role of the individual holding managerial positions within the structures of the municipality in terms of legislation. The leadership challenges that have been identified are political interference, lack of finance, lack of skilled human resources and lack of commitment. These factors have hindered the leadership style of the leader in the municipality.

The same cannot be said for the human dimension-resources where all 3 elements, training and empowerment, group work and motivation will be involved in hypothesis testing (see argumentation in the data given in the relevant tables). Based on the Star Project-Consolidation of Territorial and Administrative Reform, employees in the municipality are involved in trainings, workshops, etc. which affect the development and empowerment of employees in the Municipality as well, affecting their motivation. Undoubtedly, these dimensions affect the quality of service provided by municipal employees. Human resource management dimensions are considered and evaluated as important. As well as quality models as well as quality stone give importance to effective human resource management and according to them, human resources should be at the center of any successful quality management process. According to Dzansi (2010), proper employee management is essential for organizations that provide services such as the municipality precisely because employees have an impact on citizen and company satisfaction (Dzansi & Dzansi, 2010). Therefore, understanding these specific organizational factors that affect employees knowledge, attitudes, and behaviors. These factors affect the way citizens assess the quality of service, in the institution of the municipality. Undoubtedly, training and empowerment as well as teamwork and motivation promote continuous improvement in an institution (Fernham & Horton, 1996).

For the last dimension, the focus on the citizen, are considered important only the elements, accuracy & documentation, sensitivity, citizen demand and transparency for further analysis and testing of hypotheses, mentioned in Table 2.5.4. because of the structure of the municipality, the labor force often times unqualified due to the placement in work with "friend and not merit", political changes accompanied by various from top to bottom (manager to employee) has resulted in important only presented elements in Table 2.6

Table 2.6: Separation Method-Factors for “soft” TQM

	Com muni catio n	Trans paren t	Train in & empo werr ment	Team work	Moti vatio n	Trans paren t	Accur ancy & equip ment with doc	Sensi tivity	Citiz ens' dema nds
L1	0.634								
L2	0.785								
L3		0.934							
L4		0.936							
HRM1				0.757					
HRM2				0.759					
HRM3				0.533					
HRM4			0.775						
HRM5			0.547						
HRM6			0.681						
HRM7			0.645						
HRM8									
HRM9									
HRM10					0.506				
HRM11					0.768				
CF1							0.636		
CF 2							0.703		
CF 3							0.589		
CF 4								0.843	
CF 5								0.619	
CF 6						0.648			
CF 7						0.828			
CF 8						0.580			
CF 9									0.536
CF 10									0.712
CF 11									

Regarding the methods used to obtain the results of the table, emphasizing that the method of separation, component analysis, was used in the beginning of processing in order to separate the components to analyze the impact of each of them. The following is the rotation method (Varimax with Data Normalization), where based on the methodology of the analysis done, it is considered only in cases where there has been a converged rotation in 11

repetitions. So, the methods have been used continuously by eliminating the factors step by step first detailing the constituent components by measuring the impact of each of the separate components. Only in cases where 11 or more repetitions then the corresponding method of factor rotation has been used on these elements.

Regarding the dependent variable-organizational performance, Table 2.6 presents the average and standard deviation of all five elements of organizational performance. The following table is important for the study because it takes into account all five elements of organizational performance and exactly P1 - the Level of Satisfaction of the citizens, P2 - representing the Level of fulfillment of your satisfaction, P3 representing the Level of problems with the system, P4 - the Level of improvement of service performance and P5 - the Level of improvement of public spaces. Thus, the analysis of organizational performance subdivisions made it possible to understand the level at which they were assessed and at the same time whether there were large or small volatility (in this case the volatility is in some level; in other cases, P1 and P3 relatively significantly).

Table 2.6.1: Operational Performance

		Statistics				
		P1	P2	P3	P4	P5
N	Valid	249	249	249	249	249
	Missing	0	0	0	0	0
Meam		3.4618	3.2410	3.1325	3.2249	3.1968
SD		0.80294	0.63355	0.75302	0.55141	0.52116

In the following section, the econometric model will be presented, linear regression model to answer the research questions P2, P3, P4 as well as to confirm the hypotheses of this study.

P2. Does leadership lead as a "soft" element of TQM in organizational performance?

P3. Does human resources dimensions and resources as a "soft" element of TQM affect organizational performance?

P4. Does the focus on the citizen as a "soft" element of TQM affect organizational performance?

2.7 Econometric model

The appropriate econometric model among the models has been used based on suggestions made based on similar studies conducted by other mentioned authors and colleagues in the field of statistics as well as by the relative knowledge of the case. Thus, the hypotheses to be tested were also selected. In most studies, the econometric model of linear regression is the most widely used model, as it helps researchers reach consistent conclusions

about the relationships between study variables, as in this case. The study has objectives and a database similar to other studies, so the econometric model of linear regression, is used in this case.

So, through this model, it is observed the relationship between the "soft" elements of TQM: leadership, human resources, citizen focus and organizational performance. Leadership, HRM, and citizen focus are independent variables in this study, while organizational performance is a dependent variable.

Table 2.7 reflects the results of the analysis of linear regression of "soft" dimensions of TQM and organizational performance. The data in the table have resulted from the linear regression model presented above.

Table 2.7: Results of the analysis of linear regression of "soft" dimensions of TQM and organizational performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.434	0.179		-2.423	0.016
Age	0.091	0.058	0.074	1.571	0.117
Years of experince	0.217	0.108	0.097	2.021	0.044
Leadership (communication)	0.363	0.045	0.363	7.996	0.000
Leadershipi (transperancy)	0.233	0.046	0.233	5.096	0.000
HRM (team work)	0.207	0.045	0.207	4.556	0.000
HRM(training & empowerment)	0.359	0.046	0.359	7.859	0.000
HRM (motivatio)	0.193	0.045	0.193	4.250	0.000
CF (transparency)	0.177	0.046	0.177	3.863	0.000
CF (accuracy and equipment with doc)	0.216	0.045	0.216	4.749	0.000
CF (sensitivi towars citizen)	0.116	0.047	0.116	2.482	0.014
CF (demands of citizens)	0.059	0.046	0.059	1.273	0.204

Control variables (age and years of work in the Municipality) do not have a major impact on organizational performance (See non-standardized and standardized coefficients in Table 2.7). As discussed above, high turnover and employment of employees in some cases incompetent and not at the appropriate level of qualification in the Municipality due to policy interference, control variables (age and years of work) do not affect the great in organizational performance. From the same table, the results show that the focus on the citizen in relation to the element citizens' demands do not affect

organizational performance. As for the other elements, they are statistically significant. Table 2.7 shows that leadership (communication and transparency), human resources (team work, training and empowerment, motivation), and focus on the citizen (sensitivity, transparency, accuracy and documenting) have a strong impact on organizational performance. , because the lower the level of importance (Sig.) the stronger the connection of the "soft" dimensions of the TQM with the organizational performance. The regression results show that the aforementioned elements with Sig. 0.000 have strong connections.

The findings of this study are in line with the conclusions of other similar studies (Al-Nasser, et. al., 2013).

The leader and senior management level acts as a driving force for TQM, their commitment must be translated into specific strategies. Strategies that allow the organization to achieve higher organizational performance, focus on the client and achieve this by ensuring the full participation of employees through training and empowerment.

The importance of empowerment and training is indisputable in the success or failure of the organization. Ramseook-Munhurrnet et al. (2011) highlighted the ongoing empowerment and training to foster a positive culture where change supports the TQM climate. Other researchers claim that development and training is key to discovering innovative methods to help increase organizational performance. Arasli and Ahmadeva (2004) asserted that TQM is a philosophy whose objectives include ensuring a success model for organizations through customer satisfaction. The TQM definition presented by most researchers confirms the purpose of TQM, customer satisfaction in all organizations, for-profit or non-profit, or government organizations (Jung & Hong, 2008).

As mentioned above, due to the involvement of such factors: bureaucracy, political interference, lack of funding, lack of skilled human resources, lack of proper planning and lack of commitment), not all elements within the dimensions have emerged significantly. These elements, for example, the lack of inadequate human resources affects the quality of service provided to the citizens. Political interference often affects the employment of incompetent employees in public administration. Bureaucracies have a negative impact on service quality, too (Morphet, 2008). Financial shortages affect the training and development of the workforce in the organization and beyond. Undoubtedly, training should not be done only at the level of employees, but also leaders and senior management levels should be part of them, which brings improvements in human resource planning and management, inclusion, etc.

This view is supported by the results of the study. Thus, referring to Table 2.5 it is noticed that the results are from 0.506 to 0.934 and the theory

suggests that the bond is called strong when approaching 1 and is weak when the value is almost zero. It is judged that values above 0.7-0.75 are values that should be taken into account and factors have a strong impact while values above 0.5 have a moderate impact but should be considered as a relatively strong impact (Pallant, 2010).

This study shows the negative impact of the mentioned factors, as a result of certain performance dimensions, to have relative loss of their importance, which is often accepted by other studies for countries with similar levels of development. All elements presented with a Sig. 0.000, are elements that have an impact on the performance of the organization, in this case, the performance of the Municipality of Tirana (Sadikoglu & Olcay, 2014). In this case, the hypotheses H1, H12, H3 are confirmed. Soft elements of TQM have been considered having an impact on organizational performance.

Conclusion

To conclude, comprehensive implementation of quality management in the municipality, requires the right skills to provide quality services that meet the needs of citizens, in accordance with the expectations and requirements of the time. Studies have shown that there is a link between the implementation of total quality management in municipalities and an increased quality of service to citizens. So, whether or not the municipality makes the total quality part of it, will be reflected in the level of service provided and the performance of the organization. The analysis on this study showed that "soft" elements of TQM have a direct impact on organizational performance. These findings, confirmed by many other studies cited in this paper.

Future research direction

Based on the findings of the study, to increase the implementation of TQM in municipalities it is recommended as below.

1. Creating an organizational culture that supports TQM, provides opportunities for the inclusion of quality in the municipality's strategy for integrating it throughout the organization.
2. Develop a strategic plan that will promote key TQM practices for organizing and creating a dynamic, quality-oriented environment.
3. Establishment of a total quality department that pays attention to the actors of external as well as internal actors of the organization in the municipality.
4. Expanding the training and development function, both for the leader and the senior managers as well its employees, to implement TQM in the municipality.

5. Adopt appropriate methods and technologies to support higher service delivery, which means evaluating standards that are consistent with the values and methods of TQM, promoting efficiency, effectiveness and excellence in delivery of services.
6. Use of excellence models, [EFQM / CAF, European Quality Model] in the near future, as their use depends, to some extent, on the level of maturity of the total quality.
7. Support for ISO9001 certification, seven principles of quality management and simplifies the implementation of a quality management system in the municipality to achieve and address its challenges.
8. Develop internal mechanisms for monitoring and controlling processes by creating space for both managers and employees to react in real time to improve service quality and measure performance, such as the standardization process [Benchmark].
9. Use of the Kaizen philosophy, which defines the role of management in encouraging and implementing continuous minor
10. Engaging employee participation in setting quality objectives and goals
11. at all levels. Employee participation in this process is a must to feel motivated [involvement and commitment].

References:

1. Ahire, S.L., Golear, D.Y. and Waller, M.W., (1996) 'Development and validation of TQM implementation constructs.' *Decision Sciences* 27, (1) 23-56.
2. Arasli, H. and L. Ahmadeva, 2004. No more tears! A local TQM formula for health promotion", *International Journal of Health Care Quality Assurance*, 17(3): 135-145.
3. Armstrong, M. (2006) *A Handbook of Human Resource Management Practice*. 10th Edition, Kogan Page Publishing, London. Consolidation of Territorial and Administrative Reform (STAR 2),
4. DAP. (2018, 3 10). *Cross-Cutting Strategy Of Public Administration Reform 2015 – 2020*. Gjetur 3 10, 2018, DPA: <http://dap.gov.al/publikime/dokumenta-strategjik/64-strategjia-ndersektoriale-e-reformes-ne-administraten-publike-2015-2020>
5. Deming, W.E. (1986), *Out of the Crisis*, MIT Press, Cambridge, MA.
6. Dobrin, C., (2008). Total quality management in administration & public services. Quality access to success". 9.3.
7. Dzansi, Dennis & Dzansi, Lineo. (2010). Understanding the impact of human resource management practices on municipal service delivery

- in South Africa: An organizational justice approach. *African journal of business management*. 4. 995-1005.
8. EFQM Excellence Model EFQM 2010, EFQM 2009, Avenue des Olympiades 2, B-1140 Brussels, Belgium
 9. Evans, J. R. Lindsay, W.M. (2017). *Managing for Quality and Performance Excellence*. Cengage Learning. Boston: MA
 10. Fernham, D. Horton, S., (1996). *Managing People in the Public Services*. Macmillan Press LTD. London
 11. Field, A. (2009) *Discovering Statistics Using SPSS*. 3rd Edition, Sage Publications Ltd., London.
 12. Flynn, B. B., Schroeder, R. G. & Sakakibara, S. (1995). A framework for quality management research & an associated measurement instrument. *Journal of Operations Management*, 11(4), pp. 339-366. for Local Government, *Public Money & Management*, July-September.
 13. Garavan, T. McCarthy, A. Lai, L. Kevin, M. Sheehan, M. Carbery, R. (2020). *Training and organisational performance: A meta-analysis of temporal, institutional, and organisational context moderators*. *Human Resource Management Journal*.
 14. Garavan, T., O'Brien, F., & Watson, S. (2015). *Leadership development and organizational success*. In K. Kraiger, J. Passmore, N. R. dos Santos, & S.
 15. Malvezzi (Eds.), *Wiley Blackwell handbooks in organizational psychology. The Wiley Blackwell handbook of the psychology of training, development, and performance improvement* (p. 354–397). Wiley-Blackwell.
 16. Garavan, Th. N., McCarthy, A. (2015). Collective Learning Processes and Human Resource Development. *Sage Journal* , 451-471.
 17. Hair, J., W. Black, B. Babin, R. Anderson, R. (2006). *Multivariate data analysis. 6th ed*. New Jersey: Pearson international, Prentice Hall, .
 18. Hessing, T. (2018, 6 15). *sixsigma study giude*. Retrieved 6 15, 2018, from 6sigmastudygiude: <https://sixsigmastudyguide.com/ishikawa/>
 19. IDRA, UNDP, Chatterjee, M. (2018). *Perception of Governance in an Albania in Reform - Nationwide Assessment of the Local Government Situation in Albania*. Tirane: Projec Star II.
 20. INSTAT (2018). Population. instat.gov.al/al/tomato/treguesit-demografikë-dhe-sociale/popullsia/
 21. Jaafreh, A. B., & Al-abadallat, A. Z. (2012). The effect of quality management practices on organizational performance in Jordan: An empirical study. *International Journal of Financial Research*, 4(1), 93.
 22. Jung, J.Y. Hong, S. (2008). Organizational citizenship behaviour (OCB), TQM and performance at the maquiladora. *International Journal of Quality & Reliability Management*.

23. Juran, J. M. (1989). *Leadership for quality: An executive h&book*. New York: Free Press.
24. MBNQA.(2020).<https://corporatefinanceinstitute.com/resources/knowledge/other/malcolm-baldrige-national-quality-award-mbnqa/>
25. Morphet, J. (2008). *Modern local government*.0.4135/9781446215692.
26. Municipality of Tirana. (2018-2022). *Sustainable Development Strategy of the Municipality of Tirana 2018 - 2022*. Municipality of Tirana.
27. Municipality of Tirana. (2020, 06 04). *tirana.al*. Retrieved from Municipality of Tirana: <https://www.tirana.al/faqe/anketime>
28. Nasser, A., Zien, R., Rabiul, I. (2013). The Moderator Effect of the Relationship Between Soft Total Quality Management Practices and Performance in Municipalities . *Australian Journal of Basic and Applied Sciences* , 720-729.
29. Nunnally, Jum C. (1967), *Psychometric Theory*, 1st ed., New York: McGraw-Hill.
30. Oppenheim, A. (1992). *Questionnaire Design, Interviewing and Attitude Measurement*.London
31. Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using the SPSS program*. New York: McGraw Hill.
32. Ramseook-Munhurrun, P., V. Munhurrun and A. Panchoo, 2011. Total Quality Management Adoption in a Public Hospital: Evidence From Mauritius. *Global Journal of Business Research*, 5(3): 67-77.
33. Sadikoglu, E. & Olcay, H. (2014). The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey. *Advances in Decision Sciences*. 2014. 1-17.
34. Saleh, M.J., Hasan, R.M. (2015). Evaluating Impacts and Role of TQM Practices on Organization Performance of Public Sector in Iraqi Government. *International Journal of Internet of Things* , 7-15.
35. Sekaran, U., Bougie, R. (2009). *Research Methods for Business: A Skill Building Approach*. *International Journal of Information Technology and Management*
36. Singha, V. Kumarb, A. Singhc, T.(2018). Impact of TQM on organisational performance: The case of Indian manufacturing and service industry. *Operations Research Perspectives*. 5.199-217
37. Shafiq, M. Lasrado, E., Hafeez, K. (2017). The effect of TQM on organisational performance: empirical evidence from the textile sector of a developing country using SEM. *Total Quality Management and Business Excellence*. ISSN: 1478-3363

38. Shaukat A. Brah, A. SH., Wong, L.J., Rao, M . (2000). TQM and Performance in the Service Sector: A Singapore Study. *International Journal of Operations & Production Management*. STARII Progress Report January – June 2018
39. Tabachnick, Barbara & Fidell, L.L.S. (2007). Using Multivariate Statistics. Zikmund, W.G. (2010). Business Research Methods. South-Western Cengage Learning



ESJ Social Sciences

Sectorial Analysis of the U.S. and China Trade Conflict

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[Doi:10.19044/esj.2021.v17n1p68](https://doi.org/10.19044/esj.2021.v17n1p68)

Submitted: 02 December 2020

Accepted: 18 January 2021

Published: 31 January 2020

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Cite As:

Okafor A., Agbai E. & Egbedoyin F. (2021). *Sectorial Analysis of the U.S. and China Trade Conflict*. European Scientific Journal, ESJ, 17(1), 68.

<https://doi.org/10.19044/esj.2021.v17n1p68>

Abstract

The impact of the U.S - China trade conflict extends beyond both nations' economies to the economies of trade allies and non-trading partners caught in the web of the trade impasse. This paper conducts a sectoral analysis of the trade conflict on the U.S economy using the manufacturing, agriculture, and technology sectors as metrics. We explore data from the databases of the U.S Census Bureau and the U.S Bureau of Economic Analysis from 2001 to 2019. The trade conflict has led to a significant reduction in trades between both nations. The 25% counter tariff imposed by China reduced U.S exports by \$30 billion between 2018 and 2019. Primary income receipts declined 10%, and secondary income receipts declined further in the negative territory. China's counter-tariffs increased component costs for the U.S automobile industry, leading to a reduction in the number of new and used vehicles sold during the period. We identify an incentive-driven trade policy framework against the current punitive stance, the resumption of trade negotiations, and leveraging the WTO's instrumentality as measures to resolve the current trade conflict.

Keywords: Trade Conflict, Effect of Trade Tariffs, Global Trade, U.S and China

Introduction

The unfolding global economic scenario dictated by the U.S – China trade dispute is generating significant attention, obviously because of its far-reaching implication. The effect of the trade war is not only being felt by the economies of both nations, but transcends the walls of both countries to reach other smaller and poorer economies caught in the web of the trade conflict. The trade war is having a negative implication on the international trading system as companies in the U.S with huge exposure to China battle to deal with the external shocks.

Following the accession of China to the world trade organization (WTO), the world witnessed significant flows of foreign direct investments, which appear to have peaked in 2007 before the global financial crisis. China rose to become the second to the U.S in terms of purchasing power parity and has continued to dominate global trade across different regions, including Europe, Asia, Africa, and South America, using its Belt and Road Initiative. The present trade tensions and the more combative relationship between the two leading economic powerhouses present the most significant threat to globalization. The trade war has led to a gradual decimation of globalization and a departure from multilateral cooperation for nationalistic tendencies and doctrines. The trade tensions are exacerbating global economic uncertainty, and the world trade organization recently warned of downside risks and loss of economic momentum as a result.

The trade conflict is having a significant economic impact on both sides and has frozen investment flows to both the United States and China. The U.S economy declined for the first time since 2014 and had its worst quarterly decline since 2008 during the global financial crisis. In the U.S, three major sectors have been most affected by the trade dispute, namely Agriculture, Manufacturing, and Technology. Farmers appear to be the worst hit by the trade dispute, with most farmers affected going bankrupt. The manufacturing industry hit lows in proportions last seen since the great recession. The restrictions placed on the exportation of American Information Communication and Technology (ICT) products and semiconductors are having major setbacks for the U.S technology industry. The consequence of the trade conflict is that most companies in the affected industry have slowed down hiring while others are right-sizing leading to loss of jobs in the economy. The U.S trade deficit with China remains elevated even though it declined from \$419 billion in 2018 to \$345 billion in 2019. The unintended consequence of U.S's unilateral tax imposition on China is that why investment flows declined in China, the U.S. trade deficit with Europe, Mexico, Japan, South Korea, and Taiwan widened as a result (Hass & Denmark, 2020).

Economists are united in their submission that the U.S consumers are the ones bearing the brunt of the U.S -China trade dispute. The decline in U.S producers' export opportunities has implications for economic productivity, job growth, and income levels. This study presents a sectoral analysis of how the trade dispute between U.S - China is impacting the U.S manufacturing, agriculture and technology industries. We also explore the impact of trade disputes on the U.S government's primary and secondary income receipts since the beginning of the trade dispute.

The paper is structured as follows. Section 2 presents a historical perspective of the trade dispute between the two parties. Section 3 contains our assessment of the effect of the trade war on the manufacturing, agriculture, technology industries, and the primary and secondary income receipts of government, while section 4 contains the recommendations and conclusion.

Historical Perspective

Trade wars are usually a consequence of trade disputes arising from disagreements between two conflicting countries. Trade wars can be triggered when there is a flagrant violation of trade agreements and when attempts at resolving the conflict using the instrumentality of the world trade organization have been unsuccessful. Formal trades in documented history between the U.S and China began in 1784 during the then Qing dynasty, with the trade balance tilting in favor of the Chinese (Hur, 2018). In an attempt to close the trade deficit, American traders adopted the strategy of smuggling opium into the Chinese market. While this measure significantly reduced the trade deficit, it led to a serious confrontation between the U.S and China, with the latter placing a total ban on the consumption of opium. This would eventually culminate in the 1839 Opium War and the beginning of the rivalry between China and the Western powers on international trade.

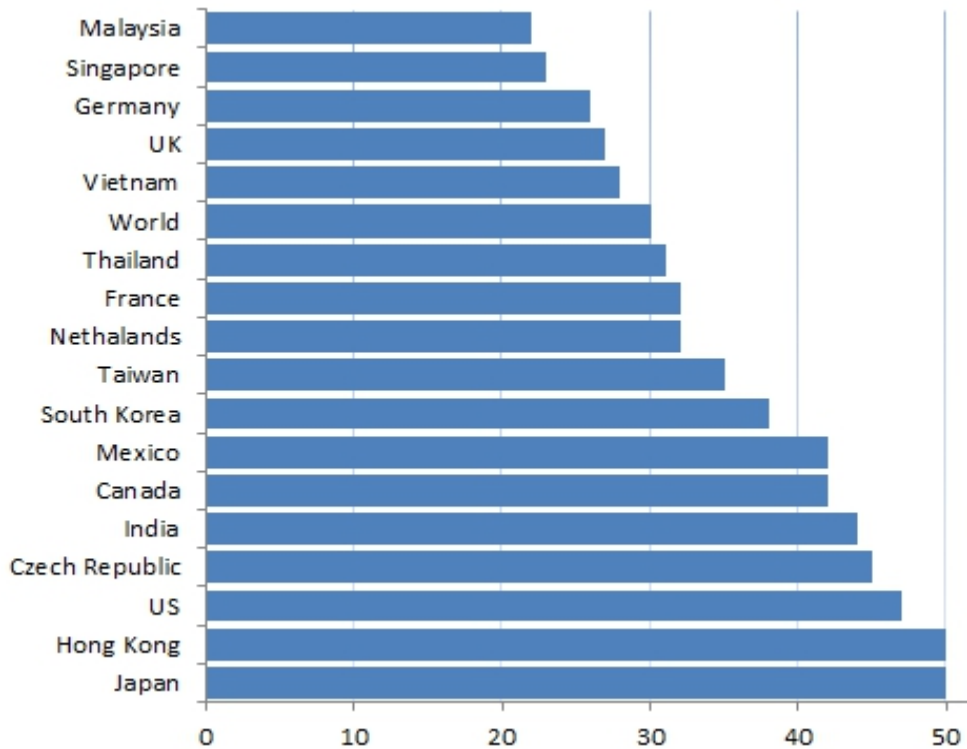
The period between 1920 and 1965 marked both a transition and confrontation period between the U.S and China. The formation of the People's Republic of China in 1949 by the communist party led to further agitation between the U.S and China. Even though both countries appeared to have made appreciable gains during this period, China clashed with the U.S on ideological differences during the Korean War (Holton & Wang, 1989). This further worsened the conflict between both nations and the cut off of trades between both countries. However, by 1971, the quest to defeat a common enemy in the form of the Soviet Union brought the U.S and China together. Their trade relations improved, and the U.S began to identify China as a strategic partner, paving the way for China to join the International Monetary Fund (IMF) and the World Bank in the 1980s (Fenwick, 1984). Tensions between both nations resurfaced following the Tiananmen Square incident in 1989. The U.S's insistence on being the world's police monitoring

other nation's compliance with democratic tenets has always sparked tensions between the U.S and China.

The mistrust between both nations continued even after China's accession to the world trade organization, sometimes leading to bilateral disputes affecting their trade relations (Hur, 2018). Of the 42 trade disputes brought against China since joining the WTO, most cases have been initiated by the U.S. The claims are related mainly to intellectual property violations and trade rights. The current spat between the two nations began in 2017 after Donald Trump won the U.S presidential election. President Trump anchored the administration's trade policy on three factors: equalizing trade balances between trading partners, moving against trade partners like China that have been accused severally of manipulating its currency to gain an unfair trade advantage and dismantling unfavorable trade agreements (Noland, 2018). This led to the administration withdrawing from several bilateral trade and multilateral trade agreements. The Trump administration threatened to exit the North American Free Trade Agreement (NAFTA) that came into force in 1994 unless it was renegotiated with the sole aim of reducing the U.S trade deficit. The administration got its wish, and NAFTA was replaced with the United States-Mexico-Canada Agreement (USMCA) in July of 2020. Other trade agreements exited by the Trump administration include the Trans-Pacific Partnership (TPP), Korea-United States Free Trade Agreement (KORUS FTA), the Paris climate accord, and the Iran nuclear deal.

The trade tension between China and the U.S took a dramatic turn in 2017 when the Trump Administration opposed granting China the market economy status at WTO, citing the Chinese communist party's pervasive role in the economy and its arbitrary use of subsidies, which places other members at the receiving end. Further, the U.S imposed \$200 billion tariffs on Chinese exports to prevent the dumping of Chinese products in the U.S economy and correct the trade imbalance between both nations. In a retaliatory move, China raised its tariffs from 10% to an average of 25% on American exports, which are considerably less than \$200 billion a year. There have been concerns that the current trade impasse between both countries is because of the U.S's unwillingness to come to terms with China's domineering control of global supply networks. Figure 1 shows that most countries depend on China for their industrial supply chains. As such, decoupling is a remote and unattainable solution to the current trade conflict.

Figure 1. Global Electrical and Electronics Supply Chain through China



Source: Unctad and Financial Times

The chart shows that 30% of global electrical and electronic equipment passes through or is supplied by China. In comparison, the U.S relies on China to meet about 50% of its electrical and electronic equipment demands. Consequently, the current impasse is of significant interest to the U.S and other trade partners. The trade conflict is already taking a toll on the average Americans operating or working in the sectors targeted by the U.S tariffs and China's counter-tariffs.

Post Tariff Literature Review

Since the advent of the trade tension between China and the U.S in 2017, a couple of scholars have intervened in the trade conflict between the U.S and China. Adjemian, Smith, & He (2019) utilized the relative price of a substitute method to investigate the impact of the trade tariff on the U.S soybean market. The study finds that the impact of China's tariff on U.S producers was not homogeneous but generally led to the lowering U.S export prices. Other local factors that impacted local producers include transportation infrastructure, storage capacity, and proximity to crush facilities, played a major role.

Amiti, Redding, & Weinstein (2019) examined the impact of the Trump administration's trade policy on price levels and welfare in 2018. The study finds that real income reduced by \$1.4 billion per month throughout 2018. Disaggregating the data, they observe that the full effect of the trade tariff was passed on to U.S consumers because of the substantial changes observed in supply chain networks, increases in prices of imported products, and the overall reduction of imported products. Li, Balistreri, and Zhang (2020) used a standard off-the-shelf general-equilibrium simulation model to examine the effect of the tariff increases on the people's welfare. The study finds that phase one of the trade deal worsened consumer welfare in China by 1.7% while that of the United States decreased by 0.2%.

Chong & Li (2019) compared the current trade war between the U.S and China with similar trade wars in history, focusing on how it impacts China. The study identifies global economic dominance, U.S midterm elections, and trade imbalances as the three major causes of trade wars between the two nations in recent history. The study projects the trade tariff's impact on China to be a 1.1% decrease in employment and a loss of 1% of the country's GDP. The effect on the U.S has also been significant. Meltzer and Shenai (2019) note that between 1999 and 2011, U.S trade with China has led to 560,000 job losses in the manufacturing industry.

Aaron and Pierce (2019) estimated the effect of the U.S trade tariffs and the retaliatory tariffs imposed by U.S trading partners on output levels, producer prices, and manufacturing employment in the U.S. They find that U.S trade tariffs and counter-tariffs led to a reduction in employment for manufacturing industries more exposed to the trade tariffs. Aaron and Pierce (2019) note that higher tariffs were positively correlated with relative increases in output price levels occasioned by rising input costs. Cavallo et al. (2019) utilized microdata to characterize the effects of US trade tariff imposed on China on U.S importers, exporters, and consumers. The study finds that the effect of the trade tariffs on price levels was mixed and that retailers in some product categories lowered their margins to accommodate the impact of the tariffs on consumers while others passed the full effect of the trade tariffs on consumers.

Contrary to the expectation that the U.S government's tax increases will lead to significant inflows in terms of tariffs, Amiti, Redding, and Weinstein (2020) note that U.S companies are the ones indirectly paying the tariffs. An estimated amount of \$46 billion was paid in tariffs by American companies. The strategies adopted include accepting reduced margins, cutting jobs for U.S workers, freezing wage hikes, and passing the effect of the tariffs on U.S consumers by raising prices. In addition, Chinese retaliatory actions against the import of U.S farm produce have put to risk the once-booming \$24 billion market in China. China is also suffering the effect of U.S tariffs as the

U.S market has become more competitive for other players leading to trade diversion away from China. Recent statistics indicate that 63% of the \$35 billion Chinese export to the U.S has been diverted to other countries, and the balance is either lost or taken over by U.S producers. The European Union and countries like Mexico and Taiwan are experiencing a surge in the sales of office machinery, communication equipment, agri-food, and transport equipment to the U.S market.

Analysis of Current Trade Impasse

In assessing the macroeconomic impact of the current trade impasse on the U.S economy, we identify three sectors, including the manufacturing, agriculture, and technology sectors. We utilize content and descriptive analysis to examine how the trade war is affecting the U.S economy. We explore data from the U.S census bureau and U.S Bureau of Economic Analysis from 2001 to 2019. Manufacturing data from 2001-2019 were obtained from the U.S Bureau of Economic Analysis, while imports and exports data were obtained from the U.S Census Bureau database. Data related to primary and secondary income receipts, in addition to the current and capital account balances, were also obtained from the database of the U.S Bureau of Economic Analysis.

The descriptive analysis in Table 1 measures the effect of the trade tariff on the trade volumes between U.S and China between 2017 and August 2020. The U.S census bureau tracks monthly data of the trade volumes between U.S and China since 1985. The dataset shows that since the beginning of the new tariff regime, U.S exports to China have declined by 18%, while imports from China declined by 11% between 2017 and 2019, and Chinese imports of products are affected by the new tariffs declined even stronger by 25%.

Table 1: Trade Volumes between U.S and China
 U.S Exports to China

Year	2017	2018	2019	2020 (Jan-Aug)
Trade (\$ Bn)	130.00	120.29	106.45	69.56
Cumulative Trade (\$Bn)	130.00	250.29	356.73	426.30

U.S Imports from China				
Year	2017	2018	2019	2020 (Jan-Aug)
Trade (\$ Bn)	505.17	539.24	451.65	262.68
Cumulative Trade (\$Bn)	505.17	1,044.41	1,496.06	1,758.74

Source: U.S Census Bureau

Further analysis from the dataset shows an uptick of 21% between 2017 and 2019 in U.S imports from China on goods not affected by the hike in tariffs. We observe an initial surge of U.S imports from China on the tariffed products as both nations sought to resolve the trade impasse between 2017 and 2018. Chinese exporters sold more tariffed products to the U.S in 2012 in anticipation of further tariff hikes. An additional hike in tariffs saw U.S imports from China decline by about \$70 billion in 2019. China maintained a steady import of non-tariffed products from the U.S between 2017 and 2019. Similarly, we notice a significant decline worth over \$30 billion in China’s import from the U.S between 2018 and 2019.

Table 2: Impact of Tariffs on Trades between U.S and China

Year	U.S Imports from China			China Imports from U.S		
	2017	2018	2019	2017	2018	2019
Non-tariffed Products	10.81	12.49	13.10	42.22	46.42	40.89
Tariffed Products	508.71	543.81	470.13	107.51	107.03	77.84

Source: U.S Bureau of Economic Analysis and Authors Computation

Imports from all the sectors affected by the tariff faced a negative growth rate between 2018 and 2019 with petroleum, agricultural products, and metals being the most impacted. Instead, we observe an upsurge in Chinese imports of U.S products, especially the non-tariffed products such as computer and electronic equipment necessary to support the Chinese economy before the second phase of the U.S trade restrictions came into force.

Manufacturing

While the duties imposed by the U.S government are providing some import protection to U.S firms, the Federal Reserve has noted that an increase in input costs, production expenses, and retaliatory tariffs outweigh any benefits derivable from the imposed tariffs (Winck, 2020)¹. According to a Federal Reserve study, the new tariffs are harming the manufacturing sector, and the sector has cut and posted the most job losses in the last four years (Aaron, & Pierce, 2019). As shown in Figure 1, manufacturing output is down significantly in 2019 to its lowest volume in a decade after seeing an initial surge in 2018. If this trend continues and taking into consideration the effect of COVID 19 on the sector, the manufacturing industry might well experience its worst performance in 2020.

¹ibisworld Manufacturing in the US Number of Businesses 2002–2026, <https://www.ibisworld.com/industry-statistics/number-of-businesses/manufacturing-united-states/>

The U.S – China trade war is beginning to impact the manufacturing sector in the U.S as the price of manufacturing inputs, especially those coming from China, has increased significantly because of the tariff. The U.S is losing on many fronts against China. First, with China retaliating against the tariffs, U.S exports have become more expensive, making it harder to sell U.S products in China. Second, since input costs are soaring, U.S manufacturers are becoming less competitive, given the presence of alternatives and substitutes from other sources. Third, U.S manufacturing output and sales have dropped domestically due to the high input costs coupled with the present state of the U.S economy.

Figure 2a – U.S Manufacturing Growth Rate 2016 to 2020

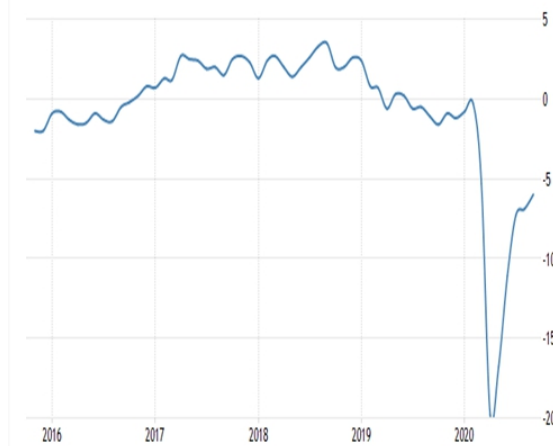
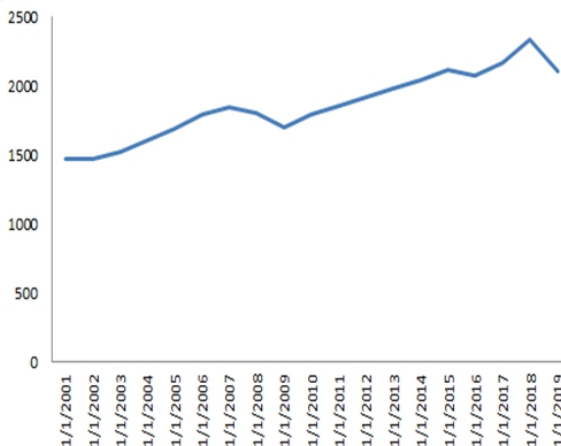


Figure 2b – U.S Manufacturing output 2001 to 2019



The unintended consequence of this trade war is now becoming apparent. Exports of goods and services have fallen since year-end 2018. Export volumes and income receipts are down from a peak of \$954 billion in quarter three of 2019 to \$902 billion in quarter one of 2020, even before the

pandemic set in. Companies in the automotive, parts and engines industry have felt the pinch the most, seeing their output decline by \$3.6 billion just in quarter one of 2020. The number of manufacturing businesses operating in the country declined from 614,418 in February of 2019 to 565,537 in February of 2020². The decline in the number of businesses started long before the pandemic hit the U.S economy.

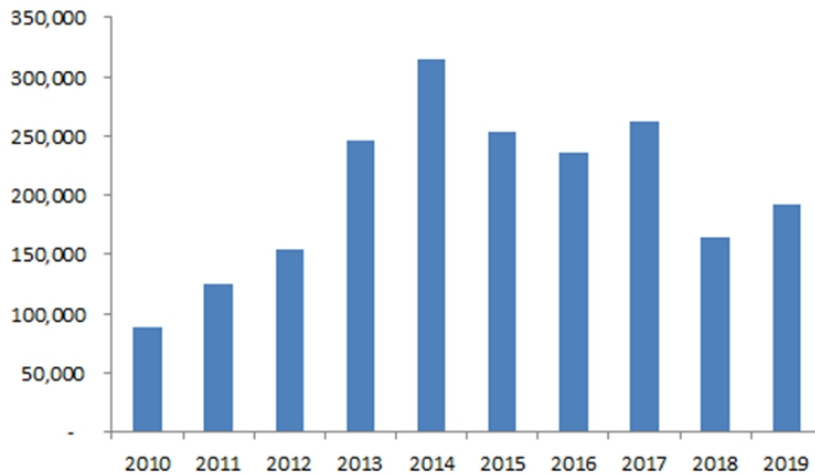
Americans are bearing the direct impact of the trade disputes. JPMorgan puts the average cost on U.S households at \$1000 (Fitzgerald, 2019). Additionally, U.S producers are battling with trade diversions from China as 65% of U.S exports have been lost in 2019 compared to 2017 overall export figures. Most staple consumer goods in the U.S have more expensive, with the U.S government taking measures to lessen the impact of the trade war on U.S consumers. Alternatively, in China, exporters are experiencing a significant decline in their export volumes to the U.S, which is China's single largest export market.

The U.S automobile industry is the most affected by the U.S - China trade tensions given the 40% tariff placed on U.S made automobiles. The tariffs on steel and aluminum products have already begun to create supply chain disruptions for U.S car manufacturers. Added tariffs increase the cost of components coupled with the difficulty of replacing offshore suppliers at short notice. Given the level of sophistication, quality, and precision required from suppliers of input materials in the industry, replacing the existing suppliers could take between 6 and 10 years to achieve. Rising prices of aluminum and steel products have added millions of dollars in unplanned costs. As noted recently, the former FORD CEO Jim Hackett notes that the increased tariff could lead to losses in excess of \$1.0 billion in the short term. Additionally, Americans are expected to pay more for U.S cars, which could be as much as \$6000 for vehicles that would typically cost \$35,000 on average.

Figure 1 shows the trade volume in passenger vehicles and light trucks exported to China between 2004 and 2019. The impact of the trade conflict can be seen in the dwindling sales since the idea of the new tariff was muted. Since the introduction of the 25% tariff on steel and aluminum products, U.S car sales have dropped by over 27%.

² Trade in Goods with China, <https://www.census.gov/foreign-trade/balance/c5700.html>

Figure 3: Used Car Sales 2010 to 2019



Source: United States Department of Commerce, Bureau of the Census, Foreign Trade Division & Statista

Agriculture

The third worst hit sector by the trade tensions in the U.S after automobiles, technology is agriculture with most companies in this sector facing bankruptcy. U.S farmers are also bearing the brunt of the trade escalation between the two countries. China is the fourth largest importer of U.S farm products, which stood at \$9.5 billion at the end of 2018. The retaliatory tariffs have had a significant impact on U.S. agricultural exports to China, which declined by \$15 billion at the close of 2019 (Carter & Sandro, 2019). In the wake of the trade conflict, U.S farmers were offered \$28 billion in subsidies, which is twice the 2009 bailout given to the auto industry. U.S exports to China have dropped xx% from \$13.6 billion in December 2017 to \$7.91 billion in March 2020³. In Table 1, we show China's reaction to U.S tariffs by selecting some and how this has led to a spike in product cost.

³ Trump's tariffs are driving job losses and production cost hikes, the Fed says Ben Winck Jan 2, 2020, <https://markets.businessinsider.com/news/stocks/trump-tariffs-driving-job-losses-production-cost-hikes-fed-says-2020-1-1028791979#>

Table 3: China’s Response to U.S Tariff

Commodity	2017 Tariffs(%)	2018 Tariffs(%)	2019 Tariffs (%)
Almonds, In Shell	10	25	35
Almonds, Shelled	10	25	35
Grapes, Fresh	12	27	30
Frozen Sockeye Salmon	7	25	37
Frozen Yellowfin Tunas	7	25	37
Oranges, Fresh	12	27	35
Pistachios, In Shell	5	20	30
Pistachios, Shelled	5	20	30
Seed Potatoes	13	20	40.5
Sparkling Wine	14	30	29
Walnuts, In Shell	24	40	50
Walnuts, Shelled	20	35	50
Wine	14	30	35

Source: USDA FAS Report Number: CH2019-0194 & CH2020-0016

The U.S accounts for 86% and 71% of world exports of almonds and pistachios, respectively. China remains the world’s leading exporter of Walnut. U.S. export of Walnut has declined by 50% since the beginning of the trade war (Carter & Sandro, 2019). However, as part of the trade agreement reached between the U.S and China, China is expected to purchase \$200 billion worth of U.S products with agriculture, pharmaceutical, and energy services leading the pack. This agreement remained in force prior to the COVID 19 pandemic, which further strained the trade relations between both countries.

Another product that has been massively impacted is U.S soybeans. China remains the largest importer of soybeans from the U.S, contributing \$3.1 billion to the U.S economy in 2018. Other agricultural products imported in high quantity include Cotton (\$924 million), hides and skins (\$607 million), pork products (\$571 million), and grains (\$530 million). Soybeans contribute about \$12.8 billion to the U.S economy. Half of this has historically been absorbed by China. Following China’s 25% retaliatory tariff on Soybeans import, U.S managed only 8.3 million metric tons of soybeans exports in 2018 compared to 32 million metric tons exported in 2017. Chinese buyers have remained the major importers of soybeans from the U.S due to China’s huge hog herd. The retaliatory tariff continues to have a significant impact on the volume of U.S soybeans imported by China. While other trading partners and nations such as the European Union, Egypt, and Argentina have moved in to purchase more soybeans from the U.S, the added demands are not able to

offset the losses from China due to the trade conflict and trade diversion (Adjemian, Smith, & He, 2019).

Technology

Another sector of the U.S economy affected by the trade disputes is the tech industry. The U.S tech industry is highly exposed to China for manufacturing and sales of semiconductors, a major input used by most tech companies. The U.S – China trade conflict has led to collateral damage for U.S tech firms⁴. However, disagreements between both nations on violation of intellectual property rights predate Trump's administration. China has been fingered in intellectual property violations over the years, and this has been a significant cause of conflict between the U.S and China. One of the reasons put forward by the Trump's administration for revising upward tariffs on imports from China leveraging Section 301 of the 1974 Trade Act includes poor protection of intellectual property rights, forced technology transfer from foreign companies investing in China, and the heavy involvement of the Chinese government in the subsidization of state-owned companies (Bekkers & Schroeter, 2020).

In 2018, Washington announced a 25% tariff on \$50 billion worth of imported equipment and materials from China even if inputs materials or components were made in the U.S. Data from the U.S Department of Commerce indicates that nearly 60% of semiconductors imported into the U.S from China were re-imported back to the U.S by U.S semiconductor producers⁵⁵. The remainder being imports from European Union, South Korea, and Japanese companies affiliated with Chinese companies and not Chinese producers⁶⁶. As part of the trade conflict, Trump's administration is restricting the export or sales of sensitive U.S technologies to some select Chinese companies and barring Chinese companies from investing in the U.S citing security concerns.

The first major victim of the trade tensions is Huawei, which has been at the center of the trade conflict between both nations over issues of technology and security. The Trump administration had sanctioned Huawei for acting as a spy organization and tool of the Chinese communist party. Washington decided to restrict Huawei's access to U.S components and technology. The administration extended this restriction to vendors producing components and equipment for Huawei. The sanction restricts vendors across the world from the use of U.S technology to produce components for Huawei.

⁴ Ana Swanson and Cecilia Kang, Jan 20, 2020. Trump's China Deal Creates Collateral Damage for Tech Firms, <https://www.nytimes.com/2020/01/20/business/economy/trump-us-china-deal-micron-trade-war.html>

⁵ Source: Official U.S. government trade data, U.S. Department of Commerce

⁶ Official U.S. government trade data, U.S. Department of Commerce, U.S. Census Bureau

Specifically, the rule prohibits the use of American software or American fabrication equipment to produce components for Huawei without authorization⁷⁷. The applied sanctions have almost upended the once-thriving Chinese tech giant and its quest to roll out the 5G technology. Huawei, leveraging on its homegrown semiconductor production unit and other substitutes from Japan and other countries, is curtailing its reliance on U.S for chips⁸⁷. The company reported an 18% jump in sale for full-year 2019 to \$120 billion, a sign that the company and other related Chinese tech companies are forging ahead despite the restrictions to the detriment of U.S buyers and suppliers.

TikTok, a Chinese-owned messaging app that has attracted hundreds of millions of users worldwide, including the U.S has been drawn into the web of the trade disagreement between both countries. Washington has tagged the continued operation of TikTok in the U.S as a security threat and therefore ordered the ban on its operations in the U.S. The Trump administration would later have a rethink and sanction its continued operation only if their operation in the U.S is sold to a U.S-based firm.

The aggressive approach by Trump's administration appears to be stoking a technology arms race between China and the U.S. Mostly, the quest to outdo one another in the production of semiconductors, artificial intelligence, and other emerging technologies is at the heart of the technology arms race. In a bid to decouple its economy from that of the U.S and to limit its reliance on U.S technological products, China is now concentrating efforts to manufacture its software, semiconductors and expanded the Chinese government's focus on the use of artificial intelligence.

Manufacturers of semiconductors in the U.S are hurting in the face of the trade policy that appears to be strangulating sales to their major semiconductor importer across the world. Table 4 shows U.S. Semiconductor Industry Sales and Market Share by region.

Table 4 U.S. Semiconductor Industry Sales and Market Share

Region	Vol.(\$ Bn)	U.S Market Share
Americas	31.5	35.60%
Europe	19.1	49.80%
Japan	14.6	40.00%
China	66.4	50.50%
Asia Pacific & Others	57.3	48.80%

Source: World Semiconductor Trade Statistics and SIA 2017 Estimates

⁷ Trump administration imposes new Huawei restrictions By Matt O'Brien, August 17, 2020, <https://apnews.com/article/7a01cf8cf13f7681df62094f27b1bcbc>

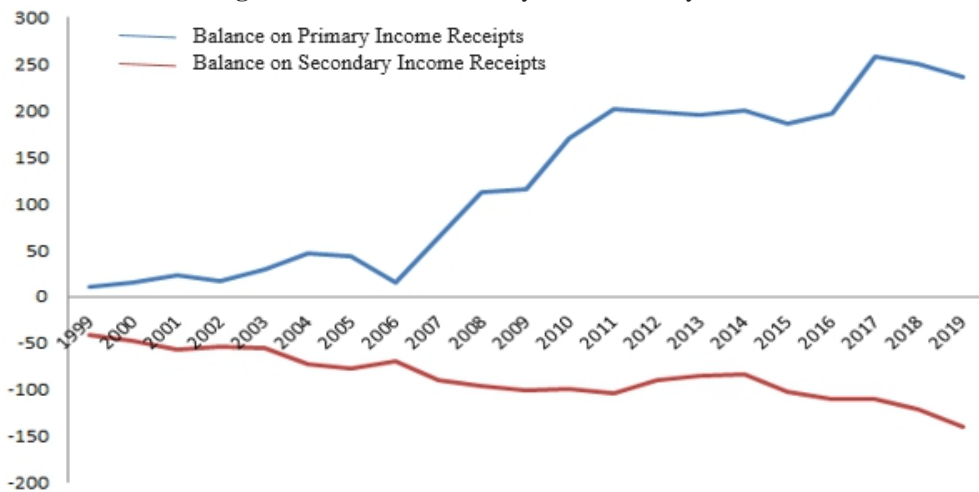
⁸

The Semiconductor Industry Association (SIA) notes that disrupting U.S. semiconductor companies' supply chains would hurt and put the industry, which creates over 250,000 jobs, at a disadvantage⁹⁸. While the U.S is implementing the tariff hike, China launched a \$150 billion support fund to aid its local semiconductor manufacturers, placing them at a huge cost advantage over other players in the industry, especially U.S manufacturers. If the 25% tariff on Chinese ICT import continues, sales from U.S ICT manufacturers industry is expected to slow by \$332 billion in the next ten years¹⁰⁹. Rather than resorting to what appears to be a counterproductive approach to the trade conflict, Washington could adopt more effective and targeted policies at addressing Intellectual Property theft. They could also leverage the instrumentality of the WTO and work synergistically with other allies to combat the various problematic aspects of Chinese industrial policy.

Primary and Secondary Income Receipts

China being a major U.S trading partner, accounts for a significant proportion of the international trades between both nations. The trade conflict has impacted both primary and secondary income receipts and further expands the negative current account balance as shown in Figure 4.

Figure 4: Balance on Primary and Secondary Income



Source: Authors

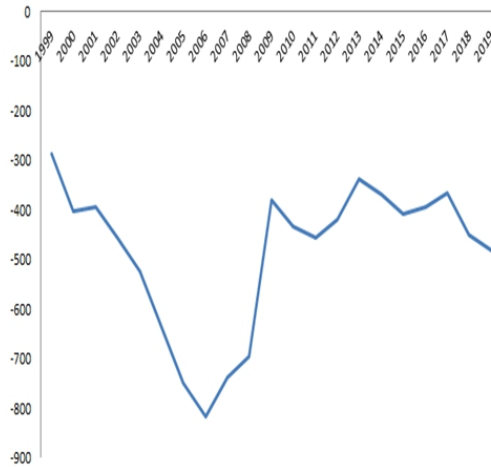
The primary income receipt has slowed down between 2017 and 2019 after reaching its peak in 2015. Primary income receipt is mainly income from

⁹Semiconductor Industry Association (SIA) https://www.semiconductors.org/wp-content/uploads/2018/08/Final_-_SIA_Submission_on_301_Tariffs.pdf

¹⁰ Why Tariffs on Chinese ICT Imports Would Harm the U.S. Economy, by Robert D. Atkinson, Stephen J. Ezell, and J. John Wu | March 2018, 1-14. <http://www2.itif.org/2018-ict-tariffs-china.pdf>

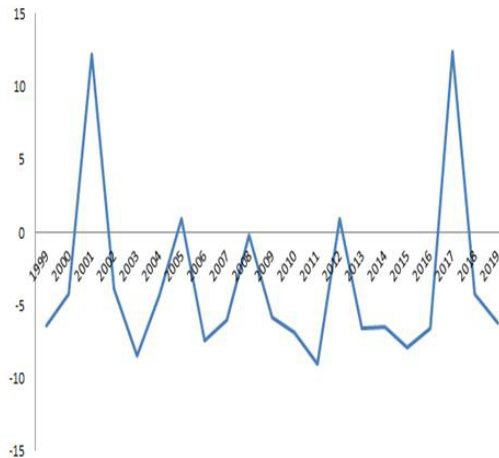
the different layers of international transactions related to investments, while secondary income receipts are mainly fees, fines, taxes, and penalties earned by the U.S government on international transactions. Primary income receipt averaged \$284 billion each quarter from 2017 to 2018 and has declined to an average of \$255 billion in 2019.

Figure 5: Balance on current account



Source: Authors

Figure 6: Balance on capital account



Source: Authors

Secondary income receipt continued in the negative territory, which indicates the slower pace of transactions consummated and fees earned during the period. The seasonally adjusted balance on current account for international transactions expanded even though in negative territory as shown

in Figure 5 from -\$394,865 in 2016 to -\$480,226 in 2019 while the balance on capital account seesawed during the period as shown in Figure 6.

Recommendations

The potential impact of the trade tariff on the global economy and trade losses is projected at 2% and 17%, respectively, as the trade conflict's effect is expected to transcend the economies of U.S and China (Bekkers & Teh, 2019). History has shown that it is difficult to emerge as a winner in a trade war. Whatever gains the U.S might have made is undone by China's retaliatory tariff with the reverberating effect on local businesses. Therefore, it has become imperative for participants and economic managers to agree to stick with multilateral commitments, especially for the U.S as China's influence on the global supply chain continues to grow.

The U.S must come clean on what constitutes a successful or an agreeable trade agreement with China and measurable criteria for assessing its success. Attempts to use trade tariffs to dissuade China from expanding its innovative capacity will definitely be seen as an infringement on China's sovereignty. One of the ways the U.S and China can begin to recouple is to resume discussions on how to achieve a win-win trade agreement between both parties in a fair, equitable, and transparent manner. Without a genuine commitment to resolving the trade impasse, the effect could be dire for the U.S economy if added to this trade conflict; it continues to pursue unilateral policies at the expense of its allies. U.S should explore an incentive-driven framework against the current punitive stance, which is bound to lead to more combative exchanges, realignment of economic powers, and the whittling down of U.S's levers of influence across the globe. Washington's decision to withdraw from the Trans-Pacific Partnership Agreement is hurting U.S manufacturers, farmers as well as consumers. U.S can return to this agreement to maintain its leverage with its Asia-Pacific partners, combat China's growing influence within the region, and encourage China to evolve lasting market reforms.

Leveraging the strong ties that the U.S has with its allies is probably another effective measure that Washington could adapt to further pressure China to agree to a more beneficial trade pact with the U.S. However, achieving this can become problematic if Washington abandons multilateralism to pursue protectionism and unilateralism, especially if it continues to decouple for established international agreements and treaties. Therefore, it becomes necessary to stress that complete decoupling is a strategy that would do both countries' economies no good.

Obviously, an equitable and efficient path to resolving the trade war would require a rules-based and multilateral approach, one that could be achieved through the instrumentality of the WTO. The WTO embodies

American core values of non-discrimination, the rule of law, and transparency and should form the foundation on which the U.S can amass global support to counter Chinese unfavorable economic practices (Meltzer & Shenai, 2019). Washington must now chart a new course, one that is different from its earlier approach of undermining the WTO despite benefitting so much from it by working synergistically with its allies to restructure the WTO in a manner that guarantees an equitable trade policy framework that works for all. However, for any appreciable progress to be made on China's compliance with WTO trade terms, the U.S must also commit to comply with WTO trade policies.

We strongly canvass for a resolution using the instrumentality of the WTO where China can be made to abide by the dispute settlement mechanism of the WTO because whereas China benefits from multilateralism and the open trade framework of the WTO, China continues to run an economic model in which the state controls both public and private enterprises. Therefore, a sustainable solution would require a political consensus to unite around a global solution aimed at addressing the trade tariff crisis.

Irrespective of the outcome of the current trade impasse is, how the U.S fairs will largely depend on actions taken at home. There will be a need to refocus its domestic policies to engender the competitiveness of its economy. The U.S will also need to tactfully design policies - anti-dumping and countervailing measures, policies that control access to its technologies either through investments or export controls, and the application of WTO-trade consistent policies to push back against Chinese harmful economic activities on U.S businesses.

Conclusion

The trade conflict between the U.S and China has been a topical issue in the last couple of years, with a significant consequence on the economies of both nations and other trading partners. In this paper, we assessed the impact of the trade conflict on the U.S economy using the manufacturing, agriculture, and technology sectors as a guide. From our assessment, we find that the trade war has had a negative impact on companies in the manufacturing, agriculture, and technology sectors of the economy, leading to losses in export revenues and jobs in the sectors targeted by the trade conflict. Further, we examined the sectoral impact of the trade war on the primary and secondary income balances accruable to the U.S government during the period. We notice a significant decline in the primary income balances since the trade war began in 2017. Secondary income balances expanded in the negative territory during the period. To address this conflict, we advanced four paths to resolving the trade war, which includes using the instrumentality of the WTO and returning to the negotiation table to extract a win-win trade policy framework. A reset of Washington's approach to multilateralism is required. Also, there is the need

to implement incentive-based access and control to U.S technologies for U.S allies, including China, to address the trade deficits and China's violation of intellectual property rights.

References:

1. Aaron, F. & Pierce, J. (2019). Disentangling the effects of the 2018-2019 tariffs on a globally connected U.S. manufacturing sector. *Finance and Economics Discussion Series* 2019-086. <https://doi.org/10.17016/FEDS.2019.086>.
2. Adjemian, M. K., Smith, A., & He, W. (2019). Estimating the market effect of a trade war: The case of Soybean tariffs 1-20
3. Amiti, M., Redding, S. & Weinstein, D. (2019). The impact of the 2018 trade war on U.S. prices and welfare. *CEPR Discussion Paper 13564*, 1-39.
4. Amiti, M., Redding, S. J., & Weinstein, D. E. (2020). Who's paying for the US tariffs? A longer-term perspective. In *AEA Papers and Proceedings* 110, 541-546.
5. Bekkers, E., & Schroeter, S. (2020). An economic analysis of the U.S – China trade conflict. *Staff Working Paper ERSD-2020, Economic Research and Statistics Division World Trade Organization*. 1-36
6. Bekkers, E., & Teh, R. (2019). Potential economic effects of a global trade conflict: Projecting the medium-run effects with the WTO global trade model. *WTO Staff Working Paper (No. ERSD-2019-04)*.
7. Carter, C.A. & Sandro, S (2019). Impact of the U.S.-China trade war on California Agriculture. *ARE Update* 23(3) 9–11.
8. Cavallo, A., Gopinath, G., Neiman, B., & Tang, J. (2019). Tariff pass through at the border and at the store: evidence from US trade policy. *National Bureau of Economic Research Working Paper* 26396. 1-37
9. Chong, T. T. L., & Li, X. (2019). Understanding the China–US trade war: causes, economic impact, and the worst-case scenario. *Economic and Political Studies*, 7(2), 185-202.
10. Fenwick, A. (1984). Evaluating China's special economic zones. *Int'l Tax & Bus. Law.*, 2, 376-405
11. Fitzgerald, M. (2019). Here's what new tariffs will cost the average American household. <https://www.cnbc.com/2019/08/19/heres-what-new-tariffs-will-cost-an-average-american-household.html>
12. Hass, R. & Denmark, A. (2020). More pain than gain: How the US-China trade war hurt America, Retrieved from <https://www.brookings.edu>
13. Hur, N. (2018). Historical and strategic concern over the US-China trade war: Will they be within the WTO? *Journal of East Asia and International Law* 11 (393) 1-30

14. Holton, R. H., & Wang, X. (1989). *US-China economic relations: present and future* (No. 29). University of California Institute of East Asian Studies.
15. Li, M., Balistreri, E. J., & Zhang, W. (2020). The US–China trade war: Tariff data and general equilibrium analysis. *Journal of Asian Economics*, 69, 1-12
16. Meltzer, J. P., & Shenai, N. (2019). The US-China economic relationship: A comprehensive approach. *Brookings and American Enterprise Institute* 1-25
17. Noland, M. (2018). US trade policy in the Trump administration. *Asian Economic Policy Review*, 13(2), 262-278.



ESJ Social Sciences

Strategy Map Development for the Central Bank of Nepal Using Balanced Scorecard

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[Doi:10.19044/esj.2021.v17n1p88](https://doi.org/10.19044/esj.2021.v17n1p88)

Submitted: 21 October 2020

Accepted: 08 January 2021

Published: 31 January 2021

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Cite As:

Niroula S., Tan Q. & Parajuli A. (2021). *Strategy Map Development for the Central Bank of Nepal Using Balanced Scorecard*. European Scientific Journal, ESJ, 17(88), 88. <https://doi.org/10.19044/esj.2021.v17n1p88>

Abstract

This paper focuses on how the development of the strategy map for the Central Bank of Nepal is done by linking the key measures with the four perspectives of Balanced Scorecard perspectives (finance, customer, internal process, and learning and growth). The central bank is a vital part of an economy, and therefore it should not limit its strategy implementation and performance measurement within the financial perspectives only. So, this paper serves the purposes of creating a road map for discovering the key indicators to create the strategy map and to support future research in the Nepalese banking field. In the absence of a previous strategy map, the strategic goals of the bank were derived from the relevant literature, the bank's vision, mission, goals, and mandates followed by the expert's selection. A list of the bank's strategic goals was derived from the survey questionnaire corresponding to the four perspectives of Balanced Scorecard. The measures of perspective were studied by factor analysis. The research therefore uses a descriptive-exploratory method. Finally, the strategy map was developed and the result consisted of the strategic goals and measures in financial, customer, internal process, and learning and growth.

Keywords: Balanced Scorecard, Central Bank, Strategy mapping

Introduction

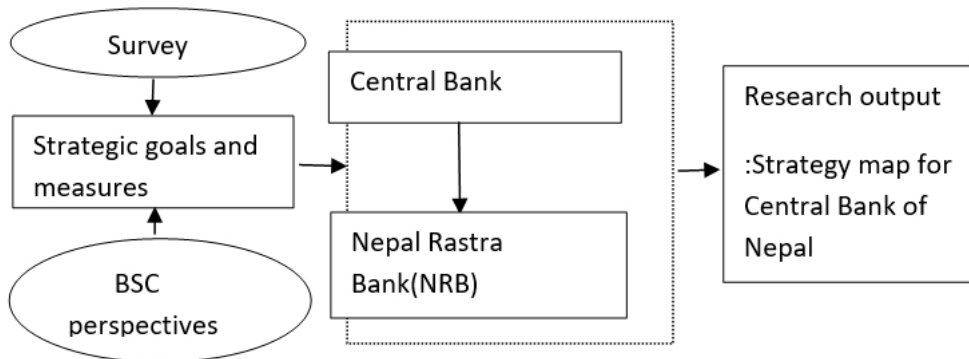
After questioning contemporary management accounting in several articles during the 1980s, Kaplan and Norton (1992) introduced the Balanced Scorecard (BSC) concept. BSC translates an organization's mission and strategy into a comprehensive set of performance measures to provide the necessary framework for a strategic measurement and management system (Kaplan & Norton, 1996). According to Kaplan and Norton, an effective strategic learning process requires a shared strategic framework that communicates the strategy and allows all participants to see how their individual activities contribute to achieving the overall strategy. Thus, the BSC provides a representation of the organizations' shared vision.

Since banking institutions hold the intangible nature of products and services, it can be challenging to measure the efficiency of the institutions. Many traditional measures focus mainly on the financial aspects during the strategy implementation and performance assessment.

To screen strategy implementation constantly, a Balanced scorecard can be used for developing proper strategic goals and their measures (Norton, 2009). Since its development, BSC has evolved as the bridge between leading and lagging factors which helps in converting the organization's strategy into actions. With the introduction of the Strategy map, organizations have been able to scientifically construct their management system around their strategies (Kaplan & Norton, 2004). Since then, BSC has not been limited only to the performance measurement but has also been rebuild as the means that helps in implementing the strategies and in presenting strategy mapping which defines the various ways of executing the strategies. Even though many BSC studies have limited themselves in performance measurement, many banking and other organizations nowadays have been widely using BSC as a successful measure to execute strategic plans (Aranda & Arellano, 2010; Banker et al., 2004). Central Bank of Nepal is the national-level regulatory authority whose importance is immense for the nation. Due to the rapid financial sector liberalization, the financial sector has become more agile which has raised various challenges to the Central Bank to attain macroeconomic and financial stability. In such a scenario, the bank should adapt its strategy accordingly so that the institute can cope up with the latest world development. However, the bank has been focusing on financial aspects for planning and performance measurement. Many studies on Balanced Scorecard have been done in Nepal previously but no documented strategy map or key performance indicators (KPIs) could be found for the non-financial perspectives for the bank. So, this study aims to fill in the gap prevailing in this field, It also aims to create a path for future research on strategy mapping and on BSC as an alternative performance measurement tool.

This study uses the survey method and literature review to obtain the data regarding the bank's strategic goals and measures. The bank's KPIs and measures are based on the four perspectives of BSC. In addition to this, factor analysis is also conducted to validate the study. This paper follows the basic structure starting from the abstract followed by the introduction, literature review, Central Bank of Nepal, methodology, research findings, and conclusions. The map of the article followed in this research is shown in the figure below:

Figure 1. Map of article



In conclusion, the study mainly focuses on 1) exploring and organizing the strategic goals and measures suitable for the performance evaluation of the Central Bank of Nepal (Nepal Rastra Bank) based on BSC perspectives; 2) developing a strategy map for strategical improvements; 3) arranging suggestions based on the analysis and providing assistance for future research.

Literature Review

In the year 1992, Kalpan and Nortan developed a performance tool that allowed the managers to view the organization from four perspectives: financial, customers, internal process, and learning and growth. They later introduced 'Strategy mapping' as a business architecture discipline which helped in implementing strategies. Balanced scorecard perspectives do not only focus on the financial goals of the organization but also focuses on the non-financial goals which help the organization to meet the strategy required to lead the industry.

Frigo et al. (2000) described the use of four perspectives to implement the vision and strategy for the community banks. However, other studies also used balanced scorecard perspectives for performance measurement along with strategy development (Banker et al., 2004; Aranda & Arellano, 2010).

Many studies have been researched in the banking industries using BSC and strategy map. Among these studies, many focus only on performance measurement rather than finding the key performance indicators for the implementation of the strategy. Wu et al. (2011) focus on how the BSC should

not be limited as a performance measurement tool but also should be utilized in the construction of a strategy map focused on the development of the organization.

A model was developed by Zhang and Li (2009) which studied the four perspectives of BSC in commercial banks. Wu (2012) researched the strategy map of the balanced scorecard as a structural evaluation methodology for a bank. In the same study, KPIs were linked to create a strategy map by determining the causal relationship between them. This study not only created the framework for the construction of the strategy map but also showed the path of creating a strategy map for the banking intuitions.

Abdurizzag Abofaied (2017) developed the BSC for a bank in Libya to measure the performance of the bank. This study helps in understanding the concept of BSC development and also enhances the cause-effect relationship between the financial and non-financial aspects of the organization.

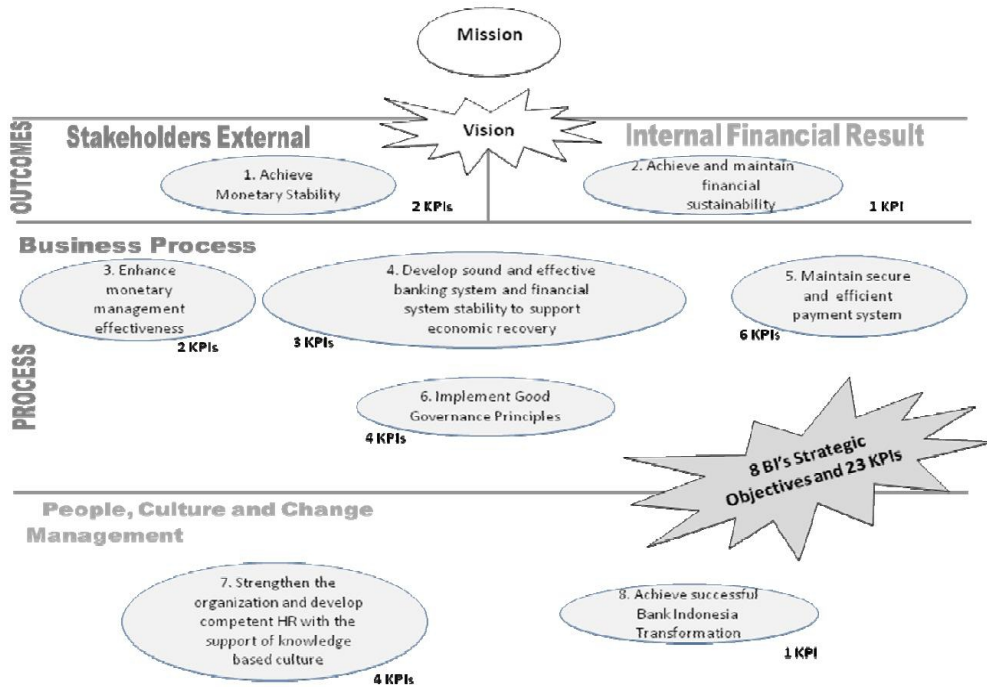
Similarly, Ahmed Hamdy (2018) examined the effect of the bank orientation by the balanced scorecard approach on the bank's performance and competitiveness. The result of the study implied that the BSC approach has a significant impact on banking performance as well as competitiveness.

On the other hand, Miklós Pakurár et al. (2019) conducted an empirical study on the impact of supply chain integration on organizational performance in the Jordanian banking sector using the balanced scorecard approach. The result not only showed the significant relationship between the supply chain integration and organizational performance but also suggested the improvement of customer involvement to improve the bank's performance.

Due to the agile and non-profit oriented characteristics of the non-profit organization, the development of a strategy map can be tricky at times. Cam Scholey and Kurt Schobel (2016) published a paper where they outlined a possible approach to strategy execution. This is a four-step framework named performance measurement for non-profits (PM4PNO) which uses the Balanced Scorecard approach.

In October 2004, a strategy map for the Central Bank of Indonesia was published after the long study which started in the year 2001 as a plan to launch inclusive planning of performance measurement (Djafara & Pranoto, 2004). The result is shown in Figure 2.

Figure 2. Strategy map for Bank of Indonesia



Mojtaba et al. (2011) did a study for the Central Bank of Iran to develop the strategy map. The result created the strategy map for the bank which is focused on clarity of the strategic goals for the bank.

For any organization to develop the relevant strategy map, proper KPIs should be selected after the rigorous literature review along with the expert's selection. Improved SWOT analysis was used as a method for finding the strategic goals by Quezada et al. (2009) to identify the KPIs. Rule of thumb is also often used in the strategy mapping process. Littler et al. combined the strategy formulation perspective of Hamel and Prahalad (1996a, 1996b) with the BSC method of Kalpan and Norton (1996). Quezada (2009) describes a simple tool to identify the strategic objectives in creating a strategy map by studying three types of methods.

In the context of Nepal, many studies have been conducted on BSC but no documented article on the strategy map has been found. Ghanendra Fago (2010) researched by comparing the performance of two different banking organizations using a Balanced Scorecard.

The central bank is crucial in the financial system and they have different performance measurement issues (Deimantè Teresienè, 2018). Satya Narayan Kalika (2019) published an article on 'Evolutionary Overview of Central Banking in Nepal: An Account of Law and Practice' where he explains

the sequential development of the Central Bank of Nepal. In the same study, the issues revolving around the autonomy of the central bank are mentioned.

Central Bank of Nepal

Nepal Rastra Bank (Central Bank of Nepal) was established on 26th April 1956 as the Central Bank of Nepal as per the Nepal Rastra Bank (NRB) Act 1955. Since the establishment of the bank, there has been substantial development in the banking field.

The functions and objectives of the bank were reformed by the new Nepal Rastra Bank Act, 2058 (2002), which are:

- to formulate necessary monetary and exchange policies to take care of the steadiness in price and consolidate the balance of payments for sustainable development of the economy;
- to develop a secure, healthy, and efficient system of payments;
- to form appropriate supervision of the banking and economic system to take care of its stability and foster its healthy development;
- to further enhance the general public confidence in Nepal's entire banking and economic system.

The bank is eminently aware that for the achievement of the above objectives within the present dynamic environment, sustained progress and continued reform of the financial sector is of utmost importance. Continuously being conscious of this great responsibility, NRB is seriously pursuing various policies, strategies, and actions, all of which are conveyed within the annual report on monetary policy (Central Bank of Nepal website).

However, the implemented strategy used by Nepal Rastra Bank to meet recent world development needs to be taken into consideration. Nepal is a landlocked country which borders within two of the biggest economy of the world, India and China. The fact that Nepalese currency is pegged with Indian currency is another undeniable truth of the Nepalese economy. In the era of digital banking and digital money, India as a neighboring country is aggressively working on digital payment. Another neighbor country, China, is trying to get yuan to be internationally recognized; thus, they are pushing this operation forward with the introduction of the Chinese Central Bank Digital Currency (CBDC) called DCEP. However, Nepal has a complete ban on cryptocurrency along with no infrastructure to support it. Also, the Nepalese banking industry still seems to struggle with basic mobile and online banking. At this pace, Nepal might end up in monetary conflict internationally without the proper strategy. Depending on these factors, NRB needs to have a detailed strategic plan if it wants to prevent its economy from being outdated or left behind.

Therefore, the Central Bank's (NRB) supervision capability should be further strengthened to bring it to global standards, which can be done through the help of a strategy map and balanced scorecard.

Methodology

This study deals with the qualitative data by exploring the prevailing situation without changing any variables. Therefore, this study uses a descriptive survey.

This study mainly looks into the Central Bank of Nepal's vision and mission on two levels. The first level is done by studying the bank's vision, mission, economic development plans, and the bank's related acts and laws. In addition to this, a key informant survey was conducted with the groups of experts consisting of bank managers and related academicians. Based on the initial key informant survey, another questionnaire on the proposed measures by using a five-choice questionnaire was prepared. Since this research is mainly focused on finding the balanced evaluation measures and to develop the strategy mapping, it ensures that the surveyed population should have extensive knowledge of the strategic goals of the bank. The respondents were selected on the basis of strata developed for three (3) sectors: Central Bank of Nepal's employees, Nepalese Commercial Banks middle and top-level managers, and academicians on the basis of academics and professional experience.

In the first phase of the survey, an online survey was done with nine top and middle-level managers and academicians to determine the strategic goals of the Central Bank of Nepal. The first survey was a key informant survey. For the second survey, the statistical population for determining the measures related to the strategic goals derived was composed of 100 respondents. The sampling population for this survey was selected from the random sampling among the strata created on the three (3) sectors as mentioned above.

The first questionnaire consisting of 10 questions was used to find the strategic goals of the bank. This questionnaire included one yes/no question, one four-choice answer question, and five open-end questions. After that, another questionnaire was developed which consists of 63 questions that included the measures related to the previously derived goals. This final questionnaire consists of a five-choice answer question of the spectrum of Likert.

In this research, factor analysis was used to validate the questionnaire, and it also uses Cronbach's alpha (α) to test the reliability of the measures' questionnaire using the SPSS software. Both studies showed that our research study is coordinated enough. Also, the previous studies and research done on the field backups the validity of our methodology and questionnaire. Mojtaba

et al. (2011) conducted a study for the strategy map creation of the Central Bank of Iran with a similar function. The practice established by this research is followed by this research.

Research Findings

This study undergoes strategic analysis for the Central Bank of Nepal using a balanced scorecard. The vision, mission, and strategic goals of the bank were determined for the development of the strategy map.

Here, in this exploration, Cronbach's alpha (α) coefficient is conducted to test the consistency of the measures' questionnaire (see Table 1).

Factor analysis was also used to analyze the scale. Therefore, three important stages of factor analysis to consider are:

- 1) Preparation of correlation matrix
- 2) Extraction of primary factors
- 3) Rotating factor to achieve the final solution

Table 1. Reliability test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.955	.956	63

The Bartlett test is used to assess the reliability of the fact that the matrix of data in society is not equal to zero. In the present study, the characteristic of the Bartlett-test is significant, indicating that the correlation matrix of the data is not zero in the society. Hence, the operating operation can be justified (see Table 2).

Table 2. Result of KMO and Bartlett test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.626
Bartlett's Test of Sphericity	Approx. Chi-Square	4185.841
	Df	1953
	Sig.	.000

The resulting structure matrix, after 24 rotations, showed the factor loading of the questions and the set of questions which were initially divided into 17 factors. These factors were classified into four basic categories after removing unrelated and low-factor loading questions. This research conclusion obtained the strategic goals and their respective measures for the Central Bank of Nepal on the basis of the scale analysis by factor analysis method (see Table 3). Hence, the strategy map for the Central Bank of Nepal was constructed using our research conclusion as mentioned above (see Figure 2).

Table 3. Research results

Perspectives	Goals	Measures
Financial	Inflation controlling and Currency Value retaining	<ul style="list-style-type: none"> • Bank interest rate • Liquidity ratio • Cash reserve ratio (CRR) of BFIs • Consumer price index
Financial	Money supply controlling (yearly)	<ul style="list-style-type: none"> • Current ratio • Bank interest rate
Financial	External sector stability	<ul style="list-style-type: none"> • External debt • Balance of trade (BOT) • Balance of payment (BOP) • Foreign Direct Investment (FDI) • International Investment Position (IIP)
Customer	Financial sector Development and stability	<ul style="list-style-type: none"> • The growth of country's banks • The growth of foreign banks • The growth of new financial institutions • The degree of privatization of Government banks • Robust Anti-Money laundering (AML) / Combating the financing of terrorism (CFT) • Payment gateway development • Access to finance at remote location/Branchless Banking
Customer	Facilitating monetary and foreign exchange in interbank markets	<ul style="list-style-type: none"> • Electronic money spread rate • The average rate of transactions required to transfer money and currency • The average number of employees involved in dealings between banks • Rates of services and new projects in background of exchanges between banks
Internal process	Maintenance of NRB's autonomy	<ul style="list-style-type: none"> • The rate of change in Bank's central management • Change in NRB's central management with respect to change in government • Governor turnover rate
Internal process	Implementation of knowledge management and good governance system	<ul style="list-style-type: none"> • Growth of IT costs to current bank costs • Growth of cost of IT to the total cost • Number of internal promotions • Output based incentive

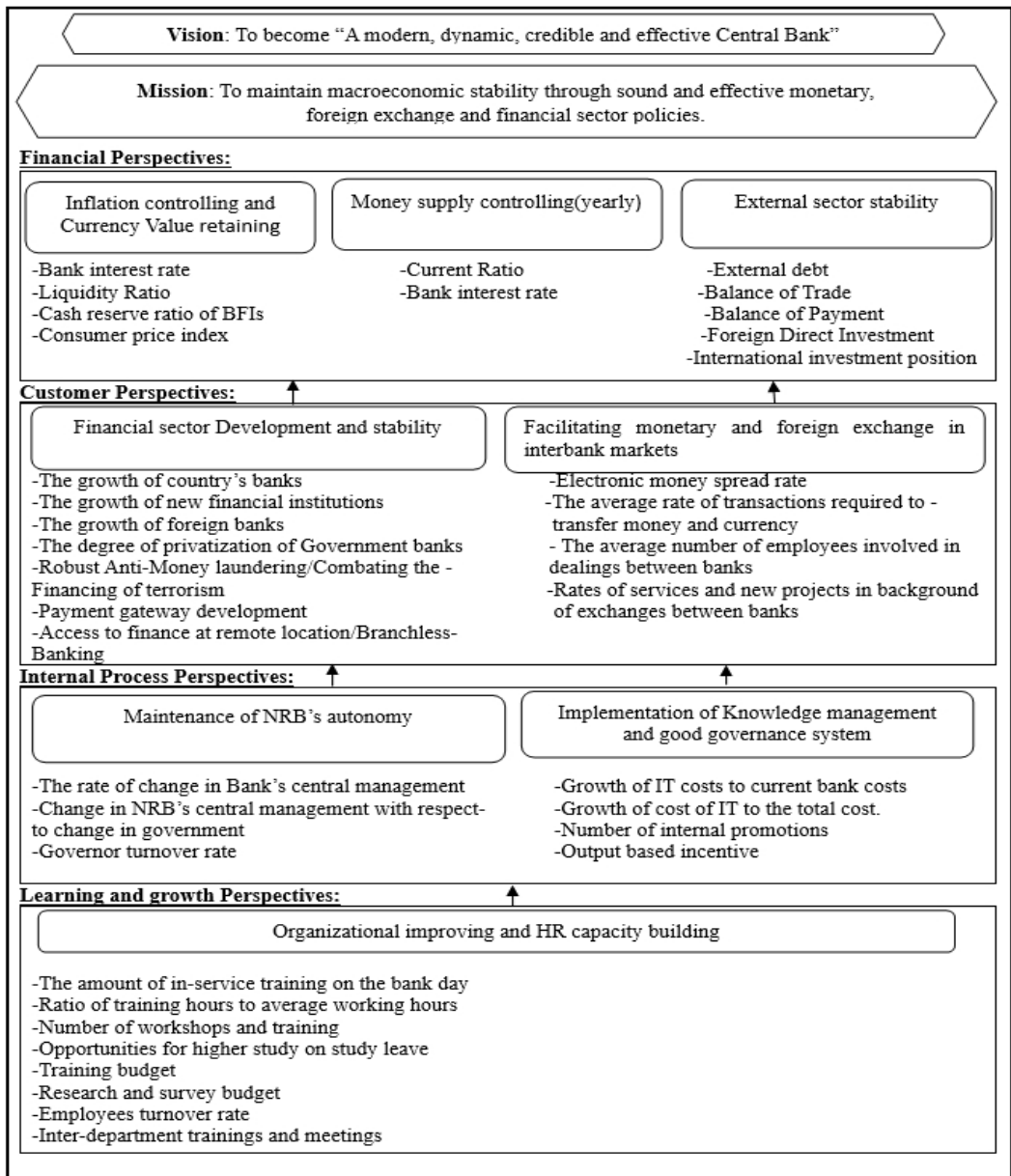
Learning and growth	Organizational improving and HR capacity building	<ul style="list-style-type: none">• The amount of in-service training on the bank day• Ratio of training hours to average working hours• Number of workshops and training• Opportunities for higher study on study leave• Training budget• Research and survey budget• Employees turnover rate• Inter-department trainings and meetings
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Conclusion

The development of a strategy for a non-profit organization and governmental organization is quite different from the non-governmental organization and for-profit organization. They require macro-level planning and documents, which is why this study had to conduct a key informant survey. Many non-profit organization and governmental organization may find complications while studying their financial perspective due to the need of macro-level understanding and their volatile characteristics. Nonetheless, this research found some measurable financial measures which control its overall goals.

The major contribution of our study in the Nepalese banking industry is that a strategy map was created based on the strategic goals derived from the micro and macro-level study, expert's opinion, and survey. Due to the COVID-19 pandemic, practical actions and approaches were limited, which could have made significant help in this study. The surveys and studies were limited to the virtual spaces due to the pandemic.

Figure 3. Strategy map for Central Bank of Nepal



Some of the measures found in our study were similar to the previous studies done for the Central Bank of Iran and Central Bank of Indonesia because of the similarity in the goals of the bank. However, the complete study was done under the precise framework of the Central Bank of Nepal, its acts, and the Nepalese banking environment.

In expressing the new recommendations, the next step is to compile so as to implement the strategy in the bank and to achieve strategic goals. This study can also be transformed into applied research with proper planning. Based on the measures that were obtained in this study, the strategy map can be obtained through the same research via internal meetings with the cooperation of experienced consultants. In addition, this paper can lead a way towards the use of BSC and strategy mapping in a non-commercial and non-profit organization in the future, especially in Nepal.

In order to achieve the strategic goals and change management, it is necessary to have a strategy and plan with a budget transplant. The successful link of planning with the budgeting process depends on the integrity of the organization and the implementation of long-term goals with short-term activities (budgeting) (Norton & Peck, 2006).

For strategy implementation, the implementation of all the pillars of the organization is necessary. The organization's pillars based on the priority include all the roles of finance, human resource, structure, technology, and the task of the organization. Kaplan and Norton (2006) stated that successful strategy implementation takes place after compiling the strategy map, setting indicators, and proper budgeting improvement using the necessary personnel and technology.

References:

1. Abofaied, A. (2017). Evaluation of bank's performance by using balanced scorecard: Practical study in Libyan environment. *International Journal of Business and Management*, V (1), 1–14. <https://doi.org/10.20472/bm.2017.5.1.001>
2. Aranda, C., & Arellano, J. (2010). Consensus and link structure in strategic performance measurement systems: A field study. *Journal of Management Accounting Research*, 22(1), 271–299. <https://doi.org/10.2308/jmar.2010.22.1.271>
3. Banker, R. D., Chang, H., & Pizzini, M. J. (2004). The balanced scorecard: Judgmental effects of performance measures linked to strategy. *The Accounting Review*, 79(1), 1–23. <https://doi.org/10.2308/accr.2004.79.1.1>
4. Fago, G. (2010). Performance measurement using balance scorecard—A case of Nepal. *Management Dynamics-A Journal on Management and Economics (2010) Vol, 14(1)*.
5. Frigo, M. L., Pustoring, P. G., & Krull JR., G. W. (2000, Spring). The balanced scorecard for community banks: Translating strategy into action. *Bank Accounting & Finance*, 13(3), 17.

6. Hamdy, A. (2018). Balance scorecard role in competitive advantage of Egyptian banking sector. *The Business & Management Review*, 9(3), 424-434.
7. Kalika, S. N. (2019). Evolutionary overview of central banking in Nepal: An account of law and practice. *Management Dynamics*, 22(1), 107–120. <https://doi.org/10.3126/md.v22i1.30244>
8. Kaplan, R. S. (2009). Conceptual foundations of the balanced scorecard. *Handbooks of Management Accounting Research*, 3, 1253-1269.
9. Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review Press*.
10. Kaplan, R. S., & Norton, D. P. (2004). Strategy maps: Converting intangible assets into tangible outcomes (1st ed.). *Harvard Business Review Press*.
11. Kaplan, R. S., & Norton, D. P. (2005). The balanced scorecard: measures that drive performance. *Harvard Business Review*, 83(7), 172.
12. Kaplan, R. S., & Norton, D. P. (2006). Alignment: Using the balanced scorecard to create corporate synergies. *Harvard Business Review Press*.
13. Littler, K., Aisthorpe, P., Hudson, R., & Keasey, K. (2000). A new approach to linking strategy formulation and strategy implementation: An example from the UK banking sector. *International Journal of Information Management*, 20(6), 411–428. [https://doi.org/10.1016/s0268-4012\(00\)00036-0](https://doi.org/10.1016/s0268-4012(00)00036-0)
14. Nepal Rastra Bank. (2020, November 13). *About*. नेपाल राष्ट्र बैंक. <https://www.nrb.org.np/about/>
15. Norton, D., & Peck, P. (2006). Linking operations to strategy and budget. *Balanced Scorecard Report, Harvard Business Review*, 16-20.
16. Pakurár, M., Haddad, H., Popp, J., Khan, T., & Oláh, J. (2019). Supply chain integration, organizational performance and balanced scorecard: An empirical study of the banking sector in Jordan. *Journal of International Studies Vol*, 12(2).
17. Quezada, L. E., Cordova, F. M., Palominos, P., Godoy, K., & Ross, J. (2009). Method for identifying strategic objectives in strategy maps. *International Journal of Production Economics*, 122(1), 492–500. <https://doi.org/10.1016/j.ijpe.2009.06.019>
18. Rajab-Baigy, M., Foruzandeh, L., Mortazavi, M., & Bigdeli, A. (2011). Strategy map creation using a balanced scorecard model case study: Central bank of Iran. *European Journal of Economics, Finance and Administrative Sciences*, (36).

19. Scholey, C., & Schobel, K. (2016). Performance measurement for non-profit organizations. *The Balanced Scorecard as an approach*.
20. Teresienè, D. (2018). Performance measurement issues in central banks. *Entrepreneurship and Sustainability Issues*, 6 (1), pp.176-189. <10.9770/jesi.2018.6.1(12)>. <hal-02121128>
21. Wu, H.-Y. (2012). Constructing a strategy map for banking institutions with key performance indicators of the balanced scorecard. *Evaluation and Program Planning*, 35(3), 303–320. <https://doi.org/10.1016/j.evalprogplan.2011.11.009>
22. Wu, H.-Y., Lin, Y.-K., & Chang, C.-H. (2011). Performance evaluation of extension education centers in universities based on the balanced scorecard. *Evaluation and Program Planning*, 34(1), 37–50. <https://doi.org/10.1016/j.evalprogplan.2010.06.001>
23. Zhang, Y., & Li, L. (2009). Study on balanced scorecard of commercial bank in performance management system. *Proceedings. The 2009 International Symposium on Web Information Systems and Applications (WISA 2009)* (p. 206). Academy Publisher.



ESJ Social Sciences

The relationship between Competitive Strategy Drivers and Performance of manufacturing Small and Medium Enterprises in Nairobi County, Kenya

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[Doi:10.19044/esj.2021.v17n1p102](https://doi.org/10.19044/esj.2021.v17n1p102)

Submitted: 23 December 2020

Accepted: 22 January 2021

Published: 31 January 2021

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Cite As:

Baariu L.V., Gathungu J. & Ndemo B. (2021). *The relationship between Competitive Strategy Drivers and Performance of manufacturing Small and Medium Enterprises in Nairobi County, Kenya*. European Scientific Journal, ESJ, 17(1), 102. <https://doi.org/10.19044/esj.2021.v17n1p102>

Abstract

This study determines the influence of competitive strategy drivers on the performance of manufacturing SMEs in Nairobi County in Kenya. Small and medium enterprises (SMEs) are the backbone of many economies all over the world through creation of employment opportunities as well as wealth creation for entrepreneurs. Strong competitive strategy drivers offer advantage to SMEs to help them achieve good performance and remain competitive in their respective markets. The study was anchored on resource-based theory which provided a framework for examining the association between the research variables. For the methodology, a cross-sectional survey was done covering 334 manufacturing small and medium enterprises in Nairobi County, Kenya. Structured questionnaires were used for data collection with a response rate of 89.6%. Various descriptive statistics were used to project the demographic characteristics of the association and the respondents. Inferential statistics was used to assess up the connection between the factors and test the model. The results indicated that the three competitive strategy drivers of environmental based drivers, resource-based drivers and hybrid strategy drivers exhibited significant relationship with performance of the Manufacturing SMEs in Nairobi county. The study's recommendations will be useful to management of manufacturing-sector SMEs in developing long

term strategies to address constraints that could have led to low capacity utilization and productivity in the sector. Additionally, it may be used to guide policy formulations geared to support manufacturing SMEs operations. The researcher recommends similar research to be undertaken in other SMEs and also have more managers respond to the questionnaires in order to enrich the collected data.

Keywords: Competitive Strategy Drivers, Capital raising, Human Capital, Firm Performance, Value Chain

1. Introduction

Small and Medium Enterprises (SMEs) are key drivers to successful economic growth through innovations, creation of employment opportunities, perfecting of entrepreneurship skills and supporting social integration (Dahmen & Rodriguez, 2014). This is because they fuel economic growth in most economies and if their performance is compromised, economic development suffers a great deal (Sidik, 2012). One of the ways through which performance can be best achieved is through the adoption of a combination of competitive strategies (Gómez, 2006). Performance of manufacturing SMEs has become an area of concern especially in a country like Kenya because of the significant role that they play in economic development in the wake of government agencies that support their growth. The Kenyan government has mainstreamed a number of initiatives through its agencies to support manufacturing SMEs growth. These agencies include the Micro and Small Enterprises Authority (MSMES), the Kenya Association of Manufacturers (KAM) and the Ministry of Industrialization and Enterprise Development.

Manufacturing SMEs in Kenya currently employ over 240,000 people representing 13% of the total employment. The manufacturing sector in Kenya has experienced major challenges in the last 15 years. This has seen its contribution to GDP reduce considerably giving rise to fears of a premature deindustrialization phenomenon. The structure of the manufacturing sector has seen little change over the years despite targeted policy interventions attempting to adjust this. The manufacturing sector's share of GDP has remained stagnant with only limited increases in the last three decades, contributing an average of 10% from 1964-73 and rising marginally to 13.6% from 1990-2007 and averaging below 10% in recent years. Production in the manufacturing sector is predominantly geared towards consumer goods (KAM, 2017).

There exist limited studies seeking that link competitive strategy drivers and performance especially in the context of manufacturing SMEs in Nairobi County. According to (Kristiansen, Furuholt & Wahid, 2003), there is a strong link between competitive strategy drivers and firm's performance.

This research study was anchored on Resource-Based theory which provided a framework for examining the association between competitive strategy drivers and performance of manufacturing small and medium enterprises. The resource-based theory contends that a firm's competitive advantage is mainly derived from its ability to mobilize resources to its advantage (Barney, 1991). Various studies have defined strategy drivers variously; according to Salavou (2015), a strategy driver, is a deliberate set of clearly defined activities that are planned and implemented with the aim of achieving a competitive advantage. The competitive strategy drivers ought to be aligned to a firm's long term strategy in an endeavor to achieve a competitive position and achieve long term profitability (Peteraf, 1993). The manufacturing SMEs competitive strategy drivers in this study are therefore categorized into three main strategic drivers, namely the environmental based strategy drivers, resource based strategy drivers and hybrid strategy drivers.

The environment-based strategy drivers are explained using porter's generic strategies of cost leadership, differentiation and focus. Porter's three generic strategies were better suited for application in the analysis of competitiveness and performance of the targeted manufacturing SMEs in this study. Cost leadership allows a firm to charge lower prices than its competitors and differentiation allows firms to offer product types and benefits that competitors cannot match. Focus is providing a particular service in an identified specific market. To sustain a competitive advantage, manufacturing SMEs must optimize their resources. These resources include human resources, intellectual property, materials and organization brand as well as capabilities, such as innovativeness, efficiency and quality, (Gathungu & Baariu, 2018)

The hybrid strategy drivers are categorized as combination of low cost and differentiation. An organization that implements a hybrid strategic approach will benefit from a non-imitation advantage compared to other competitors who employ pure strategic approach (Miller, 1992). Since cost-based and differentiation-based advantages are difficult to sustain, firms that pursue a combination strategy may achieve higher performance than those firms that pursue a singular strategy. Differentiation enables the company to charge premium prices and cost leadership enables the company to charge the most competitive price. Thus, the manufacturing SMEs are able to achieve a competitive advantage by delivering value to consumers based on both product features and price (Learning, 2009).

For this study, the resource-based strategy drivers comprise of manufacturing SMEs capital raising capacity, technology development, human capital and Value Chain. Organizations ability to raise capital has a strategic bearing on their competitiveness. The capital raising capacity enables the rate of acquisition of assets which broadly can be categorized as tangible

and not tangible (Barney, 1991). Unlike physical resources, intangible assets such as brand reputation are built over a long time and are things that other organizations cannot buy from the market. Intangible resources usually stay within a company and are the main source of sustainable competitive advantage. Technology focus for manufacturing SMEs involves developing, acquiring or applying technology for competitive advantage. Manufacturing SMEs need to define technical capabilities such as advanced device design, rapid prototyping, and automated assembly among others to achieve competitive advantage.

As part of ensuring value for customers, SMEs have to develop and sustain an engaged, knowledgeable and creative workforce (Afiouni, 2007). To create a workforce that provides sustainable competitive advantage and value creation, manufacturing SMEs should create an environment that allows their human capital to grow in a way that would be very difficult for competitors to imitate (Agarwal & Ferratt, 2001). A value chain is a way of conceptualizing the activities that are needed in order to provide a product to a consumer. It shows the way a product acquires value as well as gains cost as it goes through the process of design, production, marketing, delivery and service to the eventual consumer, Ensign (2001). Value chain comprises of fundamental activities that add value to the final product directly and support activities that add value indirectly. Directly, value chain represents the internal activities a manufacturing SME engages in during the process of transforming raw materials into outputs or finished products (Prescott, 2001).

Despite measuring firm performance attracting considerable debate, there is no universal agreement on measures of performance. However, common measures of firm performance in SMEs include both monetary and non-money related markers. Money related markers incorporate benefit pointers, for example, return on asset, investment and equity. ROI is among the most popular financial metrics used for assessing the financial outcomes on individual investments by shareholders. A high ROI means the investment gains compare positively to investment cost. Generally, ROI is usually calculated by dividing income with investment, Kabiru (2016). Non-financial procedures include operational efficiency and market share, employee turnover, entrepreneur satisfaction and longevity of the firm (Gentry & Vaidyanathan, 2010). In this research, manufacturing SMEs' performance was assessed using both financial and non-financial measures. For the financial measures, ROI was used while for the non-financial measures, the parameters used were entrepreneurial satisfaction, growth in employment and business longevity.

2.0 Literature Review

Entrepreneurship is the process of identifying an opportunity in the business environment, pooling of resources, exploiting the opportunity, make profit and meeting the needs of customers. Entrepreneurship is mainly about taking risks, creativeness and being innovative. Several theories exist to explain entrepreneurship, among them, the resource-based theory of entrepreneurship. The resource based theory argues that distinct bundle of resources at the discretion of the firm generate sustained competitive advantage (Barney, 1991; Conner & Prahalad, 1996). In this study, the theory conceptualizes the argument that firm performance is positively correlated to the resources at their disposal meaning, that, the more resources a company can access, the higher the chances of higher performance. The resource-based theory has major implications on entrepreneurship research. Entrepreneurial opportunities can best be exploited through entrepreneurs' possession of strategic resources which are likely unique, valuable, difficult to imitate hence enhancing value of particular resources that other competing firms may not yet have. According to Barney 1991, strategic resources are those whose characteristics include rarity, not easily imitable, valuable and hard to substitute which in turn offer sustainable competitive advantage.

Resources that the organization needs may not be easily available, difficult to obtain or controlled by uncooperative actors which simply complicates the resources access. Firms end up depending on external players for such needed resources. To avoid such dependencies, organizations develop strategies as well as internal structures designed to enhance their capacities for enhanced resource-related transactions (Gulati & Sytch, 2007). Such strategies may often include taking political initiatives or alignments, get into larger scale production, diversification efforts or entering into cooperation agreements with other organizations. Pelham (1999) contended that focusing on low-cost plans would have lesser influence as opposed to emphasis on a differentiation strategy which would yield better performance for SMEs. If a firm wishes to apply a differentiation strategy, it must emphasize on innovative approaches and flexible manufacturing system to produce innovative products or manufacturing process of existing products.

Cost leadership strategy is an important way for a firm to achieve sustainable competitiveness in their marketplaces. Depending on the market segments that of interest, appropriate product pricing strategies become very important especially to the cost sensitive markets. Bowen, Morara & Mureithi (2009) used stratified random sampling to assemble data from 198 enterprises via questionnaires and the data obtained was analyzed descriptively. The findings indicated that SMEs adopted a variety of approaches to endear themselves to consumers. These approaches included running discounts and giving special offers, fair pricing, enhanced customer service, diversification

and continuously offer superior of services. Based on the findings, Bowen et al. concluded that achieving good firm performance requires a cocktail of policies. Several researchers have empirically examined the impact of Porter's competitive advantage strategies on the performance of companies.

3.0 Method

Research Procedure and Sample Characteristics

The study was undertaken using the cross-sectional study design, considered appropriate for entrepreneurship research (Davidsson, 2004). This design enabled pooling of quantitative data and allowed the researcher to identify patterns of association amongst the variables that confirmed the general interpretation of the associations among the study variables. The principal research tool of data collection of this study was a structured questionnaire. Respondents included SMEs owners or senior managers/persons in charge of the SME who by virtue of their positions were better placed to give informed and reliable responses. The study population comprised of all manufacturing SMEs in Nairobi County. A thorough listing of manufacturing SMEs doing their business in the study area was acquired from the Nairobi County licensing office. The list yielded 2,050 manufacturing SMEs. The list was cross checked with registered manufacturing small and medium enterprises from the Kenya Association of Manufacturers and the MSME Authority.

The sample size for the study was calculated using the formula for finite population as proposed by Israel (2009).

$$n = \frac{N}{1+N(e^2)}$$

Where:

n= Desired Sample Size

N= Population

e = Margin of Error at 5% (standard value of 0.05)

The size of the sample in this research will be:

$$n = \frac{2050}{1+ 2050(0.05)^2}$$

n= 334 Manufacturing SMEs

The manufacturing SMEs are categorized into 13 distinct groupings. A stratified random was used to establish proportionate sample from each strata as follows:

Table 1: Sample Size Determination

Strata	Sample	Percent
Building, Mining and Construction	10	3
Chemical and Allied	53	16
Energy, Electrical and Electronic	25	7
Agriculture and Fresh Produce	8	2
Food and Beverages	56	17
Leather and Footwear	4	1
Metal and Allied	49	15
Automotive	21	6
Paper and Board	28	8
Pharmaceutical and Medical Equipment	20	6
Plastics and Rubber	44	13
Textiles and Apparel	7	2
Timber, Wood and Furniture	9	3
Total	334	100

Source: Nairobi County Licensing Office (2019)

Measures

The questionnaire used nominal and ordinal scaled items on a five-point Likert scale ranging from Strongly disagree (1) to Strongly agree(5) and are shown in Table 2 below.

Table 2: Variables and respective measurement items for Competitive strategy drivers

Environmental based drivers	
1	We have the ability to deliver high quality products and services
2	We have effective sales and marketing team
3	The market understands the benefits offered by the differentiated offerings
4	Products and services different from and more attractive than those of our competitors
5	We have brand image that our customers value
6	We concentrate on particular niche markets
7	We understand the dynamics of the niche market and the unique needs of customers within it
8	We build strong brand loyalty amongst our customers thus making our particular market segment less attractive to competitors
9	We offer unique features that fulfill the demands of a narrow market
10	The firm concentrate on a particular market
11	The firm charge low prices relative to other firms that compete within the target market
12	The firm practice the lowest cost of operation in the industry
13	Our production process is backed by innovation
14	The firm acquire quality raw materials at the lowest price
15	The firm produces highly standardized product using advanced technology
Resource based drivers	
1	Our firm can easily mobilize resources
2	Our firm has a strong business plan
3	Our firm has clear strategy and competitive edge

4	Our management team are competent and valuable
5	Our business valuation and scalability are in line with investors needs
6	Our firm embraces the development of individual and institutional ingenuity
7	Digitization of performance management not only provides more precise data but also positively influences management process
8	Technology facilitate a culture of continuous feedback thus everyone knows where they stand on a regular basis
9	Technology enables collection of more objective performance data on a real time basis
10	Our firm has high skilled labour so as to produce economic value
11	Human capital is the most essential capital in our firm
12	The firm value knowledge, experience, skill, attitudes, abilities, behaviour and obligation of employees
13	The ability to effectively acquire, control and utilize knowledge in every business activity is the differentiator between our firm and competitors
14	A tool of managing increasingly complex global value chain networks
15	The firm focuses on optimizing volumes and value based on cross functional management
16	The firm integrate decision making throughout the value chain
Hybrid strategy drivers	
1	Our firm achieve both high quality and productivity at the same time
2	Our firm embraces mass customizations
3	Our firm makes consistent low cost strategic decisions on how to pursue competitive advantages and align resources and capabilities
4	It is a way of responding to changes in the competitive environment more flexibly and effectively and stay competitive

On the whole, the measurement instrument was highly reliable with an overall Cronbach alpha of 0.813.

Analytical Procedure

To describe the demographic characteristics of the association and the respondents, descriptive statistics, that is, frequency and percentages were used. Manifestation of the study variables were analyzed using mean, standard deviation, coefficient of variation, skewness and kurtosis. To test the normality of the data, measures of dispersion (SD) were utilized while factor analysis test was carried out to reduce the set of study items to subgroups which could directly be explained. Inferential statistics was used to test the data drawn from the respondent from manufacturing SMEs in Nairobi County with respect to the stated hypothesis. The study performed inferential tests to understand the relationship between different variables and validate/invalidate theories. Pearson product of correlation coefficient was used to measure the direction and magnitude of relationship between the study variables. Further, Coefficient of determination (R^2) was used to measure the goodness of fit of the model.

4.0 Results

Out of the target of 334 respondents, the researcher received 305 responses presenting a response rate of 89.82%. Five questionnaires were improperly filled and were not analysed. This response rate was comparable to similar studies, Oly Ndubisi (2007) at 75%, Njeru (2016) at 60%, Njuguna(2014) at 99.22% and Owino(2014) at 96%. Previous studies in a similar area which had lower response rates include Leverin and Liljander (2006) at 33.7 %, Sin, Tse, Yau, Lee and Chow(2002) at 27.9% and Morgan and Hunt (1994) at 14.6%. Therefore, this study’s response rate was considered very good for survey research as recommended by Punch (2003) who proposes a score of 80-85% as good response rate. Mugenda and Mugenda (1999) suggest that a 50% response rate is adequate, 60% good and above 70% very good.

The key factors in studying organizational characteristics were the age of the firm (number of years in operation) and ownership structure. A sample of 300 respondents was selected. 167 (55.5%) of the firms indicated to have been in operation for 5-10 years, 54 (18.16 %) indicated 1-5 years, 47 (15.6%) indicated 10-15 years and only 32(10.74%) of the sampled respondents indicating that their enterprises had been in operation for over 15 years. 266 (88.75 %) of the firms surveyed were sole proprietors, 28 (9.21%) were partnerships and 6 (2.05%) indicated as companies. The respondent’s characteristics included the gender, marital status and age distribution. The sample consisted of 96(32%) male and 204 (68%) female. 225(74.94%) of the respondents were married, 41(13.81%) were single, 25(8.18%) were separated or divorced while 9(3.07%) were widowed. With regard to age distribution, 25(8.44%) of the respondents were aged between18-24, 197(65.73%) were aged between 25-34, 48(15.86%) were aged 35-44, 20(6.65%) were in the 45-54 age category and 10(3.32%) are in the 55-64 bracket.

Measurement model

Confirmatory factor extraction was done to confirm the structures for three dimensions of competitive strategy drivers as well as the overall factor as shown in Table 3 below.

Table 3: Variables and Factor Statistics

Variable	Dimension/Structure/Factor	No of Items	Scale Mean Scores
Competitive Strategy Drivers	Overall Competitive Strategy Drivers	35	3.78
	Environmental Based Drivers	15	3.87
	Resource Based Drives	16	3.55
	Hybrid Based Drivers	4	3.92
Firm Performance (Non-financial)	Overall Firm Non-Financial Performance	12	3.74
	Entrepreneurial Satisfaction	3	3.88

	Growth in Employment	4	3.65
	Business Longevity	5	3.69

Source: Field Data (2019)

On the whole, our measurement model shows acceptable good levels of statistical fit as indicated by the confirmatory factor analyses.

Descriptive Statistics

Table 4: Descriptive Statistics for Measures of Environmental Competitive Based Drivers.

Statements	Mean	Std. Dev	CV
Differentiation drivers			
We have the ability to deliver high quality products and services	3.69	0.56	0.15
We have effective sales and marketing team	3.46	0.79	0.23
The market understands the benefits offered by the differentiated offerings	3.78	0.77	0.20
Products and services different from and more attractive than those of our competitors	3.70	0.62	0.17
Overall	3.66	0.69	0.19
Focus Drivers			
We have brand image that our customers value	3.13	0.76	0.24
We concentrate on particular niche markets	3.20	0.88	0.28
We understand the dynamics of the niche market and the unique needs of customers within it	3.87	0.65	0.17
We build strong brand loyalty amongst our customers thus making our particular market segment less attractive to competitors	3.79	0.81	0.21
We offer unique features that fulfill the demands of a narrow market	3.68	0.92	0.25
The firm concentrate on a particular market	3.81	0.33	0.09
Overall	3.58	0.73	0.20
Cost Drivers			
The firm charge low prices relative to other firms that compete within the target market	4.06	0.76	0.19
The firm practice the lowest cost of operation in the industry	3.63	0.84	0.23
Our production process is backed by innovation	2.91	0.99	0.34
The firm acquire quality raw materials at the lowest price	4.16	0.88	0.21
The firm produces highly standardized product using advanced technology	3.61	0.67	0.19
Overall	3.68	0.83	0.23
Grand Overall	3.64	0.75	0.21

Source: Field Data (2019)

Table 4 presents results on environmental based drivers. Under the subscale differentiated strategy the analysis indicated that to a great extent the market understands the benefits offered by the differentiated offerings (mean = 3.78, std dev = .77), products and services different from and more attractive

than those of our competitors (mean = 3.70, std dev = 0.62) and we have the ability to deliver high quality products and services (mean = 3.69, std dev = 0.56).

Under focus drivers subscale of environmental based drivers, the scores showed that to a great extent the firm understand the dynamics of the niche market and the unique needs of customers within it (mean = 3.87, std dev = 0.65), the firm concentrate on a particular market (mean = 3.81, std dev = 0.33), we build strong brand loyalty amongst our customers thus making our particular market segment less attractive to competitors (mean = 3.79, std dev = 0.81) and we offer unique features that fulfill the demands of a narrow market (mean = 3.68, std dev = 0.92). Under cost drivers subscale the analysis indicated that to a great extent The firm acquire quality raw materials at the lowest price (mean = 4.16, std dev = 0.88), The firm charge low prices relative to other firms that compete within the target market (mean = 4.06, std dev = 0.76), the firm practice the lowest cost of operation in the industry (mean = 3.63, std dev = 0.84) and the firm produces highly standardized product using advanced technology (mean = 3.61, std dev = 0.67).

As regards environmental based drivers, successful differentiation is based on a study of buyers' needs and behaviour in order to learn what they consider important and valuable. The desired features are then incorporated into the product to encourage buyer preference for the product. Low costs permit a firm to sell relatively standardized products which offer features acceptable to many customers at the lowest competitive price and such firm gain competitive advantage and increase market share. Decision makers in a cost leadership firm are compelled to closely scrutinize the cost efficiency of the processes of the firm. Maintaining the low-cost base becomes the primary determinant of the cost leadership strategy.

Table 5: Descriptive Statistics for Measures of Resource Based Drivers

Statements	Mean	Std. Dev	CV
Capital Raising Capacity			
Our firm can easily mobilize resources	3.36	0.94	0.28
Our firm has a strong business plan	3.91	1.08	0.28
Our firm has clear strategy and competitive edge	3.71	0.95	0.26
Our firm has strong asset base and sound financial performance.	4.02	0.98	0.24
Our business valuation and scalability are in line with investors needs	3.57	0.84	0.24
Overall	3.72	0.96	0.26
Technology (production)			
Our firm operation systems are automated	3.95	0.98	0.25
Technology has assisted our firm in altering the price structure through the development of more efficient and flexible processes	4.15	1.00	0.24

Technology facilitate a culture of continuous feedback thus everyone knows where they stand on a regular basis	4.33	0.94	0.22
Technology enables collection of more objective performance data on a real time basis	3.96	0.97	0.25
Overall	4.10	0.97	0.24
Human Capital			
Our firm has high skilled labour so as to produce economic value	4.19	0.89	0.21
Human capital is the most essential capital in our firm	3.98	1.05	0.29
The firm value knowledge, experience, skill, attitudes, abilities, behaviour and obligation of employees	4.10	0.92	0.22
The ability to effectively acquire, control and utilize knowledge in every business activity is the differentiator between our firm and competitors	3.99	0.95	0.24
Overall	3.99	0.95	0.24
Value Chain Management			
A tool of managing increasingly complex global value chain networks	3.72	1.01	0.27
The firm focuses on optimizing volumes and value based on cross functional management	3.74	1.00	0.27
The firm integrate decision making throughout the value chain	3.34	1.16	0.35
Overall	3.60	1.06	0.29
Grand Overall	3.85	0.99	0.26

Source: Field Data (2019)

Table 5 indicates that overall, the respondents agreed that resource-based drivers influences performance of manufacturing small and medium enterprises in Nairobi County (mean = 3.85, standard deviation = 0.99, CV= 26%). Under the capital raising capacity, the results showed that to a great extent our firm has ability to mobilize resources (mean = 3.36, std = 0.94), our firm as a strong business plan (mean = 3.91, std = 1.08), has a clear strategy and competitive edge (mean = 3.71, std = 0.95) has strong asset base and sound financial performance. (Mean = 4.02, std dev = 0.98), our firm has a strong business plan (mean = 3.91, std dev = 1.08), our firm has clear strategy and competitive edge (mean = 3.71, std dev = 0.95) and our business valuation and scalability are in line with investor's needs (mean = 3.57, std dev = 0.84).

Under technology subscale of resource based drivers, the study found that to a great extent technology facilitate a culture of continuous feedback thus everyone knows where they stand on a regular basis (mean = 4.33, std dev = 0.94), technology has assisted our firm in altering the price structure through the development of more efficient and flexible processes (mean = 4.15, std dev = 1.00), technology enables collection of more objective performance data on a real time basis (mean = 3.96, std dev = 0.97) and our firm operation systems are automated (mean = 3.95, std dev = 0.98). Under the human capital subscale of resource based drivers the results showed that

to a great extent our firm has high skilled labour so as to produce economic value (mean = 4.19, std dev = 0.89), the firm value knowledge, experience, skill, attitudes, abilities, behaviour and obligation of employees (mean = 4.10, std dev = 0.92), the ability to effectively acquire, control and utilize knowledge in every business activity is the differentiator between our firm and competitors (mean = 3.99, std dev = 0.95) and human capital is the most essential capital in our firm (mean = 3.98, std dev = 1.05).

Under the value chain management subscale of resource based drivers the study indicated that to a great extent The firm focuses on optimizing volumes and value based on cross functional management (mean = 3.74, std dev = 1.00) and value chain management is a tool of managing increasingly complex global value chain networks (mean = 3.72, std dev = 1.01). The basis for competitive advantage is a product whose attributes differ significantly from rivals' products. Once it finds a good source of buyer value, a firm must build on the value, creating attributes into its products/services at an acceptable cost. These attributes may raise the product's performance or make it more economical to use. Differentiation possibilities can grow out of possibilities performed anywhere in the activity cost chain.

Table 6: Descriptive Statistics for Measures of Hybrid Strategy Drivers

Statements	Mean	Std. Deviation	CV
Low Cost and Differentiation			
Our firm achieve both high quality and productivity at the same time	3.81	0.99	0.26
Our firm embraces mass customizations	3.20	1.19	0.37
Our firm makes consistent low cost strategic decisions on how to pursue competitive advantages and align resources and capabilities	4.02	0.97	0.24
Our firm has achieved higher performance than our competitors	3.93	0.96	0.24
Overall	3.74	1.03	0.28

Source: Field Data (2019)

Table 6 showed that in overall low cost and differentiation strategy drivers as a form of hybrid strategy drivers had a mean of 3.74 and std dev of 1.03. To a great extent the results indicated that our firm makes consistent low cost strategic decisions on how to pursue competitive advantages and align resources and capabilities (mean = 4.02, std dev = 0.97), our firm has achieved higher performance than our competitors (mean = 3.93, std dev = 0.96) and Our firm achieve both high quality and productivity at the same time (mean = 3.81, std dev = 0.99).

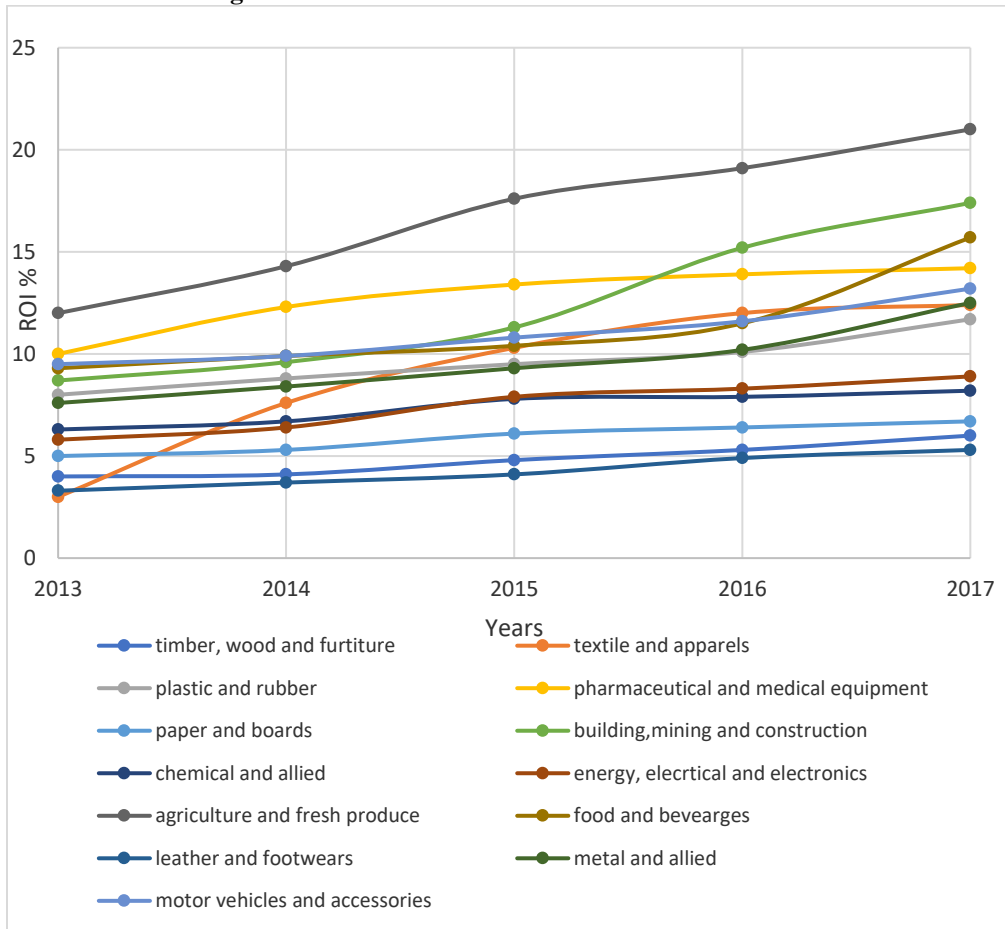
Table 7: Descriptive Statistics for Measures of Non-Financial Performance

Statements	Mean	Std. Dev	CV	Skewness	Kurtosis
Entrepreneur Satisfaction					
You are generally satisfied with your current business	3.78	0.454	14	-0.134	-0.342
Your current business meets your expectations	4.09	0.671	13	-0.044	-0.244
Your current business is your most ideal	3.77	0.125	10	-0.002	-0.117
Overall	3.88	0.417	11	-0.002	-0.123
Growth in Employment					
Number of employees have significantly increased in line with our business expansion	3.96	1.142	29	1.065	.129
Local market plays a role in employment growth	3.31	1.129	34	.513	-.774
Our firm promotes and hires new employees annually	3.35	1.250	37	.541	-.880
Our firm experiences low employee turnover annually	3.98	1.263	32	-.117	-1.097
Overall	3.65	1.196	33	.768	-0.654
Business longevity					
Financial strength influences our longevity	3.71	.990	27	-1.134	.923
Customer orientation determine business lifespan	3.35	0.670	20	-.459	-.808
Internal capabilities influence our longevity	3.80	0.456	12	-.099	-1.055
Strategic perspective defines our firm lifespan	3.84	0.623	16	-.061	-1.106
Learning and growth influences our firm longevity	3.74	0.821	22	.386	-1.010
Overall	3.69	0.712	19	-0.273	-0.611
Grand overall	3.74	0.770	21	-0.345	-0.567

Source: Field Data (2019)

The findings show that on average, SME non-financial performance of manufacturing SMEs was 3.74, standard deviation of 0.770 and coefficient of variation of 21 percent. A coefficient of variation of 21 percent indicates that the response from the respondents did not vary significantly.

Figure 1: Financial Performance-Return on Investment



As shown in Figure 1 above, there was an upward trend of ROI for the period 2013-2017 in most of the sectors. This trend over a period of time shows that firms are prudent in resource allocation and usage. There is efficiency and effectiveness which results in increase in revenue. Positive ROI values show that the firm's total returns exceed total costs. It further shows that firm's profitability is steadily rising with time.

Correlation Analysis

Correlation measures the magnitude and direction of the relationship between the dependent and independent variable. It varies between -1 and +1. The nearer it is to +1 the stronger the correlation. The nearer it is to zero the weaker the correlation. The correlation measurements between competitive strategy drivers and performance of the manufacturing SMEs in Nairobi county are presented in Table 8 below.

Table 8: Correlation between Competitive Strategy Drivers and Firm Performance

		Environment Based Drivers	Resource Based Drivers	Hybrid Strategy	Firm Performance
Environment Based Drivers	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	300			
Resource Based Drivers	Pearson Correlation	-.154**	1		
	Sig. (2-tailed)	.007			
	N	300	300		
Hybrid Strategy	Pearson Correlation	.187**	.090	1	
	Sig. (2-tailed)	.001	.125		
	N	300	300	300	
Firm Performance	Pearson Correlation	.167**	-.273**	-.187**	1
	Sig. (2-tailed)	.005	.000	.002	
	N	300	300	300	300

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Data (2019)

Table 8 shows a correlation environment-based drivers, resource-based drivers, hybrid strategy drivers and firm performance. The Pearson correlation for environmental based drivers on firm performance was significant ($r = .167, p < .01$). The correlation between resource-based drivers and firm performance was significant ($r = -.273, P < .01$). The Pearson correlation for hybrid strategy on firm performance was also significant ($r = .187, P < .01$). There was no multicollinearity reported since none of the coefficients between the independent variables are greater than 0.05.

Structure model (hypothesis testing)

Objective: To examine the relationship between competitive strategy drivers and performance of manufacturing SMEs.

The following hypothesis was formulated;

Competitive strategy drivers have significant influence on the performance of manufacturing SMEs in Nairobi County

To determine effect of competitive strategy drivers on the performance of manufacturing SMEs in Nairobi County, a simple linear regression analysis was calculated. The equation used to measure the hypothesis is:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Y = the performance of manufacturing SMEs in Nairobi County.

β_0 = constant (intercept)

β_1 , = coefficients of competitive strategy drivers

X_1 = composite index of competitive strategy drivers

ε = Error term

The results are summarized in the tables below.

Table 9: Regression Results for Effect of Competitive Strategy Drivers on Firm Performance (Non-financial Measure)

Model Summary						
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
1	.352 ^a	.124	.121		.61984	
ANOVA ^a						
Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	16.180	1	16.180	42.113	.000 ^b
	Residual	114.492	298	.384		
	Total	130.671	299			
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.849	.202		9.143	.000
	Competitive strategy drivers	.390	.060	.352	6.489	.000

a. Dependent Variable: Firm performance

b. Predictors: (Constant), Competitive strategy drivers

Source: Field Data (2019)

Table 9 presents results of the relationship between firm performance and competitive strategy drivers. The study found a relatively moderate positive relationship between competitive strategy drivers and firm performance ($r = .352$). Coefficient of determination ($R^2 = .124$) indicated that competitive strategy drivers explain 12.4% of variation in firm performance. Competitive strategy drivers collectively significantly influence firm performance (F -value=42.113, $p=0.000 < 0.05$). The coefficient of the influence of competitive strategy drivers on firm performance is ($\beta=0.390$, $p < 0.05$) implying that a unit increase in competitive strategy drivers results to 0.390 increase in firm performance. Further competitive strategy drivers individually significantly influence firm performance. The results conclude that there is a significant influence of competitive strategy drivers on the

performance of manufacturing SMEs in Nairobi County, thus the hypothesis is supported.

Table 10: Regression Results for Effect of Competitive Strategy Drivers on performance of manufacturing SMEs (Financial Measure)

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
Competitive strategy drivers	0.323	0.104	0.081	0.0374771		
ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
Competitive strategy drivers	Regression	0.006	1	0.006	4.418	0.042
	Residual	0.298	298	0.001		
	Total	0.304	299			
Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	-0.006	0.032		-0.182	0.857
	Competitive strategy drivers	0.019	0.009	0.323	2.102	0.042
Dependent Variable: Return on Investment						
Predictors (Constant), Competitive strategy drivers						

Source: Field Data (2019)

From Table 10, the study found a relatively moderate positive relationship between competitive strategy drivers and return on investment ($r = .323$). Coefficient of determination ($R^2 = .104$) indicated that competitive strategy drivers explain 10.4% of variation in return on investment. Competitive strategy drivers collectively significantly influence firm performance (F-value=42.113, $p=0.000 < 0.05$). The coefficient of the influence of competitive strategy drivers on firm performance is ($\beta=0.0190$, $p < 0.05$) implying that a unit increase in competitive strategy drivers results to 0.0190 increase in return on investment. Further competitive strategy drivers individually significantly influence return on investment. The results conclude that there is a significant influence of competitive strategy drivers on return on investment of small and medium enterprises in manufacturing sector in Kenya.

Table 11: Regression Results for Effect of Components of Competitive Strategy Drivers (on Firm Performance)

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.365 ^a	.133	.131	.65293	.133	78.359	3	268	.000
ANOVA^a									
		Sum of Squares	df	Mean Square	F	Sig.			
1	Regression	100.217	3	33.406	78.359	.000 ^b			
	Residual	126.190	296	.426					
	Total	226.407	299						
Coefficients^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	0.153	.015		10.12	.000			
	Hybrid Strategy Drivers	.225	.066	.351	3.440	.001	.191	5.227	
	Environmental Based Drivers	.122	.060	.156	2.029	.002	.190	5.260	
	Resource Based Drivers	.198	.050	.243	3.964	.000	.531	1.884	

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Environmental based drivers, Resource Based Drivers, Hybrid strategy Drivers

Source: Field Data (2019)

Table 11 presents results on the relationship between components of competitive strategic drivers on firm performance. The study found a moderate and positive correlation between Environmental based drivers, Resource Based Drivers, Hybrid strategy Drivers and firm performance ($R = 0.365$). Coefficient of determination ($R^2 = 0.133$) indicates that environmental based drivers, resource based drivers, Hybrid strategy drivers collectively accounts for 13.3 percent of the variation in firm performance. In overall the model was significant ($F = 78.359$, $P\text{-value} = 0.00 < 0.05$). Hybrid strategy drivers ($\beta = 0.225$) had the highest positive influence on firm performance followed by resource-based strategy drivers ($\beta = 0.198$) and environmental based strategy drivers ($\beta = 0.122$) respectively. Individually environmental based drivers ($p\text{-value} = 0.002 < 0.05$), resource-based drivers ($p\text{-value} = 0.00 < 0.05$) and hybrid strategy drivers ($p\text{-value} = 0.001 < 0.05$)

statistically significantly influence firm performance. The results conclude that there is a significant influence of each component of competitive strategy drivers on firm performance of manufacturing SMEs in Nairobi County

Table 12: Summary of Research Objective, Hypothesis, Analytical Model and Conclusion

Objective	Hypothesis	Results	Remarks hypothesis
To establish the relationship between competitive strategy drivers and the performance of manufacturing SMEs in Nairobi County.	Competitive strategy drivers have significant influence on the performance of manufacturing SMEs in Nairobi County	$R^2=0.124$ F= 42.113, P-Value= .000<0.05 $\beta= 0.390$, t= 6.489, P- Value=0.000<0.05	Supported
	Competitive strategy drivers have significant influence on return on investment of SMEs in Kenya.	$R^2=0.104$ F= 4.418, P-Value= .042<0.05 $\beta= 0.0190$, t= 2.102, P- Value=0.042<0.05	Supported

Source: Field Data (2019)

From the results in Table 12 above, there is a statistically significant and positive association between competitive strategy drivers and firm performance (non-financial and financial) of small and medium enterprises in manufacturing firms in Kenya.

5.0 Discussion

The study achieved a response rate of 89.82 percent which was considered adequate for further analysis. The measurement instrument was highly reliable with an overall Cronbach alpha of 0.813. Majority of the firms had been in operation for a period of 5 to 10 years. In terms of business classification; sole proprietorship was the most popular model followed by partnership and companies respectively. The study findings revealed that majority (68 percent) were female respondents with (32 percent) being male respondents. This implies there were more females than male running manufacturing SMEs in Nairobi County. The results also indicated that majority (74.94 percent) of the study respondents were married with (13.81 percent) and (8.18 percent) being single and separated/divorced respectively. Further few (3.07 percent) of the respondents are widowed. This implied that the respondents have family responsibilities which motivate them to engage in business for a living. Further from the findings, majority (65.73 percent) indicated that they ranged between 25-34 years, followed by (15.86 percent) who indicated that they range between 35-44 years with few (8.44 percent), (6.65 percent) and (3.32 percent) indicating that they ranged between 18-24, 45-54 and 55-64 years respectively. The results revealed that majority of the

players in the manufacturing SMEs were relatively young to actively handle their duties and responsibilities.

Key statements on competitive strategy drivers were; environmental based drivers, resource based drivers and on hybrid strategy drivers. These are supported by the resource-based theory which argues that a distinct bundle of resources at the discretion of the firm generates sustained competitive advantage (Barney, 1991; Conner & Prahalad, 1996). Correlation analysis was done between competitive strategy drivers and the performance of manufacturing SMEs in Nairobi County. Correlation measures the magnitude and direction of the relationship between the dependent and independent variable. It varies between -1 and +1. The nearer it is to +1 the stronger the correlation. The nearer it is to zero the weaker the correlation. The three drivers namely environmental, resource based and hybrid had +1 meaning there was a strong correlation. On hypothesis testing, the study aimed at establishing the influence of competitive strategy drivers on the performance of manufacturing SMEs in Nairobi County. This objective had a corresponding hypothesis, which stated that competitive strategy drivers have significant influence on the performance of manufacturing SMEs in Nairobi County. Competitive strategy drivers included environmental based drivers, resource-based drivers and hybrid strategy drivers.

The study tested a direct relationship between competitive strategy drivers and firm performance. From the literature review, this direct relationship has been proven by other studies (Gibcus & Kemp, 2003; Peng et al., 2008). However, the results were not conclusive as some studies indicated positive direct relationship and others negative direct relationship, hence the need to test it again. The study found that competitive strategy driver's dimensions significantly statistically collectively influence firm performance. Further each competitive strategy drivers (environmental based drivers, resource-based drivers, and hybrid-based drivers) dimensions individually significantly statistically influenced firm performance. The relationship was strong since their corresponding p-values were less than 0.05. Though competitive strategy drivers significantly influence performance of the manufacturing SMEs, their three dimensions (environmental based drivers, resource-based drivers and hybrid based drivers) account for only 12.4 percent of the variation in the performance of manufacturing SMEs. This implies that competitive strategy drivers determine greatly firm performance. The hypothesis was thus supported

The findings of this study are supported by the resource based theory of entrepreneurship. The theory asserts that distinct bundle of resources at the discretion of the firm generate sustained competitive advantage (Barney, 1991; Conner & Prahalad, 1996). The findings further justified the conceptualization of the resource based theory, that is, firm performance is

enhanced when firms use unique resources that they own and configured to enable the firm attain competitive advantage position. The direct relationship between competitive strategy drivers and firm performance supports the locus of control theory advanced by Rotter (1966) which relates to how strongly entrepreneurs perceive their efforts as being instrumental in reaching their desired goals. These entrepreneur's behavior are the ones said to have an internal locus of control while those who attribute the consequences of their actions to other causes are said to exhibit an external locus of control.

The study concurs with previous studies that established that strategies pursued by enterprises have a direct and strong influence on their performance (Gibcus & Kemp, 2003; Peng et al., 2008). Moreover, it is contended that enterprises with a comprehensive and steady strategy out-perform enterprises with no strategy (Gibcus & Kemp, 2003). Specifically, enterprises with a comprehensive and steady strategy outperform those with no strategy. These findings are also in support of Pelham (1999) who contended that a low-cost plan would lesser influence as opposed to emphasis on a differentiation strategy which would yield better performance for manufacturing SMEs thus the need for hybrid strategy drivers. Bowen et al. (2009) in their research on administration of business challenges amongst SMEs in Nairobi, assessed strategies they employed to overcome the challenges. The findings indicated that SMEs had the following approaches to conquer shortcomings: discounts and special offers, fair pricing, greater customer service, presenting a variety of services and products and constantly improving superiority of service delivery hence environmental based drivers. To further justify hybrid strategy drivers, Bowen et al. (2009) concluded that business prosperity is an outcome of embracing a mix of policies. It therefore means that organizations must always have a mix of strategies to counter the dynamic challenges in which they operate.

Conclusion

The study established that on competitive strategy drivers that is; resource-based drivers had the highest mean rating followed by hybrid strategy drivers and environmental based drivers respectively. Conceptual and empirical evidence suggests that competitive strategy drivers strengthen and enhances firm performance. The result indicated that most influential environmental based drivers on the performance of manufacturing SMEs in Nairobi County as cost drivers, while under the resource-based drivers, technology was most. These results suggest that competitive strategy drivers influence both financial and non-financial performance of manufacturing small and medium enterprises. This is an indication that the manufacturing small and medium enterprises have to develop and maintain innovativeness, creativeness, and firm learning within a firm, develop products whose

attributes differ significantly from rivals' products and study of buyers' needs and behavior in order to learn what they consider important and valuable then incorporate the desired buyer features into the product to encourage buyer preference for the product. The results of test of hypothesis on composite indices established that there was a statistically significant relationship between competitive strategy drivers and performance of manufacturing SMEs in Nairobi county. Firms should therefore lay more emphasis on competitive strategy drivers which have positive impacts on their performance.

The limitation picked in this study was the limited scope of only focusing on manufacturing SMEs in Nairobi County thus there is a need to extend the research to other manufacturing SMEs in other cities and urban areas to allow for comparison of findings. Moreover it would also be interesting to investigate other strategies likely to influence a firm's performance and, consequently, to provide additional insights to organizations. Another limitation was on the data collection tool that was used. The questionnaires were administered to only one respondent per manufacturing SME. To enrich the data collected, it is suggested that more respondent especially at different levels of management within the participating SMEs be allowed to respond to the questionnaires. The questionnaire had closed ended questions. Nonetheless, it is acknowledged that this as a limitation of the study and encourage future scholarly work to utilize a mixture of both open and closed headed questions to allow for deeper insights into the issue being studied. Future research may also be done focusing on other methodologies such as qualitative. Qualitative research on the above issues would provide useful insights and complement already existing quantitative approaches in this area.

Acknowledgement

The author would like to thank the University of Nairobi, main campus for allowing access to the library facilities including their very supportive staff members.

Author Notes

This journal is an extract from the author's PhD thesis undertaken at the School of Business, University of Nairobi, Kenya.

Declaration

The authors declare that they have no conflict of interest with respect to research, authorship or publication.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References:

1. Afiouni, F. (2007). Human Resource Management and Knowledge Management: A Road Map toward Improving Organizational Performance. *Journal of American Academy of Business, Cambridge*, 11(2), 124.
2. Agarwal, R., & Ferratt, T. W. (2001). Crafting an HR strategy to meet the need for IT workers. Association for Computing Machinery. *Communications of the ACM*, 44(7), 58.
3. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
4. Bowen, M., Morara, M., & Mureithi, S. (2009). Management of business challenges among small and micro enterprises in Nairobi. *KCA Journal of Business Management*, 2(1)
5. Conner, K. R., & Prahalad, C. (1996). A resource-based theory of the firm: Knowledge versus opportunism. *Organization Science*, 7(5), 477-501
6. Dahmen, P. & Rodríguez, E. (2014). *Financial Literacy and the Success of Small Businesses: An Observation from a Small Business Development Center. Numeracy*, 7(1), 3.
7. Davidson, P. (2004). *Researching Entrepreneurship*. NY: Springer.
8. Ensign, P.C. (2001). Value Chain Analysis and Competitive Advantage: Assessing Strategic Linkages and Interrelationships. *Journal of General Management*, 27(1), 18-42.
9. Gathungu, J & Baariu, V.L. (2018). Competitive Strategies Entrepreneurial Orientation, External Environment and Performance of Small and Medium Enterprises in the Manufacturing Sector in Nairobi City County, Kenya. *Journal of Arts and Humanities Vol 7, No 9* (2018)
10. Gentry, J., & Vaidyanathan, R. (2010). A weighted cash conversion cycle. *Financial Management*, 19, 90-99.
11. Gibcus, P., & Kemp, R. G. M. (2003). Strategy and small firm performance. *Research report financed by the Netherlands Ministry of Economic Affairs*
12. Gómez, L. (2006). The process and problems of business start-ups. *Pensamiento and Gestión*, 22. Universidad Del Norte, 232-255
13. Gulati, R. & Sytch, M. (2007). "Dependence asymmetry and joint dependence in Interorganizational relationships: effects of

- embeddedness on manufacturers' performance in procurement relationships," *Administrative Science Quarterly*, Vol. 52, pp. 32-69.
14. Israel, G. D. (2009). Determining sample size. University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS.
 15. Kabiru, J. R. (2016). Entrepreneurial Marketing Practices and Return on Investment Performance of SMES in Nigeria, *Sahel Analyst: Journal of Management Sciences*, 14(4).
 16. KAM. (2017). Annual Report
 17. Kristiansen, S., Furuholt, B., & Wahid, F. (2003). Internet cafe entrepreneurs: Pioneers in information dissemination. *International Journal of Entrepreneurship and Innovation*, 4(4), 251-263
 18. Learning, O. (2009). Integrated Cost Leadership-Differentiation Strategy. Retrieved from <http://www.openlearningworld.com/olw/courses/books/Business%20Strategies/Business%20Strategy/Integrated%20Cost%20Leadership%20-%20Differentiation%20Strategy.html>
 19. Leverin, A., & Liljander, V. (2006). Does relationship marketing improve customer relationship satisfaction and loyalty? *International Journal of Bank Marketing*, 24(4), 232 - 251.
 20. Miller, D. (1992). Generic strategies: Classification, combination and context. In: *Srivasta, P. (Ed). Advances in Strategic Management*, 8, 391-408.
 21. Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), 20.
 22. Njeru, G. W. (2016). *Market orientation, marketing practices, firm characteristics, external environment and performance of tour firms in Kenya* DBA Africa Management Review Vol 6 No.4, 2016 pp 33-49
 23. Njuguna, N. J. (2014). *The effect of country of origin, consumer characteristics and attitudes on consumer behaviour towards foreign clothing brands in Nairobi, Kenya* (Unpublished Doctoral Thesis). University of Nairobi, School of Business.
 24. Oly Ndubisi, N. (2007). Relationship marketing and customer loyalty. *Marketing Intelligence & Planning*, 25(1), 98–106.
 25. Pelham, A. M.(1999). Influence of environment, strategy, and market orientation on performance in small manufacturing enterprises. *Journal of Business Research*, 45, 33–46
 26. Peng, M. W., Wang, D.Y., & Jiang Y. (2008). An institution-based view of international business strategy: a focus on emerging economies. *Journal of Int. Business Studies* 39, 920–936

27. Peteraf, M. A. (1993). Cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179 – 191.
28. Prescott, C.E (2001). Value chain analysis and competitive advantage. *Journal of general management Vol. 27 No. 1 Autumn 2001*.
29. Punch, K. F. (2003). Essential Resource Books for Social Research: Survey research. London, England: SAGE Publications Ltd.
30. Salavou, H. (2015). Profitability in market -oriented SMEs: does product innovation matter? *European Journal of Innovation Management*, 5(3), 164-171.
31. Sidik, I. G. (2012). Conceptual framework of factors affecting SME development: Mediating factors on the relationship of entrepreneur traits and SME performance. *Procedia Economics and Finance*, 4 (2012), 373 – 383



ESJ Social Sciences

ISO 9001 Quality Approach and Performance Literature Review

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[Doi:10.19044/esj.2021.v17n1p128](https://doi.org/10.19044/esj.2021.v17n1p128)

Submitted: 31 August 2020
Accepted: 14 January 2021
Published: 31 January 2021

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Cite As:

Saida E. & Taibi N. (2021). *ISO 9001 Quality Approach and Performance Literature Review*. European Scientific Journal, ESJ, 17(1), 128. <https://doi.org/10.19044/esj.2021.v17n1p128>

Abstract

In the face of changing economic conditions and tougher markets, organizations must increase their competitiveness, increase their flexibility and improve their performance. All now have performance and continuous improvement objectives. Management standards (ISO 9001) are often associated with heavy and procedural systems. On the contrary, they are powerful performance levers for certified organizations. ISO 9000 defines performance as a “measurable result” which is related to the activities, processes, product management (including services) systems or organizations. The purpose of this article is to review the literature on the relationship between quality approach and organization performance, a discussion on the quality practices and performance are presented and conceptual models are proposed.

Keywords: Quality management; Iso certification; Quality approach; Performance

I. Introduction

Despite many years of the ISO 9001 certification of quality management systems around the world, experts still question the benefits and added value of this certification within organizations. This encourages the proliferation of academic research in this field (ISO 9001,2015). There is a great deal of research on quality management, but the results are far from being fruitful and do not provide clear confirmations of the positive or negative impact of this approach on organizations' performance, given that organizations are subject to the conditions for introducing certification (Rolland & Tran, 2006). The impact of ISO 9001 certification on the organization's performance is a research component that attracts many researchers and drives them to unveil to professionals, reality on the impact of the ISO 9001 certification. In this context, this paper presents a literature review on the impact of the implementation of the quality management system on the company's performance.

The first part of this paper describes the concepts and principles of quality management, the second part deals with a literature review about the quality concepts and finally the summary of some research dealing with the link between the quality approach and performance. In the third part, we explain the construction of the conceptual model of the research highlighting the effect of the quality approach on performance.

II. Literature review:

This literature review consists of collecting, reading, analyzing, and synthesizing a scientific paper from 1980 to 2019, using keywords related to our research. The papers were extracted from a major peer-reviewed international journals and selected using a methodological process that combined electronic search and manual analysis. An electronic tool by "Google Scholar; database; specialized and generalist journals as well as handbooks and theses" were used to identify articles that papers associated with keywords related to the issue. Then, a detailed analysis of the references cited in the articles was carried out, to highlight the main advances in terms of theoretical scoping of the research objects (Dumez, 2011). The target is to look at how the topic of quality management and performance is defined in the literature, in order to define it, before starting a more in-depth research work on the subject. Based on this analysis, a conceptual research framework will be proposed.

II.1 Definitions and concepts of quality management:

The quality management system (QMS) is based on the basic principles that the organization must apply before starting the process of implementing the system in order to achieve certification.

II.1.1 Quality management system definitions:

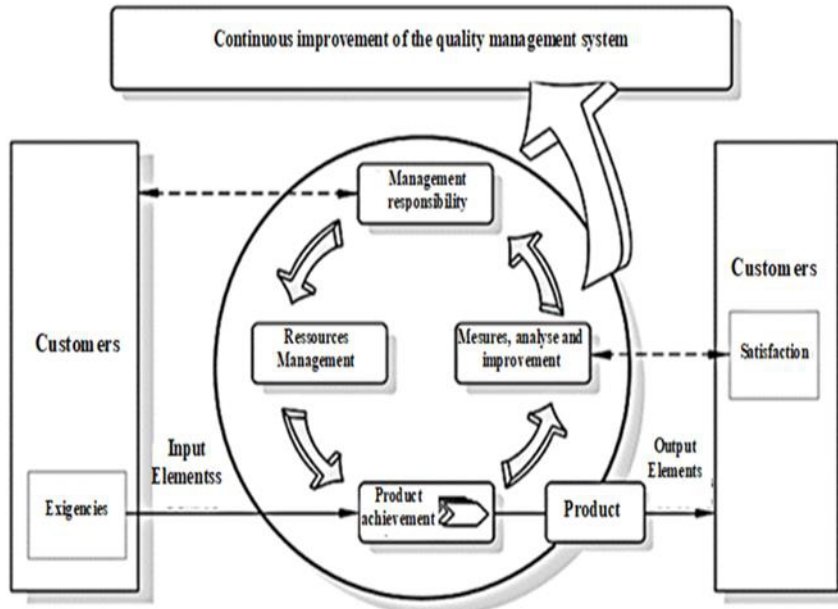
The quality management includes “the activities through which the organization identifies its objectives and determines the processes and resources needed to achieve the expected results. It is a set of interrelated or interacting elements of an organization, aimed to establish policies, objectives and processes in order to accomplish those objectives. These elements include the structure, roles and responsibilities, planning, operation of the organization, policies, practices, rules, convictions objectives and processes to reach these objectives” (ISO 9001, 2015).

The International Organization for Standardization (ISO) is an independent non-governmental international organization, which brings together experts to combine their knowledge to develop voluntary, consensus-based, market-relevant international standards supporting innovation and providing solutions to global challenges (*ISO, 2020*).

The quality management certification according to the ISO 9001 standard is a third-party recognition that the company complies with the guidelines of that standard. It provides a guarantee that the company has a management system within its organization which meets the requirements of the standard.

The QMS (Figure 1) is the set of actions implemented by a company that aims to have a continuous improvement approach in order to increase the quality of its production and its organization for the purpose of its certification. It includes the activities by which the organization identifies its objectives and determines the processes and resources required to achieve the expected results. It covers all levels of the company’s activities : communication, marketing, production, sales, human resources, logistics, etc.... (*ISO 1005, 2005*).

Figure 1 : Model of a quality management system (ISO 10005:2005)



II.1.2 Quality management principles:

The Quality Management Principles (QMP) are a set of values, rules, standards and fundamental beliefs that are considered fair and likely to serve as a basis for quality management. The QMP can be used as a basis to guide the improvement of an organization's performance. They were developed and updated by the ISO/TC 176 international experts, responsible for the development and updating of ISO quality management standards (ISO, 2016). The QMP that companies must adhere to in order to meet the requirements of the ISO 9001 standard are:

- **Customer Orientation:** The main objective of quality management is to satisfy the requirements of customers, and to strive to exceed their expectations. This customer focus appears to be a fundamental concept of quality management, since organizations exist to provide goods and services to the customer (Juran and Godfrey, 1999). The organization should adopt a customer-oriented policy with the aim of realizing long-term capabilities and thus improve its performance (Pekovic and Rolland, 2012).
- **Leadership:** At all levels, leaders set purpose and directions and create conditions in which staff are involved to achieve the organization's quality objectives. Building quality leadership is often the result of an original quality that gains what marketers call "a previous franchise".

Once acquired, this franchise can be maintained through continuous product improvement and effective promotion (Juran and Godfrey, 1999).

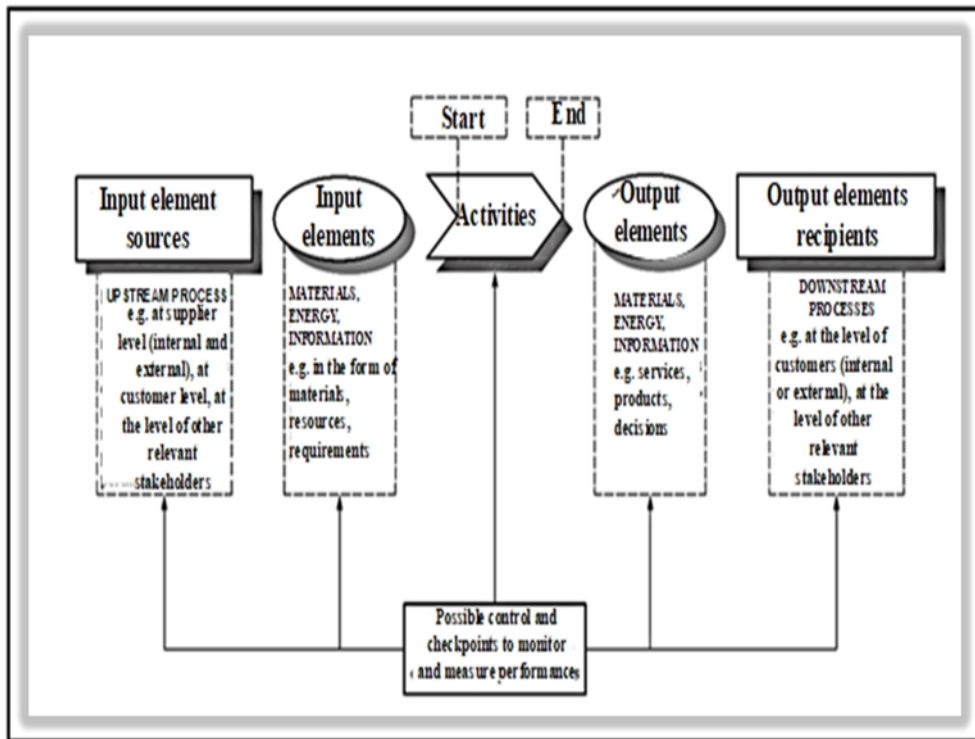
According to Maxwell (2011), there are five levels of leadership. At each level the leader's behaviors change, and this change has a significant impact on the results of achieving the objectives. At the first level, the leader acts based on his status, title and position in the company, association or team, etc... But this position is not enough to push people to follow, hence the need for level two leadership. Called the relationship-permission level, where people follow the leader by will, since that level is based on people's respect and appreciation (Maxwell, 2011). The third level, represents the results or output level through which people follow the leader, based on her results achieved in the organization. At this stage, people are true agents of change, make difficult decisions and contribute to achieving the set objectives. Subsequently, the fourth level of people development where leaders invest more in teamwork, to achieve a high level of efficiency and results is highlighted (Maxwell, 2011). The pinnacle of leadership is the five level, it is the summit where people follow the leader for who he is and for what he represents. At this level, the senior leader develops employees into level four leaders and designs a space to launch employees to the top (Maxwell, 2006).

- **Staff involvement:** Competent, empowered and engaged staff at all levels of the organization is essential to improve the organization's ability to create and deliver value. The staff involvement is a key element in the success of the organization. Their satisfaction is paramount and the company must give them a lot of attention to promote their involvement. This satisfaction is achieved through training and skills development as well as by means of participation in decision-making (Chaminade, 2005).

According to Iso 10018 version 2012, the staff involvement is a key process of strategic processes, which contributes to the deployment of the quality management principles and human factors development of the organization (ISO 10018:2012(fr) , 2012).

- **The process approach:** Consistent and predictable results are more effectively and efficiently achieved when activities are understood and managed as correlated processes operating as a coherent system (Figure 2). It is a method of analysis and modelling, and its role is to work collectively on improving the organization's efficiency (Brandenburg and Wojtyna, 2003).

Figure 2: The schematic representation of process elements (ISO 9001,2015)



- **Improvement:** The success of an organization is based on a constant drive for improvement. This process is based on the Deming Wheel principles; following the PDCA cycle: Plan, Do, Check and Act (Figure 3). It is one of the fundamental quality management principles. The company should, first of all, plan its quality management system. On the basis of this planning the actions are implemented. Afterwards a post-implementation check is necessary. This audit would evaluate the effectiveness of the action. Thus, further actions can be triggered following the results of this evaluation, and will be in turn replanted according to the Deming Wheel principle.(ISO 9001, 2015).

Figure 3: the Deming PDCA cycle and continuous improvement (Deming & Edwards, 1982).



- **Evidence-based decision-making:** Decisions based on the analysis and data evaluation and information are more likely to produce the expected results. “What is asserted without evidence can be denied without evidence” (Qualitiso, 2014). It is a very Cartesian approach that is seductive if not labour intensive. The idea is to reduce the inevitable uncertainty in decision-making, based on objective data, where causes are examined to understand the effects (Qualitiso, 2014).
- **Stakeholder relations management:** To achieve sustainable performance, the organizations manage their relationships with interested parties also known as stakeholders. The principle of this type of management states that managers have ethical obligations toward their stakeholders (Mercier, 2006).

II.2 Quality management practices:

The quality management practices concern the voluntary activities carried out by the organization, in compliance with the requirements of the ISO 9001 standard, in order to improve its performance (Patyal & Koilakuntla, 2017). The literature highlights the most critical or difficult practices to implement it for organizations. Since the quality management system is framed by the requirements of the ISO 9001 standard, the success factors of this system are globally inspired by the rigorous application of what is stipulated in its reference frame. The literature presents a panoply of quality approaches and practices that contribute to the successful implementation of this system within the organization. All these approaches and practices have a common source which is the ISO 9001 standard. The citation of all or some of

these approaches in the literature generally depends on the study field and the specific context of each research.

According to Feng and al. (2008), the approaches which allow successful implementation of the quality management system are:

- **System Implementation Planning:** This planning includes a short-term planning to achieve certification and long-term planning to support the initial effort involved during the certification preparation. The criteria for this planning are: the identification of quality aspects, documentation, training, investment and standard development procedures.
- **Commitment:** This is all levels involvement of the organization, the senior and middle management commitment, the employee commitment and the commitment of the trade union engagement.
- **The implementation of procedures:** or the application of procedures that stand out among the difficulties encountered by companies during the implementation and certification maintenance. The criteria are : Periodic audits, following standard procedures, implementation and certification maintenance (Feng, Terziovski, and Samson 2008).

In 2018, Fonseca and Domingues explored the ISO practices in 300 portuguese companies. They considered that the risk and opportunity-based thinking, determination of the organizational context with relevant the internal and external issues, identification of relevant stakeholders and their relevant requirements, organizational knowledge and change control are the main difficulties encountered by companies for the effective implementation of the quality system according to the ISO 9001 version 2015 standard (Fonseca and Domingues 2018).

The table 1 summarizes the different quality management practices according to the literature:

Quality practices	Authors
Customer focus, Continuous improvement, Strategically based, Total employee involvement	(Pambreni et al., 2019)
Thinking based on identification of risks and opportunities and adopting risk-based thinking Identifying the organizational context with relevant internal and external issues Identification of the relevant stakeholders and their relevant requirements; Organizational knowledge change control	(Fonseca and Domingues, 2018)

the system implementation Planning Commitment Implementation of procedures	(Feng, Terziovski and Samson,2008)
Management practices: • Senior management commitment and support. Infrastructure practices: •Quality organization • Employee training • Worker participation • Supplier Quality Management • Customer focus • Ongoing support The basic practices: • quality system Improvement • Information and analysis • Use of statistical quality techniques	(Lakhal, Pasin, and Limam 2006)
Leadership Training Relationship employee involvement Product/service Design Supplier Quality Management quality data analysis Process management	(Kaynak, 2003)
Leadership Strategic planning Customer focus Information and analysis People management Process management	(Prajogo & Sohal, 2003)
Leadership and Commitment Training and awareness Team Culture	(Reed et al., 2000)
Relationship with customers Support for Senior management Work force Management Relationship with suppliers Statistical control feedback Process planning management Product Design Process	(Flynn et al., 1995)

II.3 Performance:

The performance is seen as a multidimensional concept relating to the individuals who use it. Its concept differs from the point of view of manager, employee or customer, which makes it subjective and having several meanings (Salgado, 2013). Pesqueux (2004) refers to the notion of global performance as a materialization of organizational performance. He defines it as a

numerical result of a classification objective in relation to a reference frame or measurement scale. This reference can be in relation to the oneself, to improve one's performance and/ or relates to others (Pesqueux, 2004).

The performance measurement is carried out on three axes, namely,

- Relevance: when relationship between the initial objectives and the resources acquired to achieve them,
- Efficiency: the relationship between the results obtained and the resources used,
- Effectiveness: the relationship between the results achieved and the initial objectives (Gilbert, 1980).

The performance of Gilbert model traces the performance according to a combination of links between the objectives (targets, estimates, projections), the means to achieve them (human, material, financial or informational resources) and the results obtained (goods, products, services, etc.), (Figure 4).

Figure 4: Gilbert Performance Model (Gibert p 1980)



The performance measurement does not focus solely on the financial aspect. It combines a balanced system between financial and non-financial indicators, in the short or long term, between intermediate indicators and results measurement. This system is called the Balanced Score Card (BSC) or Balanced Scorecard. These indicators are divided into four axes (finances, clients, internal processes and organizational learning). These include financial performance, customers-defined performance and internal process performance (Kaplan and Norton, 2007). The different performances according to the BSC are linked by cause-and-effect relationships that shape strategy. The objective is to articulate the initiatives of employees, departments and the company, then identify using dynamic simulations, new processes to meet customer and shareholder expectation's (Kaplan and Norton, 2007), (Figure5).

Figure 5: The Diagram showing the articulations of the 4 perspectives of the BSC centered on the strategy map (Kaplan and Norton 2007).



II.4 Impact of quality approach on performance:

According to the literature, there are some confusion and contradictions regarding the effectiveness of certification. The study done by Feng and al in 2008, based on 613 companies in the industrial and service sector in New Zealand, Australia, concluded that there is a positive and significant relationship between ISO certification and operational performance. However, the relationship between ISO 9001 certification and business performance was found positive, but weakly not significant. We conclude that the certification alone does not have a unique and direct positive impact on business performance. The success ISO implementation would be increased if it is well planned and when the philosophical aspects of the organization are coupled with employee training, periodic audits, corrective actions and commitment at all levels of the organization (Feng, Terziovski, and Samson 2008).

According to Terziovski and al.(2003), there is a significant and positive relationship between a leader's motivation to adopt ISO certification and business performance. The main motivation for adopting ISO certification is customer pressure. But, organizations that voluntarily adopt the certification approach are more likely to have improved organizational performance (Terziovski and al,2003). In the same context, Rolland and Tran confirm the same idea : if the process is voluntary from the general management and if it is not constrained, on the part of senior management; the ISO 9000 certification therefore appears to increase the company performance (Rolland and Tran, 2006).

Charlees and al, (2005) tracked the financial performance of certified industrial companies, from 1987 to 1997, on the basis of more than 21,482 ISO 9001 certifications issued to the states in the sectors representing the largest number of certificates. By referring to focus groups of non-certified companies in the same industry and of the same size. They concluded that the certification leads to productivity improvements and financial performance. Similarly, by examining the effect of ISO 9001 certification on publicly traded companies, they realize that certification leads to improved financial

performance. Specifically, they conclude that companies not having sought certification have experienced substantial deterioration in asset performance, productivity and sales. While certified companies have, in general, avoided such phenomena of economic decline and underperformance.

Also, the ISO 9001 effectiveness directly contributes to product quality and operational performance. Although it has no direct impact on manufacturing firms' business performance, it has an indirect impact through the moderator of operational performance (Kafetzopoulos et al., 2015). In addition, other companies that have certification; have not seen a positive change in their absolute performance, they have seen an improvement in their relative performance compared to their counterparts. A company needs other resources to improve, especially since ISO 9001 is an organizational "standard" and its implementation alone within a company is not a lasting competitive advantage. Therefore, other tools and resources must be put in place, which are more difficult to imitate and can constitute a differentiating competitive advantage. Paradoxically, not opting for ISO 9001 certification contributes to a gradual unfavorable evolution of performance (Rolland and Tran, 2006).

The analysis of 98 studies processed by Aurélie in 2007 on the impacts of the ISO 9001 standard, reveals that the implementation of the ISO 9001 standards has an impact on operational, quality, strategy and managerial management. While the most marked contingency factors in this standard are the initial motivation to adopt the approach (voluntary or binding), the involvement of managers and employees (Aurélie, 2007).

According to an empirical study carried out by Lambert and Ouedraogo on 85 industrial processes of certified companies in 2008, the authors reveal that ISO certification has a significant impact on knowledge creation and management. This study assumes that total quality and ISO 9001 have similar impacts on knowledge management (Lambert and Ouedraogo, 2008) Terzviovski and Guerrero demonstrated through a study carried out in 2014 on 220 companies in Australia that ISO 9000 certification statically does not have a significant impact on product innovation. Certified companies focus on product detail and overlook its innovation. However, this certification has a significantly positive impact on business process innovation (Terzviovski and Guerrero, 2014).

The table 2 summarize the different auteurs finding about relationship with quality approach and performance:

Authors	Findings
Mei Feng, Mile´ Terziovski and Danny Samson, (2008)	There is a positive and significant relationship between quality practices: (implementation, organizational commitment and planning) and operational performance.
Lassâad Lakhel (2006)	There is a significant relationship between management and infrastructure practices and operational performance.
Terziovski, M., Power, D., & Sohal, A. S.(2003)	There is a significant and positive relationship between leader’s motivation to adopt ISO certification and business performance.
Charlees J. Corbett, María J. Montes-Sancho, & David A. Kirsch, (2005)	The certification leads to productivity improvements and financial performance. The companies not having sought certification have experienced substantial deterioration in asset performance, productivity and sales.
Kafetzopoulos, D. P., Psomas, E. L., & Gotzamani, K. D, (2015)	It has no direct impact on manufacturing firms’ business performance, it has an indirect impact through the moderator of operational performance.
Lambert and Ouedraogo, (2008)	ISO certification has a significant impact on knowledge creation and management.
Terziovski and Guerrero, (2014)	ISO 9000 certification statically does not have a significant impact on product innovation.
Pambreni, Y., Khatibi, A., Azam, S., & Tham, J, (2019)	The customer focus, continuous improvement, strategically based, and total employee involvement have a positive and significant effect on organization performance.
Fonseca and Domingues, (2018)	The principal reported benefits of quality practices are: risk-based thinking, mapping of the organizational context, and stakeholder identification
Hale Kaynak, (2003)	The quality practices: leadership; training; relationship employee involvement; supplier Quality Management; and process management, are an impact on Inventory management performance; financial and market performance.
Prajogo, D. I., & Sohal, A. S, (2003)	The practice of: leadership; strategic planning; customer focus; information and analysis; people management and process management are significantly and positively related to the product quality and product innovation performance.
Reed, R., Lemak, D. J., & Mero, N. P. (2000)	The practice of: Leadership; commitment; training and awareness; teams and culture can generate a sustainable competitive advantage.
Flynn, B. B., Schroeder, R. G., & Sakakibara, (1995)	The top management support was found to be critical to both infrastructure and core quality management practice.

The type of relationship between quality management approach and its contributions to the company, sometimes seem contradictory. In some academic works, the link is positive; on the contrary, others demonstrate the non-existence of this link. So, there is some confusion and contradictions regarding the effectiveness of quality practices. For empirical work that demonstrates a positive link between quality approach and performance, the literature review highlights the lack of consensus in the work on the impact of quality practice on performance. Although several studies point to the positive effects of quality practice, they also indicate that certain factors appear necessary for the link to work. This link between quality practices and the organization's performance can guide decision-makers in their choice to engage in such a process. The first motivation for adopting the quality approach, significantly influences the achievement of the performance desired by the company when the motivation is voluntary without any external pressure. The types of performance most affected in most studies are the organizational performance, which include: financial performance and operational performance.

III. Conceptual Model of the study and hypotheses development:

Based on the results of this literature review, the choice of our conceptual model will revolve around quality management practices and their impact on performance. Since these practices are very varied in the literature, their choices vary from one search to another, depending on the research purpose. In the case of our model and by referring to this literature review, we have established four quality practices: Leadership, customer focus; staff Involvement; Continuous improvement, which seem to us the most repeated in the literature ((Feng, Terziovski and Samson,2008); (Pambreni et al., 2019); (Flynn et al., 1995); (Fonseca and Domingues, 2018); (Prajogo & Sohal, 2003); (Reed et al., 2000); (Hale Kaynak ; 2003)), and meet the quality management principles.

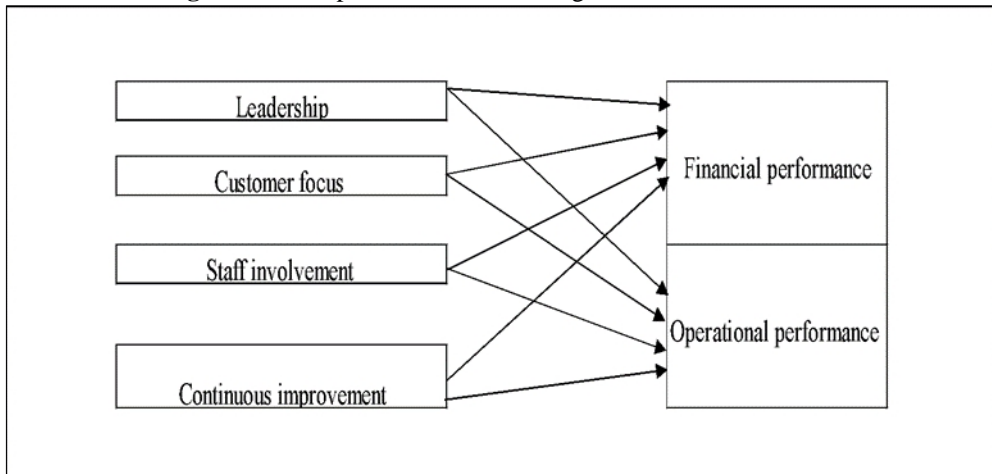
For performance measurement, we opted for The Balanced Scorecard which aims to measure a company's activities according to two types of performance; financial performance and operational performance(Kaplan & Norton, 1996). The financial performance presents the financial health of the organization and includes indicators: Return on capital; Cash flow; Project suitability and value of order books. The axes of operational performance include; customer axes which take into account customer satisfaction and needs and internal processes which look for efficiency, providing competitive advantages and learning effects and human resources management.

Our research hypotheses can be read as follows:

- H1 : Leadership has a positive impact on operational performance.
- H2 : Leadership has a positive impact on financial performance.
- H3 : Customer focus has a positive impact on operational performance.
- H4 : Customer focus has a positive impact on financial performance.
- H5 : Staff Involvement has a positive impact on operational performance.
- H6 : Staff Involvement has a positive impact on financial performance.
- H7 : Continuous improvement has a positive impact on operational performance.
- H8 : Continuous improvement has a positive impact on financial performance.

Therefore, our research model will allow the investigation of the impact of quality practice on financial and operational performance (Figure 6). This model will be applied through an exploratory study in the case of Moroccan companies.

Figure 6: conceptual models according to the literature review



Conclusion and research perspective:

The literature review highlights the lack of consensus in works related to the impact of certification on performance. Although several studies point to the positive effects of certification, they indicate that certain factors appear necessary for the link to work. This link between certification and the performance can guide decision-makers in their choice to engage in such a process.

The purpose of this article is to develop a research model on the relationship between quality approach and organization performance. Indeed, we point out that this model represents only the basis, and it is only a preliminary step towards understanding the problem posed. Further research is needed to modify and integrate other variables into the basic model. In addition, empirical work dealing with the case of Morocco will soon be

established, through a data collection study that is underway to serve as a test of the research model using econometric modeling.

References:

1. Aurélie, M. (2007). *les impacts organisationnels de la norme ISO 9000 : Une revue systématique de la littérature.*
2. Brandenburg, H., & Wojtyna, J.-P. (2003). *L'approche processus : Mode d'emploi.* Ed. d'Organisation.
3. Chaminade, B. (2005). *RH & compétences dans une démarche qualité.*
4. Charlees J. Corbett, María J. Montes-Sancho, & David A. Kirsch. (2005). *The Financial Impact of ISO.*
5. Deming, W. E., & Edwards, D. W. (1982). *Quality, productivity, and competitive position (Vol. 183).* Massachusetts Institute of Technology, Center for advanced engineering study.
6. Dumez, H. (2011). *Faire une revue de littérature : Pourquoi et comment?*
7. Feng, M., Terziovski, M., & Samson, D. (2008). *Relationship of ISO 9001 : 2000 quality system certification with operational and business performance.* Journal of manufacturing technology management.
8. Flynn, B. B., Schroeder, R. G., & Sakakibara, S. (1995). *The impact of quality management practices on performance and competitive advantage.* Decision sciences, 26(5), 659–691.
9. Fonseca, L. M., & Domingues, J. P. (2018). *Empirical Research of the ISO 9001:2015 Transition Process in Portugal : Motivations, Benefits, and Success Factors.* Quality Innovation Prosperity, 22(2), 16. <https://doi.org/10.12776/qip.v22i2.1099>
10. ISO - *À propos de l'ISO.* (s. d.). ISO. Consulté 16 février 2020, à l'adresse <https://www.iso.org/fr/about-us.html>
11. ISO 1005. (2005). *ISO 10005:2005(fr), Systèmes de management de la qualité—Lignes directrices pour les plans qualité.* <https://www.iso.org/obp/ui/#iso:std:iso:10005:ed-2:v1:fr>
12. ISO 9001-2015.pdf. (s. d.).
13. ISO 10018:2012(fr),(2012).
14. ISO,(2016).*Principes de management de la qualité (Organisation internationale de normalisation; Secrétariat central de l'ISO; iso.org © ISO, 2016 ISBN 978-92-67-20650-9.*
15. <https://www.iso.org/obp/ui/#iso:std:iso:10018:ed-1:v1:fr>
16. Juran, J., & Godfrey, A. B. (1999). *Quality handbook.* Republished McGraw-Hill, 173(8).
17. Kafetzopoulos, D. P., Psomas, E. L., & Gotzamani, K. D. (2015). *The impact of quality management systems on the performance of*

- manufacturing firms*. International Journal of Quality & Reliability Management, 32(4), 381-399. <https://doi.org/10.1108/IJQRM-11-2013-0186>
18. Kaplan, R. S., & Norton, D. P. (1996). *Using the balanced scorecard as a strategic management system*. Harvard Business Press.
 19. Kaplan, R. S., & Norton, D. P. (2007). *Balanced scorecard*. In Das Summa Summarum des Management (p. 137–148). Springer.
 20. Kaynak, H. (2003). *The relationship between total quality management practices and their effects on firm performance*. Journal of operations management, 21(4), 405–435.
 21. Lakhal, L., Pasin, F., & Limam, M. (2006). *Quality management practices and their impact on performance*. International Journal of Quality & Reliability Management.
 22. Lambert, G., & Ouedraogo, N. (2008). *Empirical investigation of ISO 9001 quality management systems' impact on organisational learning and process performances*. Total Quality Management & Business Excellence, 19(10), 1071–1085.
 23. Maxwell, J. C. (2006). *Developing the leader within you*. Thomas Nelson ; New Holland [distributor].
 24. Maxwell, J. C. (2011). *The 5 levels of leadership : Proven steps to maximize your potential*. Center Street.
 25. Mercier, S. (2006). 9. *La théorie des parties prenantes : Une synthèse de la littérature*. In *Décider avec les parties prenantes* (p. 157-172). La Découverte; Cairn.info. <https://www.cairn.info/decider-avec-les-parties-prenantes--9782707147844-p-157.htm>
 26. Pambreni, Y., Khatibi, A., Azam, S., & Tham, J. (2019). *The influence of total quality management toward organization performance*. Management Science Letters, 9(9), 1397–1406.
 27. Patyal, V. S., & Koilakuntla, M. (2017). *The impact of quality management practices on performance : An empirical study*. Benchmarking: An International.
 28. Pekovic, S., & Rolland, S. (2012). *L'impact de l'orientation client sur la performance des entreprises françaises : Étude empirique des effets directs et modérateurs*. Recherche et Applications en Marketing (French Edition), 27(4), 11–38.
 29. Pesqueux, Y. (2004). *La notion de performance globale*.
 30. Prajogo, D. I., & Sohal, A. S. (2003). *The relationship between TQM practices, quality performance, and innovation performance*. International journal of quality & reliability management.
 31. Qualitiso. (2014, novembre 20). *Les 7 principes de management de la qualité*. Qualitiso. <https://www.qualitiso.com/7-principes-management-qualite/>

32. Reed, R., Lemak, D. J., & Mero, N. P. (2000). *Total quality management and sustainable competitive advantage. Journal of quality management*, 5(1), 5–26.
33. Rolland, S., & Tran, S. (2006). *La certification qualité est-elle un facteur de compétitivité pour les entreprises? Le cas de la norme ISO 9001*.
34. Terziovski, M., & Guerrero, J.-L. (2014). *ISO 9000 quality system certification and its impact on product and process innovation performance. International Journal of Production Economics*, 158, 197–207.
35. Terziovski, M., Power, D., & Sohal, A. S. (2003). *The longitudinal effects of the ISO 9000 certification process on business performance. European Journal of operational research*, 146(3), 580–595.



La stabilité financière des Systèmes Financiers Décentralisés (SFD) au Sénégal : quelle situation après une nouvelle régulation prudentielle ?

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[Doi:10.19044/esj.2021.v17n1p146](https://doi.org/10.19044/esj.2021.v17n1p146)

Submitted: 04 November 2020

Accepted: 25 December 2020

Published: 31 January 2021

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Cite As:

Diop M.C. (2021). *La stabilité financière des Systèmes Financiers Décentralisés (SFD) au Sénégal : quelle situation après une nouvelle régulation prudentielle ?*. European Scientific Journal, ESJ, 17(1), 146. <https://doi.org/10.19044/esj.2021.v17n1p146>

Résumé

Ce travail cherche à analyser la stabilité financière des SFD au Sénégal à travers la solidité financière et la protection des épargnants, suite à l'application d'une nouvelle régulation prudentielle en 2010. La méthodologie repose sur une base de données de panel de 42 SFD de 2010 à 2015. Elle est consolidée et mise à notre disposition par la direction de la réglementation qui assure la tutelle des SFD. Un traitement de normalisation par la méthode « Min-Max », suivi d'une pondération et d'une agrégation par une analyse en composante principale (ACP) ont permis de construire un indice agrégé de stabilité et des sous indices pour apprécier la stabilité financière. Les résultats soulignent une stabilité financière et de ses dimensions (rentabilité, qualité des actifs et protection des actifs). Cependant, des efforts supplémentaires permettraient de hisser les niveaux de rentabilité, de diminuer le PAR et de corriger la tendance baissière des indicateurs de la protection des épargnants. La disponibilité des données, au-delà de 2015, serait une valeur ajoutée. Il serait important aussi de mieux analyser les déterminants de la liquidité de l'actif qui contribue à hauteur de 40% à la protection des épargnants.

Mots clés : Stabilité financière, Régulation prudentielle, Systèmes Financiers Décentralisés

Financial Stability of Decentralized Financial System in Senegal: What Situation After a New Prudential Regulation?

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Abstract

This work seeks to analyze the financial stability of the Decentralized Financial System (DFS) in Senegal through the financial robustness and protections of savers, after the application of new prudential regulation in 2010. The methodology consists of a database of 42 Decentralized Financial System panels from 2010 to 2015. It is consolidated and made available at our disposal by the Direction of the regulation which assures the guardianship of DFSs. A regulation by the method « Min-Max », followed by a ponderation and aggregation by a component analysis have permitted to build an aggregated index of stability and sub-indexes to give an appreciation of the financial stability. The results underline financial stability and its dimensions (profitability, quality of assets and assets protection). However, supplementary efforts should be permitted to boost the level of rentability, to increase the PAR and to correct decreased tendency of indicators of the protection of savers. The availability of datas, beyond 2015, should be an added value. It also should be important to better analyze the determinants of asset quality which contributes to the level of 40% to the protection of savers.

Keywords: Financial stability, prudential regulation, decentralized financial systems

Introduction

Après les années 2000, le secteur de la microfinance s'est essoufflé avec des difficultés notées au niveau de plusieurs SFD. Une catégorie d'acteurs assez significatifs du dispositif de financement comme les groupements d'épargne et de crédit (GEC) et les structures signataires de convention cadre (SSCC) montrent leurs limites en termes de viabilité et de potentiel économique. Une bonne partie des mutuelles d'épargne ont également rencontré ces mêmes difficultés et des problèmes importants de qualité du portefeuille de crédit sont constatés (Sakho, 2004 ; BCEAO, 2001). Ces difficultés, recensées à une période d'émergence de nouveaux types de SFD de forme sociétaire, conduisent à l'adoption de la loi n°2008-47 et des ratios prudentiels de la BCEAO.

Cette loi et ces ratios entrent en vigueur à partir de 2010 et permettent un assainissement du secteur à travers un régime unique d'autorisation d'exercice à tous les SFD, la suppression des GEC, des SSCC et des mutuelles n'ayant pas une capacité de résilience.

L'assainissement permet de protéger les acteurs qui déposent leurs ressources financières afin de leur éviter les conséquences de la défaillance ou de la faillite de SFD non viables.

Cette loi, poursuit aussi un objectif de stabilisation du secteur de la microfinance avec l'implication de la banque centrale dans le resserrement des conditions d'entrée et l'instruction des dossiers d'autorisation d'exercice. Également, la stabilisation du secteur de la microfinance demande le renforcement de la supervision de la BCEAO et de la DRS.

Le respect des dispositions de surveillance permettrait d'avoir des SFD solides, viables et capables de dérouler les activités d'épargne et de crédit sur une longue période (Hoxhaj, 2010). Il permet de protéger les clients épargnants en anticipant sur les risques de solvabilité, de liquidité etc. En Afrique centrale, plusieurs dispositions prudentielles ne sont pas respectées et mettent les SFD dans une situation de fragilité, au regard de plusieurs normes de solidité. Une bonne partie des SFD ne respectent pas les taux de participation. Pour certains, les fonds propres sont insuffisants. Ces deux situations sont synonymes de manque de solvabilité et exposent les clients à difficultés de retrait (BEAC, 2016).

La surveillance du secteur financier élargit les pouvoirs des organes de régulation, réduit les pratiques abusives et les prises de risques excessifs (OCDE, 2010). La gestion des risques crée de la valeur, de la rentabilité et rend performant les SFD à travers un dispositif de régulation prudentielle (Tchuiougou et Nekhili, 2012).

La réglementation et la supervision SFD, à travers une loi et des indicateurs à atteindre, constituent les piliers d'une régulation prudentielle destinée à rendre solide les SFD et à protéger les épargnants. Cette solidité

financière, synonyme de performance financière, est mesurée par les indicateurs de qualité de portefeuille, de rendement, d'autosuffisance opérationnelle etc. (Ellé, 2017).

Au regard des objectifs d'une régulation prudentielle, la question suivante est adressée :

Après l'entrée en vigueur d'une nouvelle régulation prudentielle¹ en 2010, les SFD au Sénégal ont-ils bénéficié d'une stabilité financière renforcée ?

Il s'agira de construire un indice agrégé de stabilité financière (IASF) pour analyser l'évolution de la situation sur la période post réglementation. Il sera aussi question de voir, de façon spécifique, la dynamique observée en termes de solidité financière et de protection des clients épargnants. Ainsi, les questions subsidiaires sont formulées:

- La solidité financière des SFD s'est-elle améliorée ?
- Les épargnants bénéficient-ils d'une bonne protection ?
- Avec un IASF, constate-t-on une amélioration de la stabilité financière des SFD ?

Le travail a pour objet d'analyser la stabilité financière des SFD après des années de réforme du cadre juridique pour une amélioration et une pérennité des activités de microfinance.

Les objectifs spécifiques permettant de mieux faire l'analyse se résument ci-dessous :

- Vérifier si les SFD bénéficient d'une solidité financière ;
- Analyser la protection dont bénéficient les épargnants ;
- Construire un indice agrégé et analyser la stabilité financière globale des SFD.

La méthodologie retenue consiste à utiliser des données de panel sur la période post réforme et surtout à partir de 2010 où la fourniture d'informations sur ces indicateurs avait démarré. Des analyses tendanciennes sont faites à partir des composantes de la solidité financière et de la protection des clients. Aussi, une tendance globale de la stabilité financière est présentée à partir des résultats de l'IASF.

Ce travail se répartit en trois parties : une revue conceptuelle et théorique sur la régulation prudentielle et la stabilité financière (partie I), la méthodologie de construction d'indice agrégé (partie II) et la présentation des résultats (partie III).

¹ Elle fait référence à la loi n°2008-47 et aux ratios prudentiels de la BCEAO de 2010

I. Corpus théorique sur la régulation prudentielle et de la stabilité financière

La régulation prudentielle a toujours une finalité de performance et de protection à travers un dispositif, souvent coercitif, de réglementation et de supervision.

I.1. Utilité d'une régulation prudentielle coercitive sur la stabilité financière

La régulation est, en partie, un dispositif de gouvernance externe, permettant, suivant une approche organisationnelle, de combler les défaillances de contrôle interne, de protéger les clients, de générer des bénéfices marginaux sur la base d'un couple bénéfice/coût (Tchuigoua et Nekhili, 2012). Le dispositif mis en place permet de couvrir les clients-épargnants contre les comportements opportunistes des dirigeants et des managers. Les règles du jeu sont clairement fixées et le suivi de l'exploitation est fait au profit des clients qui, du fait de l'opacité organisationnelle, ne parviennent pas à obtenir les bonnes informations.

Dans des contextes de microfinance où il y a une forte concentration de coopératives ou de mutuelles, il est constaté que les sociétaires ont une faible implication dans le contrôle de la gestion. Ils s'intéressent plus à des avantages sur la facturation des crédits obtenus et des épargnes constituées. Cette situation donne plus de latitude aux dirigeants qui pourront s'accaparer des rentes créées, à l'absence de régulation et d'organe de contrôle externe (Ory, Jaeger et Gurtner, 2006).

Aussi, dans une situation de collecte de l'épargne publique, des règles prudentielles doivent être adoptées afin de protéger les épargnants en leur garantissant un retrait des dépôts, tributaire d'une solvabilité et d'une liquidité (Christen, Lyman et Rosenberg, 2003).

Également, la régulation impose souvent une transmission régulière (annuelle, trimestrielle ou mensuelle) des rapports pour le suivi des indicateurs prudentiels. C'est un *reporting* permanent et de qualité qui s'impose aux SFD et demande par conséquent, des ressources humaines de qualité. Ce *reporting* montrant des signaux positifs par rapport au respect des dispositifs prudentiels permet de dégager une légitimité aux yeux des acteurs externes, de gagner la confiance des investisseurs et de faciliter le financement externe (Rouleau, 2007). Ce financement peut être facilité par l'existence d'un cadre réglementaire et il permettra aux petites et moyennes entreprises (PME) et aux zones rurales d'accéder facilement aux ressources financières (Satta, 2003).

La régulation prudentielle se fait à travers une réglementation² et une supervision³ prudentielle. Ces deux mécanismes ont un caractère prudentiel s'ils permettent de garantir la santé financière des intermédiaires, de prévenir des situations de défaillance et de protéger les petits déposants contre des situations d'insolvabilité et d'illiquidité (Christen et al, 2003 ; Barlet, 2003 ; Hoxhaj, 2010). Une supervision périodique portant sur ces aspects de réglementation permet de contenir les risques auxquels les épargnants sont exposés et d'aiguillonner la profitabilité (Hoxhaj, 2010).

Des travaux en Bolivie, pays pionnier en microfinance, montrent que la régulation prudentielle éloigne les SFD de leur objet social. Elle vise l'adoption de règles standards destinés à stabiliser le secteur et protéger les clients, la commercialisation de la microfinance et privilégie la rentabilité et l'autonomie (Satta, 2004). En effet, les règles prudentielles cherchent à minimiser les risques de perte en protégeant les épargnants, assurent une viabilité aux SFD et in fine, une stabilité du secteur dans son ensemble (Bédécarrats et Marconi, 2009 ; Diani, 2019). La protection des épargnants par un dispositif prudentiel semble vérifier avec l'existence d'un ratio de capitalisation satisfaisant (Tchuigoua et Nekhili, 2012).

La supervision faite par les autorités de régulation et de tutelle permet de veiller au respect des ratios prudentiels et de sanctionner les dérives préjudiciables aux épargnants du secteur financier. La sanction peut aller jusqu'au retrait de l'agrément. A cet effet, il y a un objectif d'inscrire une démarche unique, coercitive et harmonisée permettant aux SFD d'endiguer les risques suivant une même approche et de protéger les épargnants et le secteur.

Cette facette de la régulation peut être expliquée par la théorie néo-institutionnelle. Selon cette théorie, les pratiques et les formes organisationnelles dépendent de l'environnement dans lequel évoluent les organisations. Ces dernières sont placées dans un environnement hautement institutionnalisé et l'analyse de leur fonctionnement dépasse leurs frontières et fait appel aux institutions⁴ (Landrieux-Kartochian, 2018). Suivant ce déterminisme, Rouleau (2007) parle de pratiques organisationnelles institutionnalisées qui se répètent et font l'objet de routine sous les pressions de l'environnement⁵. Un environnement institutionnel suppose la production de règles, de normes et l'existence d'un dispositif de mise en œuvre des règles

² Un ensemble de règles et mesures ayant une force obligatoire adoptées par le législatif et ordonnée par le l'exécutif

³ Un mode de surveillance externe visant à faire respecter la réglementation

⁴ Constituent des règles du jeu destinées à contraindre les organisations à travers des règles formelles et informelles. Pour les institutionnalistes, précurseurs, une institution peut aussi se référer à une organisation, à condition qu'il existe de dirigeants capables d'assurer la promotion de valeurs fortes issues de la communauté.

⁵ Il peut être l'état, les organismes réglementaires, les tribunaux, les groupes professionnels, l'opinion publique etc.

établies (Menard, 2003). Le respect de ces règles conduit à une homogénéité et une similarité sur les pratiques organisationnelles. Il s'agit d'isomorphisme au sens de Dimaggio et Powell (1983) avec trois formes (coercitive, mimétique et cognitive). Les règles coercitives permettent plus d'expliquer le conformisme ou l'isomorphisme auquel les SFD sont soumis par rapport à l'exigence de respect des ratios prudentiels. Elles regroupent les aspects légaux et réglementaires qui s'appliquent aux organisations et les conduisent à adopter un rituel de conformité. Dans des pays comme le Maroc, la régulation prudentielle a permis d'organiser le secteur, homogénéiser les pratiques et assurer la surveillance de la viabilité financière des SFD (Diani, 2019).

Le fonctionnement des SFD au Sénégal est soumis à la réglementation prudentielle à travers la loi n° 2008-47 avec des objectifs clairs à atteindre et une supervision prudentielle faite par la BCEAO et la DRS. Ainsi, les SFD évoluent dans un environnement institutionnel décrit ci-dessus. Une série de ratios sont à respecter afin de protéger les clients et de rendre stable le secteur de la microfinance. Les SFD, selon leur taille et conformément à l'article 44 de ladite loi, sont contraints à déposer, chaque mois ou chaque trimestre, des rapports faisant état de leur conformité aux seuils à atteindre pour les ratios prudentiels de gestion fixés par la BCEAO. Ces contraintes coercitives imposées par la réglementation et la supervision conduisent à un isomorphisme sur le respect des dispositions prudentielles. Ce respect permettrait l'atteinte de la stabilité qui se manifeste par une viabilité et une protection des clients. A l'issue de l'éclairage sur la régulation et sur les pressions coercitives qui en découlent, le concept de stabilité financière est présenté, comme un objectif final de la régulation dans un contexte de microfinance institutionnaliste.

I.2. Stabilité financière comme finalité sous le prisme de l'approche institutionnaliste

Depuis longtemps, les approches institutionnaliste et welfariste sont analysées comme deux courants qui essaient d'avoir les mêmes objectifs de lutte contre la pauvreté avec des logiques différentes (Noël et Ayayi, 2009). L'approche welfariste est plus adaptée aux ONG qui ne recherchent pas de profit et visent les couches les plus vulnérables pour une distribution exclusive de crédit à des taux très faibles. La rentabilité et le retour sur investissement ne sont pas une priorité. Les entités de financement utilisent des subventions ou des dons et interviennent pour un temps donné et limité. Dans des situations pareilles, la viabilité, la stabilité financière de ces structures ne constituent pas un objectif (Fouda Owoundi, 2010). Une protection des clients n'est pas envisagée car il s'agit, le plus souvent, du crédit direct et par conséquent, une réglementation prudentielle est inopportune (Christen et al, 2003).

Par contre, l'approche institutionnaliste, soutenue par la banque mondiale et le fonds monétaire international, vise les moins pauvres et exige

une rentabilité sur les crédits injectés car les SFD rémunèrent l'épargne collectée auprès des ménages ou à partir d'emprunts (Noël et Ayayi, 2009). Cette approche, purement commerciale, demande une massification du crédit octroyé qui ne saurait être financé par des subventions et des dons. A cet effet, il serait indispensable de mobiliser d'autres moyens de financement plus volumineux et stables dans le temps (Nzongang, Piot-Lepetit et Kamdem, 2012).

Regardant l'évolution de la microfinance dans le contexte sénégalais avec les phases consolidation et d'intégration, il est évident que les SFD doivent compter sur leurs propres ressources pour couvrir leurs charges d'exploitation. Avec cet objectif de rentabilité, les SFD sont naturellement dans une approche institutionnaliste. L'usage de cette approche est renforcé par l'objectif de stabilité financière du secteur visé dans la loi n° 2008-47 et mis en œuvre avec les ratios prudentiels à respecter par tous les SFD.

Les crises financières et l'accélération de l'innovation financière croissante constituent les principales causes d'une quête de stabilité financière (AMAO, 2017). Le secteur de la microfinance a été assaini entre 2008 et 2010, régulé par une nouvelle réglementation et de nouveaux outils prudentiels permettant de garantir la stabilité du secteur.

La pertinence de l'analyse de la stabilité financière dépend toujours d'une période antérieure de difficultés et d'instabilité. Ce qui renseigne sur une situation évolutive soulignant que la stabilité est un état et non une propriété (Abbad et al, 2015).

La stabilité financière décrit une situation dans laquelle les acteurs fonctionnent de manière saine, sans difficultés majeures et avec un bon niveau de performance (BCEAO, 2006). Elle permet une bonne intermédiation financière, avec comme résultante, le renforcement de la confiance des épargnants et la canalisation des ressources collectées vers les projets d'investissement. Elle dépend, entre autres, d'un cadre réglementaire efficace et de supervision prudentielle des institutions (Dannon et Lobez, 2014).

En s'inspirant de la définition d'Illing et Liu (2006) sur la vulnérabilité financière, la stabilité financière, concept opposé, peut être appréciée comme une variable continue avec une série de valeurs dont les points extrêmes renseignent sur des situations de santé financière et de risques faibles. Cette approche d'appréhender la stabilité financière repose sur la démarche de Borio (2009) qui définit la stabilité par la négative, c'est-à-dire l'absence d'instabilité.

Le rapport de l'AMAO (2017) sur la stabilité financière de l'espace CEDEAO fait apparaître des ratios de stabilité qu'on peut catégoriser en deux types : ratios de solidité financière et de protection des épargnants. Pour la première catégorie, on retrouve les ratios de rentabilité des actifs, de rentabilité

des capitaux propres et de qualité des actifs (Prêts non performants) (Sorge, 2004).

Les ratios de rentabilité sont normés par la BCEAO et permettent de décrire la capacité des SFD à dégager un résultat pour un investissement donné. Donc, la rentabilité est déjà une nécessité et elle est prise en compte par des ratios d'autosuffisance opérationnelle et de marge bénéficiaire.

Pour la qualité des actifs des SFD, on se réfère impérativement à l'encours de crédit. Il constitue l'actif le plus important pour les SFD. Il permet de générer les produits d'exploitation mais il constitue également une source de perte et de retard de paiement. Deux indicateurs : portefeuille à risque (PAR) et le taux de perte sur créance (TPC) sont combinés afin de capter simultanément les informations sur les pertes et les retards constatés sur les crédits libérés.

Quant aux indicateurs de protection, l'adéquation des fonds propres, la liquidité générale et la liquidité de l'actif sont utilisés dans l'analyse du potentiel des SFD à faire face aux besoins de retrait des épargnants. Ces dimensions de solidité financière (rentabilité et qualité des actifs) et de protection des épargnants sont largement utilisés dans la littérature financière (Albulescu, 2009 ; Abbad, Achouche et Tadjeddine, 2015) et dans les instructions de la BCEAO de 2010 pour décrire la stabilité financière. Aussi, ils sont qualifiés de ratios centraux et prescrits pour les systèmes financiers (FMI, 2006). Ils sont retenus conformément à leur adaptation et formulation par la BCEAO pour les SFD. L'analyse de la solidité du système financier et des risques susceptibles d'impacter la stabilité financière peut se faire, en partie, avec une approche quantitative et micro prudentielle (BCEAO, 2006). Cette approche micro prudentielle permet de détecter les forces, les faiblesses et les risques de défaillance du système.

Les indicateurs recensés dans la revue, dans les rapports et instructions n°10 et n°20 de la BCEAO seront agrégés pour une compréhension globale et catégorisée pour chaque dimension de la stabilité financière.

L'élaboration d'un indice agrégé est essentielle pour analyser la stabilité financière. En effet, l'usage d'une seule mesure rend difficile la compréhension de la stabilité et par conséquent, un indice synthétique permettrait de mieux décrire la situation (Abbad et al, 2015). Il constitue un outil statistique complémentaire aux modèles économétriques pour rendre compte de la stabilité financière (Rouabah, 2007).

La méthode de pondération permet d'analyser l'apport de chaque dimension, de chaque indicateur à l'indice agrégé. Elle donne également un reflet de la situation de chaque segment du système financier, représenté par une dimension. Selon Illing et Liu (2006), les systèmes de pondération comprennent l'analyse en composante principale, la pondération selon la taille du marché, la pondération à variance égale, et la pondération basée sur la

fonction de distribution cumulative des variables. Tout système de pondération nécessite une normalisation⁶ des indicateurs avant le regroupement des dimensions pour un indice agrégé.

Cette revue théorique sur la régulation et la stabilité a permis de comprendre l'intérêt de la régulation prudentielle en termes de recherche de stabilité financière des SFD. L'analyse de la stabilité des SFD, après l'adoption d'une réglementation, est faite suivant une méthodologie claire de collecte et de traitement de données.

II. La méthodologie adoptée

Pour mieux analyser la stabilité financière des SFD sur la période allant de 2010 à 2015, une base de données de la Direction de la réglementation et de la supervision des SFD (DRS/SFD)⁷ de 42 SFD est utilisée. Cette base permet de calculer tous les indicateurs mobilisés dans l'analyse de la rentabilité, de la qualité des actifs et de la protection des clients.

Pour répondre à la question de recherche, un IASF et des sous indices pour chaque dimension de la stabilité financière sont élaborés. L'analyse de ces indices dans le temps permet de conclure sur la stabilité globale après réforme et aussi sur le comportement des SFD par rapport à des aspects décisifs de solidité financière et de protection des épargnants.

La construction de l'IASF nécessite le respect des étapes suivantes : justification théorique des dimensions et indicateurs, la normalisation, la pondération et l'agrégation.

a. Justification théorique du choix des dimensions et indicateurs

Au regard des développements théoriques sur la stabilité financière notés sur la partie (I.2), le tableau n°2 synthétise les dimensions et les indicateurs utilisés pour établir un IASF.

⁶ Plusieurs méthodes de normalisation existent (statistique, empirique, axiologique et mathématique) et le choix d'une option nécessite la prise du nombre et du type de variable (qualitative ou quantitative) (Albulescu, 2009)

⁷ La DRS est une direction du ministère de finance qui assure la tutelle. La DRS reçoit à la fin de chaque année les états financiers des SFD agréés et aussi de façon périodique les rapports de suivi sur le respect des ratios prudentiels de gestion. Elle a comme mission également d'établir des rapports trimestriels, annuels et des statistiques sur le secteur de la microfinance au Sénégal

Tableau 2 : Indicateurs retenus pour l'IASF

Indice	Dimensions	Ratios	Seuils	Intérêt des ratios
IASF	Rentabilité	Autosuffisance opérationnelle (OA)	>130%	Ils permettent de déceler l'aptitude à être profitable par rapport à un investissement. Aussi, les deux derniers indicateurs permettent d'analyser la qualité de portefeuille de crédit et les risques encourus sur l'encours de crédit, l'actif sur le plus important des SFD
		Rentabilité économique (RE)	>3%	
		Rentabilité financière (RF)	>15%	
		Taux de marge bénéficiaire (TMB)	>20%	
	Qualité des actifs	Portefeuille à risque à 90 J (PAR)	< 3%	
		Taux de perte sur créance (TPC)	< 2%	
	Protection des clients	Liquidité de l'actif (LA)	>5%	Ils signalent le caractère liquide des actifs et solvables du SFD. Ils décrivent la capacité des SFD à couvrir les besoins de retrait des clients
		Liquidité générale (LG)	>80%	
		Taux de capitalisation (TC)	>15%	

Source : Instructions 10 et 20 de la BCEAO ; Albulescu, 2009 ; Abbad et al, 2015 ; FMI, 2006

b. Normalisation

Dans ce travail, la méthode de normalisation « Min-Max » (méthode statistique), très répandue dans la littérature de création d'indice, est retenue. Pour l'analyse de la robustesse des résultats, une autre méthode, le Soft-max, est utilisée.

Soit x_{qc}^t la valeur de l'indicateur q pour le SFD c à la date t et \underline{c} le SFD de référence. La méthode du Min-Max est donnée par :

$$I_{qc}^t = \frac{x_{qc}^t - \min_c(x_q^{t_0})}{\max_c(x_q^{t_0}) - \min_c(x_q^{t_0})}$$

Pour prendre en compte la cohérence temporelle dans le calcul de l'indice, la normalisation des panels est d'abord faite. Ensuite, les valeurs minimales et maximales de chaque indicateur sont calculées pour les individus et les périodes. La transformation donne :

$$I_{qc}^t = \frac{x_{qc}^t - \min_{t \in T} \min_c(x_q^t)}{\max_{t \in T} \max_c(x_q^t) - \min_{t \in T} \min_c(x_q^t)}$$

c. La pondération et l'agrégation

L'agrégation et la pondération ont pour rôle de déterminer le poids de chaque indicateur dans le calcul de l'indice. Ici, une technique d'analyse en composantes principales en panel (PACP) est retenue. Ce choix est justifié par le fait qu'il est possible de résumer un ensemble de variables sans perdre

l'importante variabilité des données originales. De plus, avec la dimension de panel, cette technique permet de prendre en compte l'évolution de l'indice dans le temps. L'objectif du PACP est d'expliquer la variance des données observées par quelques combinaisons linéaires des données d'origine.

Dans une situation de panel, un vecteur de données multidimensionnel est présenté :

$$X_{T \times Q} = (x_1^t, x_2^t, \dots, x_Q^t), t \in T$$

Avec t la dimension temporelle et Q le nombre de variables.

Soit $\Sigma_{Q \times Q}$ la matrice de corrélation des variables $X_{Q \times T}$. La composante principale $Z_i^t, i = 1, 2, \dots, Q$ est définie comme suit :

$$\begin{aligned} \{Z_1^t &= a_{11}x_1^t + a_{12}x_2^t + \dots + a_{1Q}x_Q^t \quad Z_2^t = a_{21}x_1^t + a_{22}x_2^t + \dots + a_{2Q}x_Q^t \dots Z_Q^t \\ &= a_{Q1}x_1^t + a_{Q2}x_2^t + \dots + a_{QQ}x_Q^t \end{aligned}$$

Sous forme matricielle, $Z = A'X_{Q \times T}$, où $A = (a_1, a_1, \dots, a_Q)$, coefficient de A qui minimise la variance de $Z = E(ZZ') = A'\Sigma A$ soumis aux contraintes suivantes :

$$a'_1 a_1 = a'_2 a_2 = \dots = a'_Q a_Q = 1 \text{ et } cov(a'_i x, a'_j x) = 0, i \neq j$$

La solution au problème des valeurs propres et des vecteurs propres résultant de ce programme d'optimisation est λ_i qui est égale à la variance de Z avec $\lambda_1 > \lambda_2 > \dots > \lambda_Q$.

Les facteurs obtenus à partir du PACP peuvent maintenant être utilisés pour calculer les différents poids. Dans un premier temps, le PACP est appliqué sur les variables dans chaque dimension pour obtenir les différents poids. Une fois les poids obtenus, le PACP est appliqué, dans un second temps, aux sous-indices pondérés pour établir l'indice global. A partir de là, les résultats sur l'IASF seront présentés et par rapport à chacune de ses dimensions.

Avec l'approche min-max utilisée, les valeurs extrêmes peuvent fausser la distribution des valeurs normalisées. Pour éviter ce problème, la méthode softmax est mobilisée pour tester la robustesse des résultats. L'un des avantages de cette technique est sa capacité à réduire l'influence des valeurs extrêmes ou des valeurs aberrantes. La normalisation est donnée par :

$$I_{qc}^t = \frac{1}{1 + \exp(-v)}$$

Avec

$$v = \frac{[x_{qc}^t - \underline{x}_{qc}]}{\sigma_{qc}}$$

\underline{x}_{qc} représente la moyenne de l'indicateur et σ_{qc} son écart type.

III. Résultats et discussions

Il est présenté dans cette partie la contribution de la rentabilité, de la qualité des actifs et la protection des clients à l'élaboration de l'IASF. Aussi, l'évolution temporelle de l'IASF et des sous indices sera analysée pour conclure sur la solidité financière, la protection des clients et sur la stabilité financière globale des SFD.

III.1. Contribution des indicateurs et des dimensions à l'élaboration d'indices

Les principaux résultats liés à l'analyse en composantes principales en panel sont résumés dans le tableau n° 3.

Tableau 3 : Résultats sur l'agrégation et les poids des indices

Nombre de composantes principales (Min-Max)												
	Rentabilité				Qualité des actifs		Protection des clients				IASF	
	1	2	3	4	1	2	1	2	3		1	2
Prop.	0.52	0.34	0.09	0.04	0.63	0.37	0.52	0.32	0.15	0.52	0.27	0.21
Cum.	0.52	0.86	0.96	1.00	0.63	1.00	0.52	0.85	1.00	0.52	0.79	1.00
Loadings au carré												
Variables	AO	RE	RF	TMB	PAR	TPC	LA	LG	TC	Rentabilité	Qualité	Protection
F1	0.43	0.20	0.02	0.35	0.50	0.50	0.05	0.46	0.48	0.40	0.29	0.31
F2	0.00	0.31	0.59	0.10	0.50	0.50	0.94	0.04	0.01	0.00	0.56	0.42
Pondération												
Poids	0.26	0.25	0.24	0.25	0.50	0.50	0.40	0.30	0.30	0.26	0.39	0.35

Source : Résultats des analyses en composantes principales à partir des données de la base de la DR

Au regard des résultats ci-dessus, la contribution des variables pour chaque dimension et aussi l'apport des dimensions à l'élaboration de l'IASF sont exposés. Pour la dimension rentabilité, les variables (OA, RE, RF, TMB) ont pratiquement le même niveau de contribution. Il en est de même des variables PAR et TPC pour la dimension « Qualité des actifs ».

Cependant, la variable ou l'indicateur « liquidité de l'actif » contribue plus à la « protection des clients ». La liquidité générale et le taux de capitalisation ont le même niveau de contribution à la protection des clients épargnants.

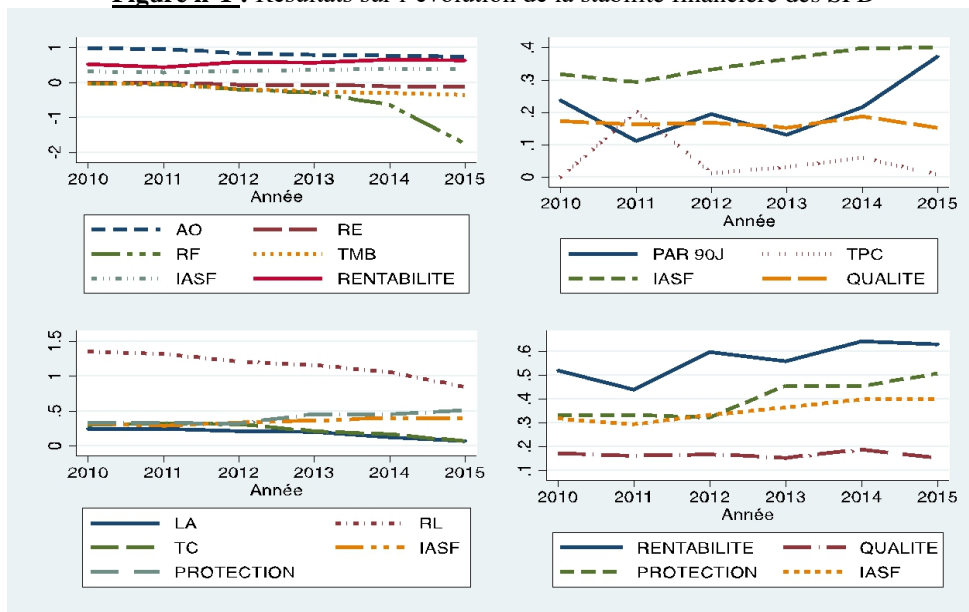
Pour l'indice agrégé, la solidité financière, appréciée à partir de la rentabilité et la qualité des actifs, contribue plus à l'élaboration de l'IASF. Ces deux dimensions expliquent à 65% la stabilité financière avec une contribution plus importante (39%) de la qualité des actifs.

La protection des clients épargnants contribue à 35% à la stabilité financière des SFD.

III.2. Appréciation de la stabilité financière

Les différentes tendances de la solidité financière (rentabilité et qualité des actifs), de la protection des clients et de la stabilité financière des SFD sont appréciées respectivement à partir des sous indices et de l'IASF. Elles sont analysées à partir des graphiques agrégés ci-dessous.

Figure n°1 : Résultats sur l'évolution de la stabilité financière des SFD



Source : Résultats issus du traitement des données de la base de la DRS

Pour la solidité financière, une évolution stable de ses déterminants est notée. Les résultats affichent une évolution constante de la rentabilité de 2010 à 2015. Cependant les seuils fixés par la BCEAO ne sont pas atteints pour les ratios comme OA, TMB etc. La rentabilité financière a connu une chute et est devenue négative, à partir de 2012. Les SFD ont des difficultés, en moyenne, pour dégager suffisamment de produits pour la couverture des charges. La viabilité financière des SFD peut être améliorée par une maximisation du volume de crédit, une fixation du taux d'intérêt à niveau suffisamment rémunérateur et une maîtrise du PAR (Diop, 2013).

Quant à la qualité des actifs, une évolution stable est constatée, juste après l'adoption de la nouvelle réglementation. Cependant, en 2013, le PAR a augmenté jusqu'à dépasser le seuil de 3% et permet de noter des retards et des impayés de plus de 90 jours. La stabilité de la qualité des actifs est due certainement à une relative maîtrise du taux de perte sur créances (TPC), à partir de 2011.

Des recherches ont montré que le PAR peut être amélioré par la fourniture de crédit correspondant juste au besoin (Honlonkou, Acclassato, et Quenum, 2001 et Lanha, 2002), la formalisation des petites entreprises

(Tressel, 2003 ; Gregory et Tenev, 2001), l'expérience en terme d'années d'existence du débiteur (Ben Soltane, 2008 ; Matabaro et Mugisho, 2013), une ligne unique de crédit (Morduch, 2000) et l'existence de garantie mobilière (Blazy et Weill, 2013).

Globalement, on note une évolution stable de la solidité financière à travers la rentabilité et la qualité des actifs. Néanmoins, des efforts sont à faire pour améliorer la profitabilité et diminuer les retards et les impayés. Les seuils fixés par la BCEAO pour les ratios de rentabilité et de PAR doivent être atteints afin de sortir les SFD de la zone stabilité précaire.

En ce qui concerne la dimension « protection des clients », une tendance haussière est notée depuis 2012. Ce qui montre une prise en compte des besoins des épargnants et une diminution des risques auxquels ils sont exposés. Au regard de l'évolution des courbes du ratio de liquidité (RL), de liquidité de l'actif (LA) et de taux de capitalisation (TC), les seuils fixés par la BCEAO sont pratiquement atteints. Cependant, une baisse est constatée depuis 2010. Des mesures de correction doivent être prises afin de redresser cette tendance qui pourra, à terme, exposer les épargnants à des difficultés de retrait. Un regard critique doit être porté sur la liquidité des actifs qui contribue à plus de 40% à la protection des épargnants.

Pour une synthèse sur l'IASF, une tendance positive est constatée depuis 2010. De manière générale, une amélioration est notée depuis l'entrée en vigueur de la nouvelle régulation prudentielle. La consolidation et l'amélioration de cette stabilité financière dépendront d'efforts additionnels sur la rentabilité et sur le PAR.

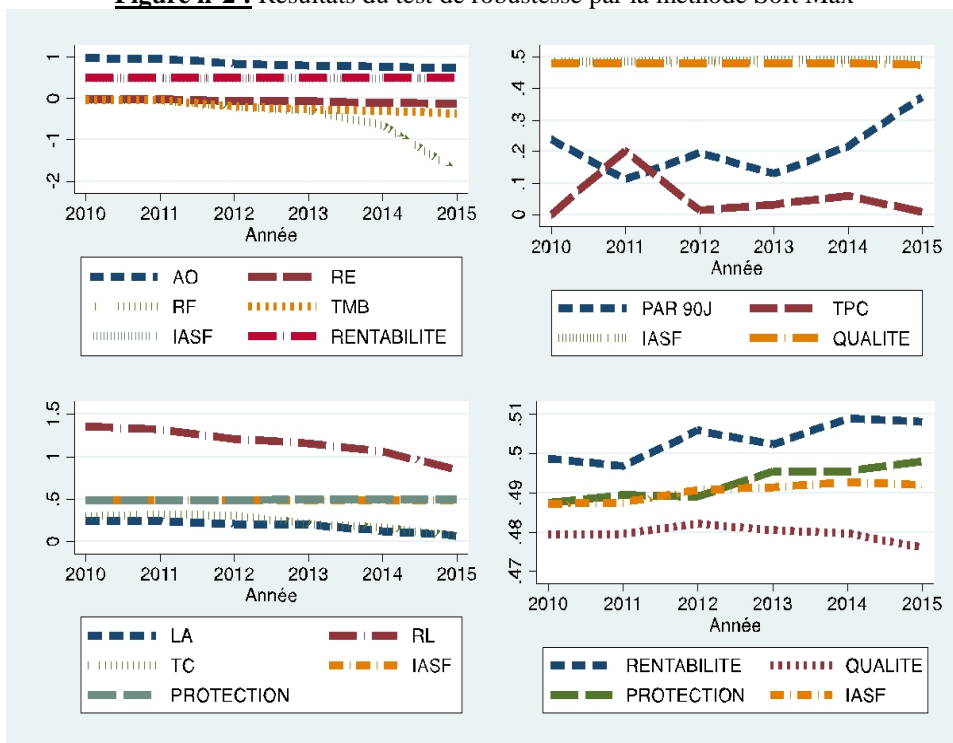
Également, la liquidité des actifs est un point important à surveiller afin que la contribution de la dimension « protection des épargnants » puisse se consolider et s'améliorer pour une meilleure stabilité financière.

Le poids (65%) des deux dimensions (rentabilité et qualité des actifs) souligne le caractère indispensable d'une solidité financière dans la quête d'une stabilité financière du secteur de la microfinance. Mieux, les dimensions prises individuellement montrent que la stabilité dépend de la qualité des actifs (39%) et de la protection des épargnants (35%) (Cf tableau 3).

III.3. Analyse de la robustesse des résultats

Ce paragraphe permet d'analyser la robustesse des résultats présentés dans la figure n°2.

Figure n°2 : Résultats du test de robustesse par la méthode Soft Max



Source : Résultats issus du traitement des données de la base de la DRS

L'analyse comparée de la figure 1 et de la figure 2 montre les mêmes tendances sur la rentabilité, la qualité des actifs, la protection des épargnants et la stabilité globale des SFD. Cependant, les résultats du test de robustesse précisent que la qualité des actifs est moins bonne avec un niveau très élevé de la courbe. La méthode Soft Max a permis de corriger les valeurs extrêmes (nulle) du PAR constatées sur la base de données. Cette insuffisance notée dans la qualité du portefeuille confirme la situation sectorielle décrite dans les rapports de la DRS en 2018 et 2019.

Globalement, les résultats sont robustes et correctes à l'utilisation d'autres méthodes de normalisation et de pondération.

Conclusion

Les résultats notés à partir de la courbe des sous indices et de l'IASF montrent une évolution constante de la rentabilité et de la qualité des actifs.

Cependant, cette situation peut être améliorée car cette stabilité ne correspond pas toujours à l'atteinte des seuils fixés par la BCEAO sur les ratios prudentiels. En effet, les ratios de rentabilité dénotent une insuffisance de produits d'exploitation pour la couverture des charges d'exploitation. Aussi,

la qualité des actifs mérite une attention particulière avec un portefeuille à risque (PAR) qui dépasse le seuil de 3%, à partir de 2012.

Les SFD du secteur doivent améliorer leur gestion afin de générer plus de marge d'exploitation et de rendre la tendance haussière pour la rentabilité et baissière pour le PAR et la qualité des actifs.

Quant à la dimension « protection des clients », la situation est plus favorable. Elle contribue à hauteur de 35% à la stabilité financière. Une situation de plus en plus satisfaisante est notée, à partir de 2012. Sur toute la période d'analyse, les seuils semblent atteints pour tous les indicateurs malgré une tendance régressive des ratios de liquidité, de liquidité de l'actif et de taux de capitalisation.

Une agrégation des résultats permet de se prononcer sur l'IASF qui souligne une évolution stable, légèrement positive de la stabilité financière des SFD, depuis 2010.

Cependant, la profitabilité, le PAR et la liquidité de l'actif méritent une surveillance régulière afin d'augmenter les produits d'exploitation, de minimiser les retards, les impayés et d'avoir plus de ressources financières disponibles. La disponibilité d'une base de données plus récente permettrait d'actualiser les résultats et de donner plus de valeur ajoutée.

Le travail pourrait être prolongé sur la recherche des déterminants de la liquidité de l'actif des SFD. Cette variable est capitale et contribue à hauteur de 40% à la protection des épargnants.

References:

1. Abbad, H., Achouche, M. & Tadjeddine, Y. (2015). Evaluation du système financier Algérien : Construction d'un indice agrégé de stabilité bancaire. *Working Paper P25*. <http://economix.fr>.
2. Albulescu, C.T. (2009). Forecasting Romanian Financial System Stability Using a Stochastic Simulation Model. Working Paper 2009.4, *International Network for Economic Research*, p 22.
3. Bédécarrats, F. & Marconi, R. (2009). L'influence de la régulation sur la contribution de la microfinance au développement : le cas de la Bolivie. *Revue Tiers Monde*, Vol. 50, No. 197 (JANVIER-MARS 2009), pp. 71-90.
4. Ben Soltane, B. (2008). Déterminants de la durée de retard de remboursement des microcrédits individuels: application d'un modèle de durée. *African Review of Money Finance and Banking*, (2008), pp, 91-116.
5. Blazy, R. & Weill, L. (2013). Why do banks ask for collateral in SME lending?. *Applied financial economy*, Volume 23,2013- Issue 13. pp 1109-1122

6. Borio, C. (2009). L'approche macroprudentielle. *Revue de la stabilité financière* n°13, pp. 35-46.
7. BEAC (Banque des Etats de l'Afrique Centrale). 2016. La stabilité financière en Afrique centrale. *Revue de la stabilité financière en Afrique centrale* pp 51-58
8. Dannon, P. H. & Lobez, F. (2014). La régulation bancaire dans l'union économique et monétaire ouest-africaine est-elle efficace ? *Revue d'économie financière*, N° 116, pp 279-304.
9. Diani, A. (2019). Logique d'acteurs et régulation dans le champ de la microfinance marocaine : vers une commercialisation croissante. *RECMA*, 2019/4 N° 354, pp 104-119
10. Dimaggio, P. J. & Powell, W. W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, vol. 48, pp. 147-160.
11. Diop, C. M. (2013). L'analyse des déterminants de la viabilité financière des structures financières décentralisées (SFD) au Sénégal. *African Management Studies (AMS)*, 1(2), PP. 125-160. <http://www.samuniversity.org/index.php?journal=AMS&page=issue&op=archive>
12. Fouda Owoundi, J.P. (2010). La réglementation a-t-elle un impact sur les performances de la microfinance? Le cas du Cameroun. *African Review of Money Finance and Banking*, (2010), pp. 29-58.
13. Gregory, N. & Tenev, S. (2001). The Financing of Private Enterprise in China. *Finance and Development* 38, pp. 14-17.
14. Honlonkou, A. N., Acclassato, D. H. & Quenum, C.V.C. (2001). Problématique de remboursement des crédits dans les systèmes financiers décentralisés et garantie de prêts aux petits opérateurs économiques au Bénin. *Cahier de Recherche ELIFID 00-2*, P 61
15. Hoxhaj, R. (2010). Regulation and supervision of microfinance in Albania. *BEH - Business and Economic Horizons*, Issue 2, July 2010, pp. 75-81.
16. Illing, M. & Liu, Y. (2006). Measuring financial stress in a developed country: An application to Canada. *Journal of Financial Stability*, Vol. 02, Issue 3, pp 243-265.
17. Landrieux-Kartochian, S. (2018). *Théorie des organisations*, 4^{ième} édition. (pp : 95-124). Gualino 70, rue du Gouverneur Général Éboué 92131 Issy-les-Moulineaux cedex.
18. Lanha, M. (2002). Résolution des problèmes d'information en microfinance Analyse à partir de la stratégie de Vital-Finance Bénin. *Mondes en développement* 2002/3 (no 119), p, 47-62.

19. Matabaro, B. L. & Mugisho, M.G. (2013). Analyse des déterminants et de la probabilité de défaut de remboursement de crédit dans les IMF d'uvira : cas de mecre uvira. *Journal of economics and social sciences*, N°2, pp 41-62
20. Menard, C. (2003). L'approche néo institutionnelle: des concepts, une méthode, des résultats. *Cahier d'économie politique*, 2003/1 n° 44, pp 103- 118.
21. Ellé, S.M. (2017). Microcrédits et performances financière et sociale des institutions de microfinance au Cameroun. *La revue gestion et organisation*, Volume 9, Numéro 2, pp 79-91
22. Morduch, J. (2000). The Microfinance Schism. *World Development*, Vol, 28, No, 4, pp, 617-629.
23. Noël, C. & Ayayi, A. (2009). L'autosuffisance des institutions de microfinance est-elle une nécessité ?. *Humanisme et Entreprise*, n° 292, pp 65 à 75.
24. Nzongang, J., Piot-Lepetit, I. & Kamdem, D. (2012). La mesure de l'efficacité financière et sociale des institutions de microfinance du réseau MC² au Cameroun. *Mondes en développement*, n°160, pp 99 à 116.
25. Ory J.N., Jaeger M. & Gurtner E. (2006). La banque à forme coopérative peut-elle soutenir durablement la compétition avec la banque SA ? *Finance Contrôle Stratégie*, vol. 9, n° 2, p. 121-157.
26. Rouabah, A. (2007). Mesure de la vulnérabilité du secteur bancaire luxembourgeois. *Working paper N° 24*. Banque Centrale Luxembourg, pp 1-20.
27. Rouleau, L. (2007). Théories des organisations : Approches classiques, contemporaines et de l'avant-garde. Presses de l'université de Québec.
28. Satta, T. A. (2004). Microfinance regulation influence on small firms' financing in Tanzania. *Financial Regulation and Compliance Volume 12*, n°1, pp 64-74.
29. Sorge, M. (2004): Stress-testing financial systems: an overview of current methodologies. *BIS Working papers*, n° 165, December, p 41
30. Tchuigoua, H.T. & Nekhili M. (2012). Gestion des risques et performance des institutions de microfinance. *Revue d'économie industrielle*, 138, 2ème trimestre 2012, pp 127-148
31. Tressel, T. (2003). Dual financial systems and inequalities in economic development. *Journal of Economic Growth*, Vol, 8, No, 2 (Jun., 2003), pp 223-257.

Rapports ou Archives

32. Albulescu, C. T. (2008). La dynamique de la stabilité du système financier roumain : une analyse en termes d'indice agrégé de stabilité. *Munich Personal RePEc Archive*, Online at <https://mpra.ub.uni-muenchen.de/16754>.
33. AMAO (2017). Evolution et stabilité du secteur financier au sein de la CEDEAO
34. Barlet, K. (2003). Le point sur la réglementation et la supervision de la microfinance. BIM n°30 septembre 2003. CGAP, <http://www.cgap.org/>.
35. BCEAO (2001). Etude sur la viabilité financière des SFD. Monographies de la BCEAO www.bceao.int
36. BCEAO (2006). Revue de la stabilité financière dans l'union économique et monétaire ouest africaine
37. BCEAO (2010). Instruction n°010-08-2010 relative aux règles prudentielles applicables aux structures financières décentralisées des Etats membres de l'union monétaire ouest Africaine (UMOA). https://www.bceao.int/sites/default/files/inline-files/chapitre_7__reglementation_specifique_aux_institutions_de_microfinance.pdf
38. BCEAO (2010). Instruction n°20-12-2010 relative aux indicateurs périodiques à transmettre par les systèmes financiers décentralisés au ministère en charge des finances, à la banque centrale et à la commission bancaire de l'Union Monétaire Ouest Africaine (UMOA). https://www.bceao.int/sites/default/files/inline-files/chapitre_7__reglementation_specifique_aux_institutions_de_microfinance.pdf
39. Christen, R. P., Lyman, T. R. & Rosenberg, R. (2003). Principes directeurs en matière de réglementation et de supervision de la microfinance. CGAP/le Groupe de la Banque mondiale, Washington, D.C. 20433 Etats-Unis.
40. Direction de la réglementation et de la supervision des systèmes financiers décentralisés DRS/SFD. (2008). Loi N°2008-47 du 03 septembre 2008 portant réglementation des systèmes financiers décentralisés (SFD) au Sénégal. <https://drs-sfd.gouv.sn/sitedrs/index.php/2017/12/26/loi-2008-47/>
41. Direction de la réglementation et de la supervision des systèmes financiers décentralisés (DRS/SFD). (2019). Note sur la situation des SFD, trimestre 1 et 2. <https://drs-sfd.gouv.sn/sitedrs/wp-content/uploads/2019/06/Note-sur-la-situation-des-SFD-au-1er-trimestre-2019.pdf>
42. Direction de la réglementation et de la supervision des systèmes financiers décentralisés (DRS/SFD). (2018). note sur la situation des

- SFD, (trimestres 1 ; 2 ; 3 et 4). <https://drs-sfd.gouv.sn/sitedrs/wp-content/uploads/2019/06/Note-sur-la-situation-des-SFD-au-1er-trimestre-2019.pdf>
43. FMI. (2006). Indicateurs de solidité financière. Guide d'établissement. <http://www.imf.org>
 44. Loi N°2008-47 du 03 septembre 2008 portant réglementation des systèmes financiers décentralisés (SFD) au Sénégal. <https://drs-sfd.gouv.sn/sitedrs/index.php/2017/12/26/loi-2008-47/>
 45. OCDE. (2010). Renforcer la stabilité financière en améliorant la réglementation. Etudes économiques de l'OCDE, N°2 pp 95-130
 46. SAKHO D. (2004). Viabilité et lutte contre la pauvreté. Rapport publié par le ministère des petites et moyennes entreprises, de l'entrepreneuriat féminin et de la microfinance du Sénégal, www.gtms.sn/IMG/pdf/Rapport_provisoire_VLCP.pdf



ESJ Social Sciences

Décentralisation des politiques éducatives en Côte d'Ivoire : Les effets structurants des motivations politiques sur les résultats de l'action publique locale

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[Doi:10.19044/esj.2021.v17n1p167](https://doi.org/10.19044/esj.2021.v17n1p167)

Submitted: 04 November 2020

Accepted: 16 December 2020

Published: 31 January 2021

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Cite As:

Nahi C.P. (2021). *Décentralisation des politiques éducatives en Côte d'Ivoire : Les effets structurants des motivations politiques sur les résultats de l'action publique locale*. European Scientific Journal, ESJ, 17(1), 167. <https://doi.org/10.19044/esj.2021.v17n1p167>

Résumé

La décentralisation est apparue vers les années 80 en Côte d'Ivoire au moment de la diminution des ressources de l'État et des restrictions budgétaires imposées par le FMI. Au nombre des solutions envisagées pour juguler la conjoncture économique, il a été envisagé le transfert d'importantes prérogatives de l'Etat central vers les collectivités territoriales parmi lesquelles figurent le service public de l'enseignement. Si la décentralisation des politiques éducatives a été conçue à l'origine pour contribuer à l'efficacité de l'action publique en la rapprochant du citoyen, ses résultats semblent de plus en plus mitigés. Pour rendre compte de l'inefficacité du processus, la crise économique a été majoritairement mobilisée comme principal facteur explicatif. Bien que n'évadant pas la pertinence et la valeur heuristique de cet argument, ce travail s'intéresse quant à lui aux logiques propres des acteurs, piste qui semble n'avoir pas été suffisamment explorée. En d'autres termes, l'étude soutient que les politiques éducatives locales sont inefficaces parce qu'elles sont structurées par les intérêts matériels et positionnels des décideurs liés aux enjeux électoraux.

Mots clés : Crise économique, décentralisation, service public de l'enseignement, agenda, processus décisionnel, motivations électoralistes

Decentralisation of Education Policies in Côte d'Ivoire: The Structuring Effects of Political Motivations on the Results of Public Action

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Abstract

The decentralization emerged in the 1980s in Côte d'Ivoire at a time of declining state resources and budgetary restrictions imposed by the IMF. Among the solutions envisaged to curb the economic situation, the transfer of important prerogatives from the central state to local authorities, including the public education service, was envisaged. Although the decentralisation of education policies was originally designed to contribute to the effectiveness of public action by bringing it closer to the citizen, its results seem increasingly mixed. To account for the inefficiency of the process, the economic crisis has been mobilized as the main explanatory factor. While not evading the relevance and the heuristic value of this argument, this work focuses on the actors' own logics, an avenue that seems to have been insufficiently explored. In other words, the study argues that local education policies are ineffective because they are structured by the material and positional interests of decision-makers linked to electoral issues.

Keywords: Economic crisis, decentralization, public service education, agenda, decision-making process, electoral motivation

Introduction

Le modèle de l'État centralisé qui s'est longtemps imposé en Côte-d'Ivoire, repose d'abord sur l'idée selon laquelle, l'État est seul à même de définir l'intérêt général et d'arbitrer entre celui-ci et les intérêts particuliers (Wodie, 1996). L'État se voit reconnaître un rôle exclusif pour structurer et coordonner les activités de la société. C'est pourquoi, dès l'indépendance du pays en 1960, les pouvoirs publics ivoiriens ont placé l'éducation nationale au rang des priorités en affichant leur volonté politique d'atteindre un taux de scolarisation de 100 % (Proteau, 2002). Pour ce faire, ils ont réservé chaque année, plus de 40 % du budget national à l'enseignement (Hugon, Vimard, & Tapinos, 2003).

Le service public d'éducation et d'enseignement a donc été pensé comme devant être le véhicule majeur de dissémination des valeurs de la

république une et indivisible en renforçant les instruments d'une bonne éducation à la citoyenneté et à l'esprit républicain¹. L'État reste garant du bon fonctionnement du service public national et maître du contenu des programmes, de l'organisation des examens, du contrôle pédagogique, du recrutement et de la nomination des personnels. Cependant, le système éducatif ivoirien a été progressivement confronté à une longue crise (Proteau, 2002) économique et structurelle² consécutive aux faiblesses constatées au niveau de la planification (Semiti, 2006), de la programmation et de l'évaluation. Ainsi, pour comprendre la trajectoire qu'a suivi le système éducatif ivoirien en termes de continuité ou de rupture, la périodisation suivante, peut être avancée : « Dans une première période, de l'indépendance à la fin des années 1980, l'État a été le principal acteur d'une planification scolaire financée sur les fonds de la coopération bilatérale et destinée, au moins en théorie, à étendre et à élargir la scolarisation en opposition aux politiques éducatives coloniales restrictives; dans une seconde période, de la fin des années 1980 à nos jours, (...), les bailleurs de fonds internationaux conditionnent l'aide financière à une restructuration du système éducatif, limitant ainsi l'autonomie d'intervention de l'État dans le domaine scolaire du fait de l'imposition de nouvelles normes (...) » (Lanoue, 2004, p. 85), .

Pour pallier aux effets de cette crise et respecter les exigences des nouvelles conditionnalités des bailleurs, l'État de Côte-d'Ivoire, a inscrit sur son agenda la politique de décentralisation des politiques éducatives. On peut appréhender la décentralisation en éducation comme : « le transfert de responsabilités, en matière de planification, management, financement et allocation des ressources, du gouvernement central vers des unités locales sub-nationales publiques ou privées, ces unités pouvant soit être directement placées sous l'autorité du gouvernement, soit disposer d'une autonomie partielle ou totale (Mons, 2004, p. 42) ». Les motivations de la décentralisation des politiques éducatives à l'instar de celles initiées ailleurs et dans des contextes différents peuvent se résumer en trois catégories (Rey, 2013). *Primo*, elles le sont, pour des raisons politiques en vue d'instaurer une gouvernance participative qui associe les citoyens à leur école. *Secundo*, c'est pour des finalités économiques en vue d'atteindre une plus grande efficience économique et sociale et *tertio* pour améliorer l'efficacité des enseignements

¹ À cet effet, l'article premier de la loi n° 95-696 du 7 septembre 1995 relative à l'Enseignement dispose que : « Le droit à l'éducation est garanti à chaque citoyen afin de lui permettre d'acquérir le savoir, de développer sa personnalité, d'élever son niveau de formation, de s'insérer dans la vie sociale, culturelle et professionnelle et d'exercer sa citoyenneté ».

² La planification n'a pas toujours été respectée en matière de création d'écoles en Côte d'Ivoire de sorte que les estimations correctes des besoins d'éducation, surtout en ce qui se rapporte aux ressources humaines, n'ont pas été effectuées. Les possibilités budgétaires de l'État n'ont pas également été suffisamment prises en compte dans les programmes éducatifs.

en les adaptant aux besoins des élèves. Cependant, s'il est indéniable que la décentralisation des politiques éducatives présente des avantages certains, des retours d'expériences peu positifs commandent de relativiser leur efficacité.

En effet, en Afrique (Marie & Idelman, 2010), de nombreux pays ont opté pour une décentralisation minimale. Cette option qui est caractérisée par un État (Gacha, 2009) généralement concepteur, opérateur et contrôleur du système éducatif se matérialise par des transferts restreints et un processus décisionnel stato-centré. Pourtant, une telle option n'est pas toujours sans conséquence sur le rendement de l'action publique locale. C'est-à-dire que : « là où la supervision et l'appui de l'État sont faibles et où son absence n'est pas compensée par une obligation locale forte de rendre compte, l'inefficacité et la mauvaise gestion qui ont caractérisé la gestion centrale peuvent se reproduire, sinon se multiplier, aux niveaux inférieurs » (Lugaz et al., s. d., p. 140). En effet, si des pays aux caractéristiques très différentes ont adopté dans leur politique pour cette réforme ambitieuse et complexe : « il y a des doutes, cependant, quant à ses objectifs et son impact » (Lugaz et al., s. d., p. 7). En d'autres termes, la décentralisation peut contenir des « dangers » (Prud'homme, 1995) qui peuvent mettre en doute l'idée qu'elle puisse conduire à une allocation plus efficace des ressources. Ce qui explique d'ailleurs que la politique de décentralisation en Côte-d'Ivoire n'ait pas toujours pu atteindre les objectifs³ qui lui ont été assignés. Autrement dit : « la politique de décentralisation actuelle connaît certes des avancées considérables au niveau administratif, politique, institutionnel, territorial et économique, mais reste à un stade embryonnaire en ce qui concerne les réalisations et les transferts de compétences » (Soumahoro, 2015, p. 35). C'est à dire qu'à l'épreuve du terrain, l'on observe qu'il y a un décalage entre l'action publique locale et les aspirations des populations (Adomon, 2015). Les causes de l'inefficacité des politiques éducatives décentralisées ont été diversement abordées. Pour apporter une réponse à cette préoccupation, de nombreuses études ont tenté d'établir une corrélation entre la crise économique (Mel, 2015) et l'ineffectivité (Atta, 2001) des compétences transférées en Côte d'Ivoire. Or, une réflexion sur la décentralisation est indissociable d'une réflexion sur l'organisation des pouvoirs (Dramé, 1998) dans la mesure où elle vient rompre avec le modèle de l'État centralisé, la décentralisation implique une nouvelle distribution des pouvoirs.

C'est pourquoi, la présente étude, veut mettre en exergue un aspect important de l'élucidation de cette problématique qui n'a pas été suffisamment pris en compte par les études antérieures. Elle veut mettre l'accent sur le mode de gestion des deniers publics marqué par la non-transparence (Blundo, 2001),

³ Voir les actes des états généraux de la table ronde de la Décentralisation et du Développement Local. Ministère de l'Administration du Territoire, 2007.

les pratiques clientélistes des élus locaux et son corollaire de mise en œuvre des projets locaux biaisé par des motivations essentiellement électoralistes (Douillet & Robert, 2007). Le poids des motivations politiques peut constituer un obstacle majeur à l'efficacité des politiques décentralisées lorsque dans la prise en charge des compétences transférées, les intérêts personnels et politiques de l'ordre politique prévalent sur ceux des populations locales. Plus précisément, les alternances électorales peuvent avoir un double impact : Elles peuvent agir sur la conduite des politiques et sur la façon dont les protagonistes des politiques publiques modifient leur implication en fonction des échéances électorales à venir. Ce travail est essentiellement basé sur la théorie économique de la démocratie développée par Anthony Downs (Downs, 2013), qui part de l'idée que la motivation principale des élus consiste à profiter des avantages personnels que peuvent leur conférer les fonctions publiques en termes de revenu, de prestige et de pouvoir. Autrement dit, c'est la recherche du succès électoral qui explique pourquoi des élus vont s'engager pour la mise en place de politiques publiques. L'approche conceptuelle basée sur les idées, des intérêts et des institutions « Trois I » (Palier & Surel, 2005) a contribué à opérationnaliser l'orientation théorique. L'enquête et la collecte des données de terrain se sont déroulées dans la commune de Cocody située dans le district d'Abidjan.

La politisation des politiques éducatives locales

Le transfert des pouvoirs de gestion et de décision à des acteurs plus proches des réalités où s'expriment les besoins des communautés est le principe fondamental qui gouverne toute politique de décentralisation. C'est dans cette optique que l'État ivoirien a adopté pour le principe du transfert de certaines compétences aux collectivités territoriales en matière d'éducation⁴. Cependant, le choix de la décentralisation minimale fait que l'État demeure encore la pièce maîtresse de ces politiques⁵. En effet, il apparaît que, dans l'exercice des compétences transférées, les motivations politiques et électoralistes (Maillard, s. d.), structurent significativement les politiques éducatives locales. D'une part, le gouvernement central semble réticent à partager ses prérogatives avec les pouvoirs locaux et rechigne dans bien des cas, à décentraliser certaines prérogatives aux structures régionales et locales.

D'autre part, ce manque de volonté politique entraîne une insuffisance de l'encadrement juridique du processus de transfert des compétences qui finit par poser problème dans l'appropriation des compétences transférées par les

⁴ Ce transfert de compétence s'opère entre autre par la loi n° 2003-208 du 7 juillet 2003 portant transfert et répartition de compétences de l'État aux Collectivités territoriales.

⁵ Loi n° 95-696 du 07 Septembre 1995 relative à l'Enseignement stipule en son article premier que : « L'éducation est l'une des priorités de l'État. Elle constitue le service public de l'Enseignement ».

acteurs locaux en ce qui concerne leur compréhension des textes (Ministère de l'Administration du Territoire a organisé les & États Généraux de la Décentralisation et du Développement Local, 2007). *In fine*, cette absence de clarté favorise une instrumentalisation des compétences transférées à des fins électoralistes par les élus locaux.

Une autonomie réduite par un cadre juridique contraignant

D'une manière générale, la décentralisation se définit comme le processus par lequel le pouvoir central transfère certaines de ses prérogatives au profit de structures locales. Il s'agit, en d'autres termes, d'une technique de gestion administrative par laquelle l'État transfère des postes d'autorité, des compétences et des capacités à des organes relativement autonomes (Greffé, 2005). Ainsi, la décentralisation peut être assimilée à des situations, des modèles et des processus variés en fonction des motivations politiques de chaque pays. En Côte d'Ivoire, la décentralisation n'apparaît que vers les années 80 à la faveur de la crise économique (Adiko, 2003). En fait, la découverte de l'importance des acteurs à l'échelle locale n'intervient qu'au moment de la diminution des ressources de l'État, du problème du règlement de la dette extérieure et des restrictions budgétaires imposées par le FMI (Atta & Gobe, 2013). La décentralisation territoriale (Gacha, 2009) qui se rapporte à l'étude, bien qu'ayant été prévu par l'article 68 de la constitution du 3 novembre 1960, n'est réellement intervenue que vingt ans après⁶. C'est-à-dire qu'il faut attendre, les lois n° 80-1180 sur l'organisation municipale, n° 80-1181 sur le régime électoral, n° 80-1182 sur la création de la ville d'Abidjan du 17 octobre 1980 pour assister à la phase de démarrage effectif de l'opération de communalisation avec l'organisation, à l'échelle nationale, des premières élections municipales en 1980.

Depuis cette date, le processus a évolué avec la création de régions décentralisées⁷ et de districts⁸ autonomes. Dans la forme, le fonctionnement et l'organisation de l'administration instituée ont été soumis à une double subordination : juridique et politique (Mambo, 2009). Cependant, en Côte d'Ivoire, la mise en œuvre de la bureaucratie n'a pas nécessairement obéi aux principes de l'idéal type Wébérien. Par conséquent, le procédé technique utilisé pour l'organisation de l'administration a généralement pris une forme

⁶ Cette décentralisation a connu deux principaux moments : la phase d'expérimentation et celle de consolidation. La phase d'expérimentation débute avec la loi de la loi n° 78-07 du 09 janvier 1978 portant création, sous un régime unique, de 26 nouvelles communes de plein exercice.

⁷ Le pays compte aujourd'hui trente et une (31) collectivités territoriales régionales.

⁸ La loi découpe formellement le territoire national en douze (12) Districts, circonscriptions administratives, et deux (02) Districts Autonomes que sont Abidjan et Yamoussoukro. Seuls les deux districts autonomes sont présentement fonctionnels.

plus « autoritaire »⁹. En ce qui concerne le second aspect, c'est-à-dire la subordination politique, elle s'observe à travers le cadre juridique et le mode d'organisation.

Dans le premier cas, au plan juridique, le critère principal de l'État a été celui de l'exercice de la souveraineté, c'est-à-dire un pouvoir inconditionné faisant du pouvoir central, la source principale de décisions, dont tous les autres pouvoirs dérivent. Or, en Côte d'Ivoire, comme dans de nombreux africains, l'État, le politique, le peuple sont intentionnellement indifférenciés. De sorte que, le principe hiérarchique qui est la clef de voûte et l'élément central de l'organisation bureaucratique en ce sens qu'il permet de garantir la subordination et la soumission de l'administration d'État aux orientations souhaitées¹⁰ par les autorités politiques légitimes n'a servi qu'à accentuer la centralisation. Autrement dit, contrairement au schéma classique de subordination politique, en Côte d'Ivoire : « La transplantation de l'administration publique française dans les États d'Afrique noire francophone en général et en Côte d'Ivoire en particulier s'est faite de manière imparfaite, la dose d'autonomie ayant été complètement vidée ou presque. L'administration est presque entièrement subordonnée aux organes politiques, ne bénéficiant que d'une autonomie particulièrement faible » (Degni Segui Rene, 2013, p. 21). Ce processus est le résultat de « hyper-présidentialisme » (Nahi, 2018) que les différentes constitutions ivoiriennes ont consacré. Une sorte de « dictature constitutionnelle » qui concentre tous les pouvoirs aux mains du chef de l'État et de l'Exécutif en sa qualité de chef de l'administration. Ce qui fait qu'au niveau des collectivités territoriales, les gouvernements successifs ivoiriens même quand ils décentralisent les fonctions, ils retiennent souvent à leur niveau, les rôles politiques les plus importants et les rôles de supervision. Or, dans les rapports entre les collectivités décentralisées et le pouvoir central, il est constant que le rapport n'est pas d'ordre hiérarchique et qu'il devrait se réduire à une simple surveillance ou supervision (Caillosse, 1988). À l'opposé d'une telle vision, les procédés de contrôle utilisés en Côte d'Ivoire, sont plutôt de nature à affaiblir l'autonomie des collectivités et à renforcer leur dépendance vis-à-vis de l'exécutif. Dans les faits, nous sommes passés d'un contrôle politique plus subtile avec « le contrôle d'opportunité » et celui de la « tutelle-conseil »¹¹ qui faisait passer la collectivité locale « comme une majeure non émancipée à qui l'État doit donner : assistance, conseil et soutien » (Dégni-Ségui, 2013, p. 99) à une véritable subordination politique. En d'autres termes, le législateur

⁹ L'expression est du professeur Degni Segui.

¹⁰ La hiérarchie permet de réaliser l'unité de commandement au profit du sommet, dont les ordres sont répercutés et exécutés fidèlement en suivant les lignes de la hiérarchie.

¹¹ La tutelle conseil est un ajout du législateur ivoirien à la tutelle classique héritée du droit français.

ivoirien¹² a désormais fait du contrôle a priori la règle et le contrôle a posteriori l'exception au terme de l'article 44 de la loi sur l'orientation de l'organisation générale de l'administration de 2014. Avec cette nouvelle loi, nous sommes en face d'une forme déguisée de contrôle hiérarchique qui soumet les collectivités territoriales à une subordination politique.

En fin de compte, si la décentralisation vise formellement une gestion autonome des compétences transférées aux collectivités, il apparaît clairement qu'au vu du cadre institutionnel et juridique, qu'il subsiste encore une méfiance du pouvoir central. Et cette méfiance se révèle à travers le cadre juridique et institutionnel des politiques éducatives locales. En Côte d'Ivoire, la décentralisation des politiques éducatives est prévue par la constitution¹³ qui dispose que les collectivités publiques assurent l'éducation en créant des conditions favorables à cette éducation. Cette disposition constitutionnelle est renforcée par la loi n°2003-208 du 07 juillet 2003 portant transfert et répartition de compétences de l'Etat aux collectivités territoriales qui fixent les compétences suivantes transférées en matière d'enseignement et de formation professionnelle à la ville :

- L'élaboration, la mise en œuvre et le suivi des plans urbains de développement des enseignements et de la formation professionnelle en harmonie avec les programmes nationaux
- La construction et la gestion des écoles primaires, maternelles, des crèches et jardins d'enfants, des institutions d'éducation féminine et des centres d'apprentissage en harmonie avec la carte scolaire
- L'Alphabétisation avec le plan d'action national

Le constat avec ces compétences transférées, c'est l'absence du principe de libre administration car les collectivités territoriales ont une compétence liée en la matière. Leurs actions doivent être nécessairement arrimées aux politiques nationales en matière d'éducation au risque de ne pas être acceptées par la tutelle.

À côté de ces compétences, une autre forme de décentralisation existe à travers l'existence des comités de gestion des établissements scolaires (COGES)¹⁴. Ces comités créés à la faveur de la loi de septembre 1995 relative

¹² Article 44 de la loi sur l'orientation de l'organisation générale de l'administration territoriale de 2014.

¹³ Article 10, alinéa 2 de la constitution de novembre 2016.

¹⁴ Les COGES sont régis par deux textes le Décret n° 2012-488 du 7 juin 2012 portant attributions, organisation et fonctionnement des comités de gestion des établissements scolaires publics, en abrégé coges) du 7 juin 2012 et l'Arrêté ministériel N°80/MEN/CAB du 8 août 2002

à l'Enseignement¹⁵, sont chargés de veiller à la bonne marche de l'établissement en lui confiant le fonctionnement et la gestion¹⁶ des activités socio-éducatives, pédagogiques, financières et de l'entretien de l'école. Cette structure regroupe l'ensemble de la communauté éducative ainsi que des représentants des intérêts publics, des activités économiques, culturelles et sociales qui constituent l'environnement de l'établissement. En d'autres termes, à travers les COGES, l'Etat vise l'implication de la communauté et des populations bénéficiaires dans la gestion des écoles. Si les élus des collectivités territoriales en assurent la présidence depuis 2012, ces comités font l'objet dans les faits d'un contrôle hiérarchique de la part du ministre de l'éducation nationale¹⁷. La présence des collectivités territoriales au sein de ces comités n'a qu'une valeur symbolique.

La rationalité limitée du processus décisionnel dans les politiques éducatives

Le processus décisionnel devrait être essentiellement structuré par la prise en compte des besoins et des nécessités des administrés. Cependant, les contraintes liées aux impératifs des politiques nationales et les motivations et les intérêts positionnels et matériels du maire qui est l'acteur central du processus se présentent comme des facteurs lourds constituant un obstacle à la rationalité sociale des décisions (Balme & Brouard, 2005). À côté de ces deux facteurs, l'influence des groupes d'intérêt contribue également à éloigner les administrés de la prise de décision.

Le poids des motivations électoralistes dans la mise sur agenda

L'idée que l'État ou les collectivités apporteraient des solutions à des problèmes économiques et sociaux en agissant au nom de l'intérêt général par la rationalité de son action est une fausse évidence que l'analyse des politiques publiques tente de déconstruire. En effet, de nombreux travaux ont permis par leurs conclusions, de créer la rupture en mettant en cause le naturalisme des faits sociaux et la prétendue rationalité des enjeux politiques. A la vérité, les

¹⁵ LOI n° 95-696 du 7 septembre 1995 relative à l'Enseignement. Article 8 :

¹⁶ Le COGES a pour mission de contribuer à la promotion de l'établissement où il siège et d'y créer les conditions d'un meilleur fonctionnement en y favorisant son intégration dans le milieu par un appui aux activités socioéducatives et pédagogiques. À cette fin, le COGES est chargé : créer les meilleures conditions de fonctionnement de l'établissement. À ce titre, il doit aider à entretenir couramment les bâtiments et les équipements et aide à sauvegarder le patrimoine et l'environnement. Au niveau des élèves, il doit contribuer et œuvre pour la promotion de l'hygiène et la santé à l'école avec l'implantation et à la promotion des cantines scolaires. Au plan financier, le COGES recouvre et gère toutes les ressources financières de l'établissement autres que le budget de l'Etat.

¹⁷ À travers la direction de l'animation, de la promotion et du suivi des COGES (DAPS-COGES), représentant du ministère de l'éducation national auprès des COGES.

politiques publiques ne sont pas le résultat d'un processus linéaire et empreint d'objectivité dans la mesure où, en amont de celles-ci, se trouve toute une problématisation qui conditionne les prises de décisions. Ce qui fait dire à C. W Anderson « qu'élaborer une politique ne signifie pas uniquement résoudre des problèmes, cela signifie également construire des problèmes » (Anderson C. W., 1988). C'est-à-dire que la décision est le résultat d'une confrontation et une articulation de valeurs et des représentations portées par des acteurs qui poursuivent des finalités multiples, non nécessairement réductibles à la résolution du problème.

Ainsi, il ne suffit pas simplement qu'un problème existe pour que l'action publique se mette en œuvre, car l'essentiel se situe dans l'interprétation qui en est faite. En somme, avant de le réguler, il faut que le domaine de l'action publique concerné soit construit et que les enjeux soient sélectionnés et configurés. En somme, l'interprétation revêt une importance capitale parce que les autorités ne peuvent pas prendre en compte tous les problèmes publics pour la simple raison que : « L'attention publique est une ressource rare, dont l'allocation est réglée par la compétition dans un système d'arènes publiques » (Hassenteufel, 2011, p. 51).

Les autorités s'adonnent donc à une sorte de catégorisation, de sélection des dimensions pertinentes des faits sociaux. Cette phase de sélection, au cours de laquelle les pouvoirs publics décident de porter leur attention sur un problème particulier au détriment d'un autre, correspond à la phase de formulation et de mise sur agenda public (Anderson, 1975). On définit l'agenda comme étant : « l'ensemble des problèmes faisant l'objet d'un traitement, sous une forme ou une autre, de la part des autorités publiques » (Philippe Garraud, s. d., p. 27).

En tout état de cause, aborder « l'action publique à partir d'une perspective d'agenda permet de mettre en lumière des logiques de pouvoir, les obstacles culturels, et les freins institutionnels qui empêchent certains sujets d'être pris en compte par les autorités publique » (Kübler & Maillard, 2009). Dans les collectivités territoriales en Côte d'Ivoire, la faiblesse de l'autonomie institutionnelle que nous avons relevé dans la loi n°2003-208 du 07 juillet 2003 portant transfert et répartition de compétences de l'Etat aux collectivités territoriales en matière d'enseignement et de formation professionnelle à la ville constitue le premier obstacle dans la mise sur agenda. En effet, qu'il s'agisse des plans urbains de développement des enseignements, de la construction et de la gestion des écoles et de l'alphabétisation, leur mise en œuvre et leur réalisation sont soumises au respect de l'architecture de la politique nationale. Pourtant, la décentralisation, doit permettre aux collectivités locales de disposer d'une certaine liberté de décision pour définir les normes de leurs actions et les modalités de leurs interventions. D'ailleurs, la gestion des écoles qu'évoque la loi n'est effective ni au plan organique, ni

au plan matériel. En effet, depuis 1995, les écoles sont gérées par les COGES sous l'autorité du ministère de l'éducation nationale et les élus n'assurent que la présidence des assemblées générales avec des pouvoirs limités¹⁸.

Deux situations limitent l'influence des communes sur les COGES. *Primo*, sur plus de 8 000 COGES (Ministère de l'éducation nationale de la République de Côte d'Ivoire, 2016) au niveau primaire, environ 3 000 reçoivent des subventions du ministère de l'éducation nationale qui exercent un contrôle sur leurs fonctionnement. Au niveau secondaire, ils ne sont pas subventionnés mais reçoivent une quote-part des frais d'inscription en ligne des élèves¹⁹. *Secundo*, les ménages sont, de loin, les principaux financeurs des COGES, avec 92% des activités au niveau secondaire et 73% au niveau primaire (Ministère de l'éducation nationale de la République de Côte d'Ivoire, 2016). En somme, il n'y a que dans certains cas que des conseils régionaux et mairies subventionnent également les COGES. Les subventions n'étant pas des obligations légales parce que laissées à la discrétion des organes dirigeants des collectivités, le choix des COGES à financer n'est pas toujours un choix naturel et objectif. Si dans l'ensemble, la mairie a de faibles chances d'orienter la mise sur agenda des activités des COGES qui sont assujetties aux décisions du ministère et de l'assemblée générale, ce n'est pas toujours le cas en ce qui concerne, ceux qui bénéficient de ses subventions²⁰.

Si la mise sur agenda est dans un premier temps structuré par le pouvoir central, dans un deuxième temps, elle est également sous l'emprise des intérêts électoralistes et matériels des élus locaux. Autrement dit, même si une politique éducative locale répond aux exigences de la politique nationale, elle ne fera pas systématiquement l'objet d'une attention particulière de la part du conseil municipal.

À Cocody, l'acteur qui détermine de façon systématique le contenu de l'agenda public et les orientations de l'action publique est le maire. Ainsi, dans la phase de formulation et de mise sur agenda public des politiques éducatives, les logiques de pouvoir qui structurent les motivations de celui-ci constituent des freins à une prise en compte transparente des problèmes publics. Les politiques éducatives constituent en réalité des ressources importantes de la compétition politique (Douillet & Robert, 2007) que les autorités politiques vont contrôler à travers une main mise sur le processus de décision. En d'autres termes, les politiques éducatives qu'il propose ne sont pas

¹⁸ Selon l'article 10 du décret sur les COGES : Le président dirige les débats de l'assemblée générale et préside l'assemblée électorale des directeurs d'école d'un groupe scolaire pour la désignation du vice-président de l'assemblée générale.

¹⁹ Celle-ci leur est retournée sans passer par le budget. Ces subventions sont complétées par des contributions des parents et dans certains cas d'ONG, entreprises privées ou individus.

²⁰ Nous n'avons pas obtenu la liste des COGES qui sont bénéficiaires des subventions de la mairie pour des raisons qui ne nous ont pas été communiquées.

nécessairement le résultat de la volonté des administrés et de l'intérêt général. À travers le contrôle a priori qui est instauré, le processus est loin de promouvoir la démocratie locale et la gestion participative qui sont des modalités importantes de la décentralisation.

Comme nous l'avons souligné précédemment, la préparation d'un projet et la construction d'une politique éducative, est l'affaire exclusive du maire. Si formellement le maire doit recueillir l'avis motivé de la commission des affaires économiques, financières et domaniales et celle des affaires sociales et culturelles, il est quasiment impossible dans les faits que ces commissions donnent un avis défavorable à un projet initié par le maire. Ces commissions fonctionnent exactement comme des caisses d'enregistrement. Une fois la phase de l'examen en commission achevée, le dossier est acheminé sur la table du conseil municipal pour une délibération, un vote sur la base des informations et avis des commissions²¹. Il s'agit en réalité, d'une formalité car il n'y a véritablement pas de débat. La volonté du maire ainsi traduite en projet adopté par le conseil municipal est transmise au préfet d'Abidjan²².

La loi²³ et les principes de bonne gouvernance enjoignent le maire et son conseil municipal à organiser un vote public du budget afférent au projet de telle sorte que tout habitant de la localité puisse assister à la discussion et au vote du budget. Ce citoyen peut même prendre connaissance des documents budgétaires au siège de la collectivité²⁴. Or, dans le cadre de notre étude, il nous a été impossible de consulter lesdits documents et selon les informations que nous avons recueillies sur place, le contribuable n'est pas invité à suivre les débats et le vote du budget qui s'en suit. L'une des manifestations de la rationalité limitée du processus décisionnel est le non-respect du contenu de la carte scolaire qui sert à planifier les besoins futurs d'éducation, au niveau local et les moyens à mettre en œuvre pour satisfaire ces besoins²⁵. L'exemple du village de Djorogobité²⁶, est symptomatique de ce dysfonctionnement²⁷.

²¹ Généralement, cette phase, la préparation du projet par le Maire, son examen par les Commissions et le vote du Conseil municipal a lieu entre le 16 Juillet et le 30 Septembre de l'année civile.

²² Le Préfet reçoit en fait les procès-verbaux des séances du Conseil et sa délibération en 12 exemplaires, dans un délai de 15 jours francs à compter de la date de la réunion.

²³ La loi N°2012-1128 du 13 Décembre 2012 portant organisation des collectivités territoriales dispose en son art.32 : « Les réunions des Conseils sont publiques », sauf dans des cas précisés par la loi.

²⁴ Article 35 de la loi N°2012-1128 du 13 Décembre 2012 déjà cité.

²⁵ La loi portant transfert de compétences aux collectivités locales fait obligation aux communes de se doter de cet instrument majeur pour aiguiller la construction et la réhabilitation et l'équipement des établissements scolaires.

²⁶ Ce village est situé non loin du nouveau CHU d'Angré.

²⁷ Inscrite comme zone prioritaire devant bénéficier d'une école dans la carte scolaire, ce village n'a pu bénéficier de celle-ci qu'en 2018 grâce à la multinationale Orange dans le cadre de la Responsabilité Sociale d'Entreprise (RSE).

Ainsi, ce sont moins les propriétés intrinsèques d'un problème par exemple sa gravité ou son urgence, ou la mobilisation autour de lui, les ressources de ceux qui le portent et le relaient, les réponses disponibles en termes d'action publique et son adéquation avec des valeurs dominantes dans une société donnée et à un moment donné qui expliquent sa mise sur agenda par des autorités publiques (Hassenteufel, 2010). À côté des dysfonctionnements que nous venons d'énumérer, le processus décisionnel est également affecté par le poids des acteurs non étatiques.

L'influence des acteurs non étatiques

Au plan local, les motivations électoralistes des élus entraînent une cohabitation de la vision stato-centré et celle de la vision pluraliste qui prend en compte le rôle et l'influence des acteurs extérieurs (Chabanet & Guigni, s. d.). Ces acteurs qui constituent des groupes d'intérêts²⁸ peuvent être constitués des groupes sociaux et économiques (entreprises) constitués d'acteurs intervenants dans la mise en œuvre concrète de la politique publique ou des groupes de pressions qui ont la capacité de participer à la construction d'un problème public et susciter sa mise sur agenda. Ces groupes sociaux sont déterminants parce qu'ils peuvent donner des consignes de vote en faveur d'un candidat (Dupuy & Halpern, s. d.). La dimension électorale joue pour deux raisons : D'une part, parce que le groupe représenté forme une clientèle électorale constituée de ressources militantes et politiques numériquement importantes et d'autre part, parce qu'il est présumé avoir la capacité d'influencer un grand nombre d'électeurs neutres. Ces groupes sociaux peuvent également prendre la forme de soutien financier d'un groupe d'intérêt à un parti politique. Ce type de soutien se manifeste au niveau du financement des campagnes électorales. À Cocody, dans le cadre de l'action publique éducative, les groupes d'intérêt prennent la forme d'associations de résidents d'un quartier, de syndicats de copropriété, et de comités.

Ces regroupements, formés sur une base volontaire, ont pour but la défense d'une cause, d'un intérêt. Officiellement, il s'agit ici de rapprocher l'école des apprenants en vue de faciliter leur accès et leur maintien dans l'institution mais aussi de permettre aux parents d'encadrer plus aisément leurs

²⁸ On désigne généralement par groupes d'intérêt un ensemble d'acteurs plus ou moins organisés qui cherche à influencer les pouvoirs publics dans un sens favorable aux préoccupations sociales qu'elle prend en charge, sans chercher à en faire partie (ce qui serait le propre de l'administration) ni à exercer ou participer directement à l'exercice du pouvoir politique, contrairement aux partis. Les groupes d'intérêt se distinguent des partis politiques en ce qu'ils, défendent d'une part, des intérêts plus spécifiques (voire sectoriels) et d'autre part, ils ne participent pas directement à la compétition électorale, mais interviennent de façon variée dans la vie politique à travers des protestations, de la production d'expertise, etc.

enfants. À cet effet, ces groupes d'intérêt entrent en négociation avec la municipalité en vue de faire inscrire cette volonté sur l'agenda.

Les premiers groupements sont les COGES que nous avons évoqués dans les développements précédents. Pour beaucoup d'observateurs, ces comités sont des caisses noires qui élèvent des cotisations annexes exorbitantes (Zadi, 2020). En effet, aujourd'hui il est indéniable que l'image : « Des COGES semble être ternie par plusieurs maux, ceux-ci ont pour noms : conflit de compétence entre les différents acteurs, méconnaissance des textes, cotisations aussi bien inopportunes qu'abusives, détournements des fonds collectés, mauvaise gestion caractérisée. Par ailleurs, on assiste à la présence des mêmes personnes dans plusieurs comités de gestion de la localité. (...). Ces dérives entraînent le désintérêt total des parents, des enseignants et des élèves qui se manifeste par l'absence aux réunions, aux activités organisées par les responsables des COGES, la difficulté à justifier les cotisations exigées pour le bon fonctionnement des COGES » (Kei, 2010, p. 42-43). Cependant, face aux dérives constatées, les élus locaux font preuve de passivité dans beaucoup de cas dans la mesure où les assemblées générales sont composées d'importantes entités communautaires dont le suffrage peut faire la différence. Le maire qui préside l'assemblée générale qui est l'organe de décision est celui qui dirige les débats qui autorisent les cotisations exceptionnelles qui créent les polémiques. En d'autres termes, le maire est témoin des charges financières supplémentaires imposées à ses administrés et qu'il peut soulager en subventionnant les comités sur le budget de sa commune. A défaut de cette solution, les élus se rangent derrière les décisions et les manœuvres des COGES. Dans les faits et selon les données de l'enquête, après s'être assuré de la fidélité des représentants des acteurs envers sa personne, le maire accède à leur demande ou ferme les yeux sur leurs agissements. Cette faible implication des élus dans la gestion de l'école avait suscité un séminaire²⁹ en octobre 2013, en vue de réclamer leur implication effective dans la gestion et le fonctionnement des comités de gestion des établissements scolaires (Coges). À cette occasion, le représentant du ministre de l'intérieur : « a instruit les élus à inscrire l'appui des Coges dans leur budget et en faire une priorité » (Jean, 2013). Récemment d'ailleurs, la maire de la commune de Tiassale a tout simplement supprimé les cotisations des parents au profit des COGES et en compensant ce manque à gagner par une subvention (*Éducation/Tiassalé : Le maire met fin aux cotisations Coges | FratMat*, s. d.). Pour l'élu, la commune par cette décision venait soulager les parents d'élèves parce que les frais COGES: « en plus de peser sur le pouvoir d'achat des parents d'élèves, ont montré leur limite au regard de l'état de dégradation de

²⁹ Ce séminaire organisé par le ministère de l'Éducation nationale, à travers le Service national d'animation de promotion et de suivi des Coges (Snaps-Coges).

la plupart des écoles de la commune et surtout de l'absence de transparence dans leur gestion ».

En ce qui concerne le poids des syndicats et les associations, le cas de l'association des habitants de la Cité Joël Dervain (appelé aussi Cité SIR) à Akouédo 6 palmeraie nord illustre parfaitement cette situation. Cette cité inaugurée en 2009 au profit du personnel de la Société Ivoirienne de Raffinage (SIR) a fait la demande d'un groupe scolaire conformément aux exigences de la carte scolaire sans suite jusqu'en 2013. Avec l'inflation de la population de la zone³⁰ à la faveur de la crise post-électorale, les habitants de la cité et ceux des alentours se sont constitués en association pour relancer l'idée de l'école. En 2013, des démarches ont été entreprises auprès des nouvelles autorités municipales qui ont réagi favorablement et cela, en toute urgence³¹, alors même que le Programme Triennal 2013-2015 avait été déjà approuvé.

À côté des groupes de pression, les entreprises constituent également des acteurs importants

Ces unités économiques produisent pour la vente ou distribuent des biens et services moyennant paiement et cela, conformément à des objectifs définis par leur direction. Mais ce n'est qu'à partir du moment où l'État ou une collectivité territoriale fait appel aux entreprises que celles-ci deviennent des acteurs des politiques publiques. Le processus par lequel l'État ou une collectivité territoriale fait appel aux acteurs privés s'appelle, de façon générique, la contractualisation des politiques publiques. La forme la plus usitée est l'appel d'offre. L'appel d'offre est un mode de passation des marchés publics, dans lequel la personne publique choisit l'offre économiquement la plus avantageuse, sur la base de critères objectifs préalablement portés à la connaissance des candidats, et sans négociation avec ceux-ci. Or à Cocody, le choix des entreprises se fait dans des conditions opaques. Aucun agent de la Mairie n'a pu nous décrire de façon précise le mode de passation des marchés avec les entreprises. Tous se sont contentés de nous affirmer que cela relève du pouvoir discrétionnaire du Maire. Ainsi sur la période 2013-2017, ce sont des marchés d'un coût total de sept cent soixante-treize millions huit cent cinquante-trois mille huit cent soixante-onze francs CFA (773.853.871frs CFA) qui ont été concédés à des entreprises exerçant pour la plupart dans le domaine du bâtiment avec des procédures irrégulières. En effet, le rapport 2017 de l'autorité de régulation des marchés publics (ANP) a relevé 7 marchés irréguliers sur 11 audités, soit 64 % des marchés. Cette absence totale de transparence sur la question pourrait s'expliquer que par la recherche d'intérêts matériels et positionnels.

³⁰ Les alentours de la cité ont aussi enregistré une arrivée massive de population.

³¹ La construction de cette école est brandie par le Maire comme son action personnelle au profit des populations sur le site "jevotengoan.com".

Les contraintes liées à la mise œuvre des politiques éducatives

Au niveau de la mise en œuvre, un ensemble de facteurs exerce également une influence sur les politiques publiques. Il s'agit des institutions qui peuvent être définies comme : « Les règles formelles et informelles, les normes, les précédents ainsi que les facteurs organisationnels qui structurent le comportement politique » (Pomey et al., 2010, p. 709). Les institutions se rapportent aux structures gouvernementales c'est-à-dire à la nature du régime et au type d'organisation politique d'un pays. Ainsi, les structures gouvernementales peuvent façonner et entraver de maintes façons le développement et les choix de politiques. Dans le cas de cette étude, le contrôle politique de la mise en œuvre des politiques éducatives par la tutelle restreint les marges de manœuvre de l'organe de décision municipal. Au final, la mise en œuvre de ces politiques est subordonnée aux logiques du pouvoir central et de la majorité présidentielle. Ces logiques se manifestent par une insuffisance des budgets et une faiblesse structurelle.

La faible autonomie financière

L'autonomie financière apparaît comme un corollaire du principe de la libre administration des collectivités locales. En effet, la concrétisation de ce principe de libre administration suppose que les collectivités locales soient dotées de compétences juridiques pour décider de la nature, de la structure et du niveau de leurs ressources et de leurs charges financières, et qu'elles en aient la maîtrise. La faible autonomie financière se manifeste à travers deux situations : la dépendance administrative vis à vis de la comptabilité publique générale et la faiblesse du budget de la commune.

La dépendance financière de l'administration centrale

La loi du 26 décembre 2003 portant régime financier, fiscal et domanial en Côte d'Ivoire ne consacre pas expressément l'autonomie financière des collectivités locales. Néanmoins, ce principe y est sous-jacent. Or à l'instar de l'Etat, les collectivités locales peuvent recourir à l'impôt pour financer leurs dépenses. Et la loi du 26 décembre 2003 portant régime financier, fiscal et domanial des collectivités territoriales en Côte-d'Ivoire cite parmi les ressources des collectivités locales, les recettes fiscales. Toutefois, les collectivités locales en Côte d'Ivoire ne disposent pas d'une autonomie fiscale car, elles n'ont pas le pouvoir de créer un impôt³², d'en déterminer l'assiette, le taux et les modalités de recouvrement. Les ressources

³² En vertu du principe de légalité fiscale, expression juridique du principe du consentement de l'impôt découlant de l'article 14 de la Déclaration des droits de l'Homme et du citoyen, il revient au législateur de fixer le régime de l'impôt local.

fiscales³³ des collectivités locales proviennent donc essentiellement du partage des impôts étatiques, du produit des impôts locaux dont le régime est fixé par le législateur ou encore d'impôts locaux dont elles peuvent déterminer le taux dans les limites déterminées par la loi. Or, il ne peut y avoir : « une libre administration des collectivités locales sans une véritable autonomie fiscale locale, c'est-à-dire sans que les autorités locales puissent décider du niveau de la pression fiscale locale » (Ovono, 2012, p. 6). En effet, l'autonomie fiscale locale présente plusieurs avantages : « D'abord, elle donne un fondement à la démocratie locale en créant un lien entre les citoyens et les collectivités locales. Ensuite, sur le plan économique, le pouvoir fiscal conféré aux collectivités locales leur permet en principe de lier le montant des impôts qu'elles prélèvent à celui des services publics qu'elles offrent, sous le contrôle de l'électeur contribuable » (Ovono, 2012, p. 6) . Au niveau des investissements, des dépenses et les charges le pouvoir de décision de la mairie connaît aussi d'importantes restrictions tenant soit à l'existence de dépenses réglementées ou interdites, soit à l'imposition des dépenses obligatoires. Les opérations de dépenses doivent respecter les principes et règles du droit budgétaire et de la comptabilité publique et celles du code des marchés publics.

À côté de cette restriction, il y a la question liée au contrôle administratif exercé sur les décisions budgétaires des collectivités territoriales. Ce contrôle qui est une exigence constitutionnelle ne devrait pas en principe affecter l'autonomie des collectivités. Cependant, l'instauration d'un contrôle a priori en Côte d'Ivoire n'est pas de nature à garantir le principe de libre administration car il prend souvent la forme d'une autorisation préalable de l'autorité de tutelle. En Côte d'Ivoire, aux termes des articles 18 et 19 de la loi du 26 décembre 2003 portant régime financier, fiscal et domanial des collectivités territoriales, le budget voté par le conseil est transmis par le maire, à l'autorité de tutelle au plus tard dans les quinze jours francs à compter de la date de vote³⁴.

Ainsi, lorsque le maire fait endosser son projet par le conseil municipal, le dossier est envoyé au préfet. Lorsqu'il accuse réception du

³³ Dans le premier cas, le commun est bénéficiaire du partage du produit d'un impôt national en recevant les quotes-parts d'impôts nationaux sont versées aux collectivités locales. Dans le second cas, les collectivités locales perçoivent l'intégralité du produit d'un impôt prélevé sur une matière imposable locale, mais sans disposer du pouvoir d'en déterminer le taux.

³⁴ L'article 19 donne la possibilité à l'autorité de tutelle d'effectuer d'office et sans renvoi du budget, les corrections de forme.

dossier, le préfet³⁵ d'Abidjan à son tour l'examine³⁶ puis adresse une copie du dossier au ministre de l'intérieur par le truchement du directeur général de la décentralisation et du développement local.

Le préfet saisit également le ministre chargé de l'économie et des finances via la commission des programmes et budgets pour avis. En définitive, le dossier atterrit sur la table du ministre en charge de l'administration du territoire qui décide en dernier ressort. Cette décision du ministre intervient sous la forme d'un arrêté³⁷. On pourrait reconstituer schématiquement le processus de la prise de décision selon les données du tableau suivant.

Tableau 1 : Tableau décrivant les étapes et les acteurs étatiques intervenant dans la décision

Étapes	Acteurs étatiques impliqués dans le contrôle de tutelle a priori
1	Préparation du projet par le Maire
2	Examen par les Commissions
3	Délibération du Conseil municipal et fixation de la priorité de l'opération
4	Transmission au Préfet
5	Visa du Préfet
6	Transmission au directeur de la décentralisation et du développement local
7	Avis de la Commission des programmes et des budgets
8	Transmission au Ministre chargé de l'économie
9	Transmission au Ministre du Budget
10	Visa du Ministre chargé de l'Économie
11	Visa du Ministre chargé du Budget
12	Décision finale du Ministre d'État en charge de l'administration du territoire sous la forme d'un arrêté

Finalement, l'on constate qu'au plan financier et institutionnel, le processus est pris en otage par le pouvoir central si bien que les choix effectués relèvent plus d'un calcul rationnel, celui de renforcer la légitimité de la majorité au pouvoir.

C'est pourquoi en dépit des difficultés financières, l'on constate dans certaines situations que les dépenses publiques de transfert sont plus élevées

³⁵ Au terme cette étape, le Préfet peut adopter deux (02) attitudes : soit il renvoie le projet au Maire, soit il l'approuve si celui-ci est conforme aux exigences. Quand le projet est conforme aux exigences, il est transmis au Ministre auprès du 1er Ministre chargé de l'Économie et des Finances puis au Ministre auprès du 1er Ministre chargé du Budget qui tous deux apposent leur visa.

³⁶ Il examine seulement la conformité des documents aux exigences légales.

³⁷ Par exemple les projets éducatifs initiés sous l'empire du Programme Triennal 2015-2017, ont été autorisés par le Ministre de l'intérieur à travers l'arrêté n°113/memis/dgddl/dtef/sdbf du 15 Avril 2015 portant approbation et règlement du Programme Triennal 2015-2017 de la Commune de Cocody signé du Ministre de l'Intérieur de l'époque.

que les années d'élections. Mieux, pour aller dans le sens de Maillard, « la proximité d'une échéance peut conduire des gouvernements à hâter la mise en œuvre d'un dispositif enfin d'en retirer des bénéfices politiques » (Kübler & Maillard, 2009, p. 48-49). Une telle situation s'observe avec les investissements effectués avec les programmes triennaux de la mairie dans la construction des établissements scolaires. Les deux (02) programmes triennaux 2013- 2014- 2015³⁸ et le Programme Triennal 2015- 2016- 2017³⁹ ont enregistré la construction et la réhabilitation d'école qui ont servi d'arguments de campagne au maire sortant. C'est d'ailleurs cette situation que la ministre de l'éducation nationale a éloquemment caricaturé à l'occasion d'un meeting qu'elle animait le mardi 9 octobre 2018 à Tiébissou en faveur des candidats de son groupement politique le RHDP. S'adressant à la foule, elle leur a recommandé de demander ceci aux candidats de l'opposition qui demandaient leurs suffrages :

« Tout ce que tu veux faire là c'est bien mais est ce que toi tu connais le premier ministre Gon Coulibaly ? Tu lui demandes, oui mon frère, tout ce que tu veux faire là c'est bien mais est-ce que toi là tu peux rencontrer le président de la République Alassane Ouattara ? Faut lui demander mais toi c'est le président qui t'envoie ici pour venir travailler pour nous ou c'est le premier ministre ? S'il ne répond pas à la question, ne l'écoutez plus parce que c'est le maire qui vient mettre en œuvre la politique sociale du gouvernement, c'est le maire qui vient mettre en place le programme de développement du gouvernement, le maire là, même le budget du maire c'est le gouvernement qui lui donne, tous les projets que le maire réalise c'est le premier ministre et le gouvernement qui lui permettent de faire ça, mais si toi le gouvernement t'as pas choisi, le premier ministre t'a pas choisi et le président te connaît pas, tu peux faire quoi pour les gens ? Rien ».

1.

³⁸ Le Programme Triennal 2013-2015, comporte douze (12) actions estimées à trois cents trente et un million de francs CFA (331.000.000 Frs CFA)³⁸ et vingt-six (26) opérations évaluées à un milliard sept cents cinquante-cinq millions de francs CFA (1.755.000.000 Frs CFA) pour la période indiquée. Ce programme est exclusivement financé sur fonds propre de la commune.

³⁹ Le Programme Triennal 2015-2017, comporte dix-huit (18) actions estimées à un milliard six-cents vingt millions de francs Cfa (1.620.000.000frs Cfa) dont cent quatre-vingts quinze millions de francs Cfa (195.000.000 frs Cfa) affectés aux prises en charge scolaire et universitaire et quarante-six (46) opérations d'un coût total de trois milliards deux-cents trente-huit millions cinq cents mille francs Cfa (3.238.500.000 frs Cfa).

La faible autonomie institutionnelle et financière débouche sur des difficultés financières des administrations en charge des politiques éducatives.

La faiblesse des budgets de la mairie

L'administration centrale constitue la source principale de financement⁴⁰ de l'éducation en Côte-d'Ivoire quand on considère l'ensemble des administrations publiques. Le financement par le programme présidentiel d'urgence (PPU)⁴¹ qui intervient à partir de 2012 se situe à un niveau important des dépenses de l'administration centrale. En ce qui concerne les collectivités territoriales (Conseils généraux et Mairie), leur apport est dérisoire. Sur la période (2006-2014) (Ministère de l'éducation nationale de la République de Côte d'Ivoire, 2016), par exemple, elles n'ont exécuté au plus que 1% du total des dépenses d'éducation des administrations publiques sur la période. En dépit de cette prépondérance de l'administration centrale dans le financement de l'éducation, les collectivités territoriales telle que la mairie de Cocody éprouvent dans leur ensemble des problèmes de trésorerie (N'tchuvi & Aloko, 2018). Afin de les appuyer dans la prise en charge de leur fonctionnement et dans la réalisation de leurs investissements, l'Etat alloue annuellement aux collectivités, des dotations⁴² inscrites au budget de l'Etat comme le prévoit la loi n° 2003-489 du 26 décembre 2003 portant régime financier, fiscal et domanial des collectivités territoriales. Des subventions⁴³ sont allouées à l'ensemble des collectivités par l'Etat, à l'exception du District Autonome d'Abidjan et de ses dix(10) principales communes qui ne peuvent en bénéficier qu'exceptionnellement et pour des opérations spécifiques, compte tenu de leur grande capacité de mobilisation de ressources propres et de l'importance de la quote-part d'impôts partagés qui leur est reversée. Elles constituent une contribution du budget de l'Etat à certaines collectivités qui en bénéficient en plus des ressources propres collectées localement et leur quote-part des impôts partagés. La mairie de Cocody n'en bénéficie

⁴⁰ Les financeurs, qui sont les unités qui financent le système éducatif, divisées en trois grands groupes : les administrations publiques (centrale, régionales et locales), le secteur privé (ménages, sociétés et institutions à but non-lucratif comme les ONG locales) et le Reste du monde (prêts et dons des bailleurs et partenaires techniques, ONG internationales). Les producteurs, qui sont les unités qui produisent les services éducatifs, divisées en trois grands groupes : les établissements d'enseignement publics, les établissements d'enseignement privés, et les entités administratives.

⁴¹ Le Programme Présidentiel d'Urgence est une cause importante de l'augmentation des dépenses en éducation. Il s'évalue entre 36 900 et 46 500 millions de FCFA depuis 2012.

⁴² Ces subventions sont octroyées sur la base d'un ensemble de critères dont la population et la spécificité de la commune.

⁴³ Ainsi, pour la gestion 2017, ce sont cent quatre-vingt-sept (187) Communes, trente-et-une (31) régions, le District Autonome de Yamoussoukro et, à titre exceptionnel, le District Autonome d'Abidjan qui ont bénéficié de subventions de l'Etat.

qu'exceptionnellement sur la base des éléments que nous avons évoqué dans les développements précédents⁴⁴. Ce dont bénéficie la commune de Cocody à l'instar des autres communes d'Abidjan, c'est sa quote-part des impôts partagés. Cependant, le partage de ces impôts entre l'Etat et les collectivités territoriales, a consisté pour l'Etat, jusqu'à l'exercice budgétaire 2015, à se dessaisir de la quote-part devant revenir aux collectivités sans la comptabiliser dans la loi de finances. Cette situation a changé depuis la loi de finances 2016 car la quote-part d'impôts partagés à reverser aux collectivités territoriales est désormais inscrite dans le budget de l'Etat. Ce changement vient alourdir les procédures administratives des collectivités territoriales pour rentrer en possession de leurs budgets. Cette situation pose la question de la dépendance de la mairie envers l'État avec le mécanisme avec l'unicité des caisses qui freine la réalisation à temps des opérations éducatives dans la mesure où la mairie doit indéfiniment attendre que l'État lui reverse sa part⁴⁵.

À côté de cette situation préjudiciable, l'autre constat qui se dégage comme pour l'ensemble des communes d'ailleurs, les ressources financières bien qu'importantes comparativement à la majorité des communes de Côte-d'Ivoire demeurent insuffisantes (Assepo, 2002) à l'échelle de Cocody. La modicité des montants reversés à la commune constitue un obstacle au financement idoine de la politique éducative. Les sources de financement de la commune de Cocody sont diverses. Ils sont constitués entre autres des recettes fiscales, des recettes des prestations de service, des revenus du patrimoine, des aides de l'État, des fonds de concours, des aides extérieures. Les recettes fiscales sont constituées du produit des impôts rétrocédés et des taxes fiscales. Quant aux recettes de prestation de services, ces recettes sont constituées des taxes rémunératoires et des redevances. Il s'agit des recettes des services généraux (légalisation de signatures et certifications, délivrance de livrets de famille, etc.), des recettes des services de la commune (autorisation de construire, taxe d'enlèvement des ordures ménagères, services funéraires), des recettes des services culturels (par exemple location de salles.), des recettes des services économiques (par exemple taxe payée par les commerçants sur les marchés).

Les revenus du patrimoine, pour leur part, sont des droits que perçoit la commune en cas d'occupations temporaires de son domaine public. En ce qui concerne les fonds de concours, ce sont des apports financiers provenant de personnes privées ou publiques en vue du financement de certains

⁴⁴Les aides de l'État au budget de la commune qui sont faites sous la forme de dotations. Ce sont des aides que l'État accorde automatiquement à la commune. La plus importante de ces dotations est la dotation générale de fonctionnement (DGF).

⁴⁵ C'est par exemple ce que l'on a observé en 2013, le budget de la commune a été approuvé et signé quasiment en fin d'année. En 2014, il a fallu attendre la fin du 2ème trimestre de l'année pour l'approbation, donc la disponibilité des fonds.

investissements publics. Les aides extérieures sont des transferts financiers en nature ou en numéraire en provenance de l'extérieur, d'autres États, organisations internationales, publiques ou d'organismes privés.

Notons cependant que, dans la pratique, ce sont les impôts et les taxes, donc les recettes fiscales qui constituent des sources de financement propres de la commune de Cocody, celles sur lesquelles elle s'appuie pour mener à bien ses différentes politiques dont la politique éducative. Concernant l'impôt foncier, cet impôt annuel constitue une source importante de revenu dans le contexte de Cocody, vu les opérations immobilières qui y ont cours chaque année. Cependant, seulement 30% sont reversées à la commune de Cocody et 70% à l'État⁴⁶. La clé de répartition de l'impôt synthétique depuis 1994 reste la même à savoir 40% pour la commune et 60% à l'État. Conscient des difficultés liées au principe de l'unité de trésorerie, au rang desquelles l'insuffisance des ressources financières allouées aux communes (Bede, 2017), l'État de Côte-d'Ivoire a prévu des assouplissements au principe. Il s'agit des placements⁴⁷ que les collectivités locales sont autorisées à faire et du dépôt auprès de certains organismes en contre parti d'un intérêt. Ces aménagements sont loin d'avoir régler le problème

Tableau 2 : Tableau récapitulatif des actions éducatives de la Mairie de Cocody entre 2013-2017

Programme triennal	Constructions	Réhabilitations et équipements
2013-2014-2015	Construction d'une école maternelle au quartier Syninfo. Coût de l'opération : 55.000.000frs CFA	Acquisition de mobiliers scolaires pour les Groupes Scolaires 2 Plateaux et Angré. Coût de l'opération : 50.000.000frs CFA
	Construction d'une école primaire à Blockhauss. Coût de l'opération : 50.000.000frs CFA	Construction d'un hangar au Groupe Scolaire Riviera Golf. Coût de l'opération : 15.000.000 frs CFA
2015-2016-2017	Construction d'un établissement pour la petite enfance à Génie 2000 Nord, à Akouédo-extension. Coût de l'opération : 70.000.000frs CFA	Réhabilitation des écoles primaires publiques de la commune (07 écoles au total). Coût de l'opération : 210.000.000frs CFA

⁴⁶ Ces chiffres ont été communiqués par le Dr Albert François Amichia, maire de la commune de Treichville, lors d'une conférence organisée par la Ligue des Enseignants d'Histoire-Géographie de Côte-d'Ivoire sous le thème : « Le rôle de la commune dans la Côte-d'Ivoire émergente à l'horizon 2020 ». Cette conférence s'est tenue le 25 août 2014 à Yamoussoukro, <http://news.abidjan.net/h/506290.html>, consulté le 12 juillet 2018

⁴⁷ Il s'agit d'abord des placements budgétaires portant sur des excédents budgétaires. Il s'agit ensuite des placements de trésoreries portant sur les fonds d'emprunt momentanément utilisés.

On constate avec le tableau que de 2013 à 2017, le budget est évalué à plus de huit milliards deux-cents millions de francs CFA (8.200.000.000frs CFA) répartis comme suit : pour le fonctionnement à sept milliards vingt-deux mille cent quatorze (7.000.022.114 Frs CFA) et pour l'investissement à un milliard cent soixante-dix-sept millions huit cent quatre-vingt-six mille (1.177.886.000frs CFA). Sur ce budget, sur la période 2013-2015, c'est la somme de sept cent soixante-treize millions huit cent cinquante-trois mille huit cent soixante-onze francs CFA (773.853.871 Frs CFA) soit 13,13% du budget total d'investissement qui a été investie au titre de la politique éducative. C'est pourquoi à l'occasion des vœux formules à l'endroit de ces administrés le 18 février 2018, on pouvait entendre le maire sortant dire : « Au niveau de l'éducation, sachez que malgré les contraintes budgétaires, nous avons construit de nombreuses écoles et réhabilitées les établissements qui attendaient de l'être. À cela, il faut ajouter plus de 1000 bourses offertes à nos élèves et étudiants, élite de demain ».

Les difficultés structurelles

Les politiques éducatives locales si elles contribuent au service public de l'enseignement au plan national, restent avant tout une affaire de spécialistes et de structures adéquates. Ainsi, les collectivités locales devraient non seulement se doter de structures spécialisées en charge de l'éducation qui doivent impérativement collaborer avec le ministère technique qui est le ministère de l'éducation nationale. Or la sous-direction en charge de l'éducation et de la promotion humaine qui est chargé de mettre en œuvre la politique éducative de la mairie de Cocody est en sous-effectif. Seulement, en dehors de quelques agents administratifs et financiers mis à la disposition de la commune par l'État, l'immense majorité du personnel de la mairie est recrutée directement par le Maire. Les critères qui président au recrutement étant le résultat du clientélisme, il s'ensuit, outre l'incompétence de certains agents, une mauvaise répartition des agents dans les différents services de la Mairie. Ainsi, à la mairie de cocody, pour le compte de la sous-direction éducation et promotion humaine en charge de toutes les questions et projets liés à l'éducation (y compris l'alphabétisation), à la culture, au sport, au tourisme et aux loisirs compte que deux (02) agents sur les trois cents agents (300) qui émargent sur le budget de la commune.

Cette insuffisance numérique du personnel contrarie gravement la mise en œuvre d'une véritable politique éducative. Il faut également ajouter à cette faiblesse la formation inadaptée⁴⁸ des agents de la mairie de Cocody en charge

⁴⁸ Par exemple, M. Dakoury, Sous-directeur du Service Éducation a une formation initiale de Technicien Supérieur en Gestion Commerciale. En plus de vingt ans de présence⁴⁸ à la Mairie de Cocody, il aura travaillé dans quasiment tous les services, avant d'arriver à la tête de la Sous-direction Éducation. Bien qu'il soit pétri d'expérience, de qualités intellectuelles

de gérer les questions éducatives. À la mairie de Cocody, les agents en charge des questions d'éducation ne sont pas formés au pilotage des politiques publiques. L'Éducation, dans sa séquence pilotage des politiques, doit être véritablement l'affaire d'experts et autres professionnels de la question, ayant une vision large des choses tant sur la question de l'Éducation que mobilise des savoirs transversaux allant de la démographie à la psychologie en passant par l'économie et l'analyse des politiques publiques. Dans le cadre du pilotage des politiques éducatives locales, deux sources de connaissance doivent être mobilisées, pour mener à bien les projets et qui font défaut, bien des fois, aux acteurs étatiques locaux : outre la gestion classique des projets et ses déclinaisons⁴⁹, l'analyse des politiques publiques⁵⁰ et l'éthique de l'action publique, c'est-à-dire la connaissance des valeurs et principes qui sous-tendent le service public de l'enseignement. Ainsi, la faiblesse de la collaboration avec les services de l'éducation nationale et le manque de compétences en matière de politiques éducatives peut priver les réalisations de projets éducatifs de l'apport technique nécessaire. Le risque avec une telle configuration, c'est le fait qu'elle puisse aboutir à une hégémonie des motivations politiques, électoralistes et des intérêts matériels dans le fondement des décisions sur la rationalité sociale⁵¹.

Conclusion

Le maire actuel de la commune de Cocody, monsieur Yacé Jean Marc à l'occasion des campagnes électorales des élections municipales de 2018 qu'il a remportées établissait le diagnostic du secteur éducatif de la commune en ces termes.

« Il faut une véritable politique de l'Éducation à Cocody. Elle doit être axée sur un renforcement des services publics. En effet, la construction et l'entretien des classes d'établissements publics sont inscrites au budget communal. L'école publique n'est plus ce qu'elle était il y a quelques années. De ces beaux

indéniables (c'est un tribun hors norme), de qualités humaines faisant de lui un leader syndical respecté, la question du pilotage des politiques éducatives lui est complètement étrangère. Or de nos jours, avec la complexification des questions liées à l'Éducation, le pilotage des politiques éducatives requiert des compétences techniques et technologiques avérées.

⁴⁹ Nous faisons référence ici à la Gestion Axée sur le Résultat (GAR), et le suivi-évaluation des projets, entre autres.

⁵⁰ Ces dernières années, les spécialistes des politiques publiques ont développé de nombreux concepts, modèles et approches. Il ne s'agit pas ici d'imposer à l'agent municipal de connaître toutes les théories et autres concepts de l'Analyse des politiques publiques. Il s'agit plutôt d'en apprendre les notions basiques indispensables à l'exécution de ses missions.

⁵¹ Avec une telle distance, on comprend difficilement comment les décideurs prendront en compte, le contenu de la carte scolaire, document majeur dans la fabrique des politiques éducatives.

locaux aux allées fleuries, aux murs et aux toilettes propres il ne reste plus rien. Les salles de classes sont pléthoriques, le système d'électrification défaillant et l'enseignement délivré au rabais. Il est clair que les établissements publics de Cocody échappent complètement à la modernité et à l'évolution. Pourtant, le fonctionnement et la gestion de l'école publique comme mentionné plus haut, incombent à la commune »

Ce que l'élu dénonce n'est autre chose que la crise de l'action publique éducative dans la commune. C'est-à-dire que, l'évaluation des politiques éducatives locales aboutit à des résultats qui sont loin de ceux initialement visés (Perret, 2014). Il est donc question de vérifier que la mise en œuvre pratique d'un dispositif correspond bien au cahier des charges défini par ses concepteurs, ce qui suppose notamment que les bénéficiaires potentiels de la mesure soient informés et que les agents chargés de l'appliquer soient correctement formés. La bonne articulation de ces différentes phases dépend étroitement du cadre institutionnel dans lequel les politiques publiques sont évaluées. Ce sont tous ces écarts que nous avons tenté de montrer à travers notre étude sur la décentralisation des politiques éducatives à Cocody.

L'étude a abouti à la conclusion que l'évaluation des politiques publiques éducatives peut s'analyser en termes d'inefficacité. L'action publique locale est encore dominée par le modèle « *top down* » et des approches *etatocentré*. C'est à dire qu'on conçoit encore l'action publique comme une intervention d'autorités dotées de la puissance publique ou un ordre, un commandement, qui aurait vocation à être transmis et exécuté sans la moindre interférence. Pourtant, une approche centrée sur les sommets de l'État ne peut donner à avoir que les aspects les plus nobles et spectaculaires de l'action. En d'autres termes, les résultats de l'action publique sont présentés avec une mention spéciale sur le rôle des gouvernants qui sont auréolés de superlatifs de leaders héroïques, visionnaires, réformateurs courageux. Cette vision est complétée par une théâtralisation des décisions, des moments historiques qui transforment le cours des politiques publiques et le sort des populations. Alors que : « Cette conception du décideur rationnel et puissant est le plus souvent un leurre, un masque, de processus complexe ou les acteurs sont inscrits dans des trajectoires, des réseaux, des intérêts et des institutions » (Lascoumes & Galès, 2018, p. 3). En effet, l'étude en abordant la question sous l'angle de du choix rationnel, montre que les politiques publiques éducatives sont le résultat d'individus influencés par des incitations et de sanctions font des choix dans le but de maximiser leur intérêt, leur satisfaction, ou des préférences et non des buts. Alors, la démocratie locale qui inclut une gestion participative (Gerstle, s. d.), étant absente du processus, la rationalité

sociale et l'intérêt général semblent apparaître comme des finalités dérisoires dans l'action publique éducative face aux logiques propres des élus. Au final, le processus décisionnel, la formulation et la mise sur agenda des problèmes liés à l'éducation sont plus portés vers une rationalité électorale et matérielle que vers une rationalité fondée sur la satisfaction de l'intérêt général. Au niveau de la mise en œuvre, les politiques publiques sont confrontées à des difficultés issues de l'ineffectivité de l'autonomie institutionnelle et financière de la mairie.

References:

1. Adiko. (2003). La décentralisation en Côte d'Ivoire depuis l'ère coloniale à nos jours. In *Africa Research Séries: Vol. 10. L'administration locale en Côte D'Ivoire* (p. 5-14). Consulté à l'adresse <http://www.ide.go.jp/English/Publish/Download/Ars/10.html>
2. Adomon, A. A. (2015). *Bilan de la politique de décentralisation en Côte d'Ivoire : Cas des communes d'Alépé, de Taabo et de Yopougon* (Doctorat en Géographie). Felix Houphouët Boigny, Cocody.
3. Anderson C. W. (1988). « Political judgement and theory in policy analysis ». In *Handbook of Political Theory and Policy Science*. New York: Portis E. B., Levy M. B., (dir.),.
4. Anderson, J. E. (1975). *Public policy-making*. Praeger.
5. Assepo, A. H.-. (2002). *Développement, aménagement, régionalisation en Côte d'Ivoire*. Presses Universitaires de Cote d'Ivoire.
6. Atta, K. (2001). Décentralisation et développement local. *Gres IGT*.
7. Atta, K., & Gobe, T. (2013). Décentralisation et crise économique en Côte d'Ivoire. *European Scientific Journal*, 9.
8. Balme, R., & Brouard, S. (2005). Les conséquences des choix politiques : Choix rationnel et action publique. *Revue française de science politique*, 55(1), 33-50.
9. Bede, C. (2017). Subventions dérisoires, budgets non approuvés : Les élus locaux interpellent le gouvernement. Notre voie.
10. Blundo, G. (2001). Négociant l'État au quotidien : Agents d'affaires, courtiers et rabatteurs dans les interstices de l'administration sénégalaise. *Autrepart*, (20), 75-90. <https://doi.org/10.3917/autr.020.0075>
11. Caillosse, J. (1988). Le savoir juridique à l'épreuve de la décentralisation ? *Annuaire des collectivités locales*, 8(1), 5-31. <https://doi.org/10.3406/coloc.1988.1034>
12. Chabanet, D., & Guigni, M. (s. d.). Les conséquences des mouvements sociaux. In *Penser les mouvements sociaux : Conflits sociaux et*

- contestation dans les sociétés contemporaines* (p. 145-161). Paris : La découverte.
13. Degni Segui René. (2013). *Droit administratif général* (Vol. 1). Omniprésence.
 14. Dégni-Ségui, R. (2013). *Droit administratif général* (4^e éd., Vol. 1). Omniprésence.
 15. Douillet, A., & Robert, C. (2007). Les élus dans la fabrique de l'action publique locale. *Science de la société*, (71), 2-24.
 16. Downs, A. (2013). *Une théorie économique de la démocratie*. Bruxelles ; Paris: Université de Bruxelles.
 17. Dramé, H. (1998). Décentralisation et Enjeux Politiques. L'Exemple du Conflit Casamançais (Sénégal). *Bulletin de l'APAD*, (16). Consulté à l'adresse <http://journals.openedition.org/apad/538>
 18. Dupuy, C., & Halpern, C. (s. d.). Les politiques publiques face à leurs protestataires. *Revue française de science politique*, 4(55), 701-722.
 19. Éducation/Tiassalé : Le maire met fin aux cotisations Coges | FratMat. (s. d.). Consulté 2 novembre 2020, à l'adresse <https://www.fratmat.info/article/208102/Soci%C3%A9t%C3%A9/%C3%89ducation/educationtiassale--le-maire-met-fin-aux-cotisations-coges>
 20. Gacha, T. (2009). *Essai sur un état africain décentralisé : Le cas de la Côte d'Ivoire : contribution à l'étude du nouvel état africain* (Thesis, Toulouse 1). Consulté à l'adresse <http://www.theses.fr/2009TOU10049>
 21. Gerstle, J. (s. d.). La réactivité aux préférences collectives et l'imputabilité de l'action publique. *Revue française de science politique*, 6(53), 859-885.
 22. Greffe, X. (2005). *La décentralisation* (Nouv. éd. ent. ref. et mise à jour). Paris: La Découverte.
 23. Hassenteufel, P. (2010). Les processus de mise sur agenda : Sélection et construction des problèmes publics. *Informations sociales*, n^o 157(1), 50-58.
 24. Hassenteufel, P. (2011). *Sociologie politique : L'action publique* (2^e édition). Armand Colin.
 25. Hugon, P., Vimard, P., & Tapinos, G. P. (2003). *La Côte d'Ivoire à l'aube du XXI^e siècle : Défis démographiques et Développement durable*. Paris : Karthala.
 26. Jean, P. (2013). Gestion des Coges : L'implication des élus locaux, une exigence. nouveau réveil.
 27. Kübler, D., & Maillard, J. de. (2009). *Analyser les politiques publiques*. Grenoble: Presses universitaires de Grenoble.
 28. Lanoue, E. (2004). La société ivoirienne au fil de ses réformes

- scolaires : Une politique d'éducation « intermédiaire » est-elle possible? *Autre part*, (31).
29. Lascoumes, P., & Galès, P. L. (2018). *Sociologie de l'action publique—2e éd.* (3e édition). Malakoff : Armand Colin.
 30. Lugaz, C., De Grauwe, A., Balde, D., Diakhaté, C., Dougnon, D., Moustapha, M., & Odushina, D. (s. d.). *École et décentralisation : Résultats d'une recherche en Afrique francophone de l'Ouest*. Paris : Institut international de planification de l'éducation.
 31. Maillard, J. (s. d.). La conduite des politiques publiques à l'épreuve des temporalités électorales. Quelques hypothèses exploratoires. *Pôle Sud*, (25), 39-53.
 32. Mambo, P. (2009). *Droit et ville en Afrique : Étude de la décentralisation ivoirienne en matière d'urbanisme*. Paris : Harmattan.
 33. Marie, J., & Idelman, E. (2010). La décentralisation en Afrique de l'Ouest : Une révolution dans les gouvernances locales ? *EchoGéo*, (13). <https://doi.org/10.4000/echogeo.12001>
 34. Mel, T. (2015). *La décentralisation à l'épreuve de la crise économique en Côte d'Ivoire*. Paris: harmattan.
 35. Ministère de l'Administration du Territoire a organisé les, & États Généraux de la Décentralisation et du Développement Local. (2007). *Les actes des états généraux de la Décentralisation et du Développement Local*.
 36. Ministère de l'éducation nationale de la République de Côte d'Ivoire. (2016). Le financement de l'éducation en Côte d'Ivoire, 2006-2015 .Sur le modèle des Comptes Nationaux de l'Éducation Volume I : Analyse et annexe 1.
 37. Mons, N. (2004). Politiques de décentralisation en éducation : Diversité internationale, légitimations théoriques et justifications empiriques. *Revue française de pédagogie*, 146(1), 41-52. <https://doi.org/10.3406/rfp.2004.3092>
 38. Nahi, P. C. (2018). Les logiques autoritaires de la production de l'ordre en Côte d'Ivoire : De la crise de légitimité politique à la criminalisation des mouvements sociaux. *Lonniya*, 1(5).
 39. N'tchuvi, T. Y.-C., & Aloko, N. J. (2018). Analyse de La contribution Des collectivités territoriales au développement local En Côte D'ivoire : Cas du département d'agboville. *European Scientific Journal*, 14(32).
 40. Ovono, E. A. (2012). L'autonomie financière des collectivités locales en Afrique noire francophone. Le cas du Cameroun, de la Côte d'Ivoire, du Gabon et du Sénégal. *afrilex*.
 41. Palier, B., & Surel, Y. (2005). Les « trois I » et l'analyse de l'État en action. *Revue française de science politique*, 55(1), 7-32.

42. Perret, B. (2014). *L'évaluation des politiques publiques* (Nouvelle édition). Consulté à l'adresse <https://www.lgdj.fr/l-evaluation-des-politiques-publiques-9782707183385.html>
43. Pomey, M.-P., Morgan, S., Church, J., Forest, P.-G., Lavis, J. N., McIntosh, T., ... Dobson, S. (2010). Do provincial drug benefit initiatives create an effective policy lab? The evidence from Canada. *Journal of Health Politics, Policy and Law*, 35(5), 705-742. <https://doi.org/10.1215/03616878-2010-025>
44. Proteau, L. (2002). *Passions scolaires en Côte d'Ivoire : École, état et société*. Karthala.
45. Prud'homme, R. (1995). "Les dangers de la décentralisation (anglais). *Observateur de Recherche à La Banque Mondiale*, 10(2), 201-220.
46. Kei, M. (2010). Caractérisation et attitudes à l'égard des comités de gestion des établissements secondaires publics du district d'Abidjan. *Revue Africaine d'Anthropologie*, Nyansa-Pô, 10.
47. Rey, O. (2013). Décentralisation et politiques éducatives. *Dossier d'actualité veille et analyses*, (83).
48. Semiti, A. J. (2006). La programmation ou la planification implicite de l'échec scolaire au niveau du primaire et du secondaire en Côte d'Ivoire pendant et après la colonisation. *Revue du CAMES - Nouvelle Série B*, 007(1).
49. Soumahoro, M. (2015). Construction, reconstruction territoriale et décentralisation en Côte d'Ivoire (2002-2009). *Espaces et sociétés*, n° 160-161(1), 51-66.
50. Zadi, A. (2020). Suppression des cotisations du Coges : La Fesci donne un ultimatum à la ministre Camara Kandia. Infodrome.
51. Wodie, F. (1996). *Institutions politiques et droit constitutionnel en Côte d'Ivoire*. Presses universitaires de Côte d'Ivoire.



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Financing MSMEs Green Growth, Resource Efficiency and Cleaner Production in East Africa

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[Doi:10.19044/esj.2021.v17n1p196](https://doi.org/10.19044/esj.2021.v17n1p196)

Submitted: 04 November 2020
Accepted: 25 December 2020
Published: 31 January 2021

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Cite As:

Ongechi M.A. & Mandala O.N. (2021). *Financing MSMEs Green Growth, Resource Efficiency and Cleaner Production in East Africa*. European Scientific Journal, ESJ, 17(1), 196. <https://doi.org/10.19044/esj.2021.v17n1p196>

Abstract

Resource efficiency, including cleaner production and energy efficiency (CP/EE), play an important role in supporting Africa's sustainable growth in the future. Since the 1990s both the governments and development agencies in Africa have promoted such strategies to help firms reduce their negative environmental impact while enhancing their economic performance. The main objective of this study was first to explore opportunities and constraints for the commercial financing of micro, small and medium enterprises (MSMEs) for resource efficiency and cleaner production (RECP) projects in East Africa (EA), and to develop a sustainable financial scheme for firm-level RECP programs; secondly, to interrogate financing opportunities for RECP advisory services allowing for the growth of the RECP agenda and providing the opportunity to make RECP programs self-sustaining; and thirdly, to increase the use of, and investment in RECP technologies by Enterprises (Industries and MSMEs) in EA. A survey was undertaken across EA and stratified sampling was used to ensure all the partner states were included in the sample. A mixed method approach was used where both primary and secondary data were collected. The sample size comprised of 36 financial institutions and 42 enterprises across the EA region. Key respondents across the industries were interviewed, and a semi-structured questionnaire was used. Quantitative data was analysed by descriptive analysis using SPSS and presented in form of frequency tables. Content analysis was used for the qualitative data and then presented in prose. A hybrid kind of scheme(s) was

developed. The study recommends a guarantee scheme whereby the government and or development partners provide guarantee to commercial banks at 50% and the enterprises would be required to raise 50% collateral to unlock funding to enterprises. However, most MSMEs indicated the lack of capacity to raise the 50% collateral hence the study proposes a revolving fund supported by the development funds to set aside a kitty to cater for this category of enterprises. Additionally, a rigorous process has been put in place to implement these two models of financing. Through the study formulation of managerial policy and practice that promote better RECP practices and green growth will be operationalized.

Keywords: Financing, Green Growth, Resource Efficiency and Clean Production

1. Introduction

Studies document that resource efficiency, including cleaner production and green growth, critically contribute to fostering future sustainable growth. A number of governments and development partners have continued to support strategies to help firms decrease their environmental impact while enhancing their economic performance (Ashton et al. 2002). Governments employ economic tools, such as lending programs, pollution taxes, charges and fees and subsidies which are designed to encourage firms to adopt environmentally sound practices by increasing the penalties or by decreasing the investment required and providing other economic benefits to those who adopt them. However, many firms, mostly MSMEs, continue to shy away from implementing resource efficiency practices due to the fact that they are regarded as being more problematic or less profitable compared to other investments. The introduction of policies, regulations and incentive programs to engage MSMEs in resource efficiency, needs to be cognizant of the barriers MSMEs face in adopting them (Ashton et al. 2002; McEwen 2013; Lewis and Cassells 2010).

Public funding alone cannot adequately deal with the great challenges of climate change and environmental degradation in the East Africa region. Private sector engagement and mobilizing private sector investment in the advancement of climate change mitigation and adaptation efforts, particularly in Resource Efficiency and Cleaner Production (RECP) activities of the industrial sector is essential. RECP provides investment options for win-win opportunities in many industries grappling with pollution in the EA region.

The cleaner production concept has been defined as the “continuous application of an integrated preventative environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment” (UNEP, 1994).

Since its conceptualization, cleaner production has been applied in 72 countries around the globe, using the experience of industrialized countries and their commitment of providing developing and transition countries with methods, practices and techniques for more sustainable production, by building national structures - the national cleaner production centers, and technical capacities – the national experts, in order to ensure further scaling up and replication of cleaner production applications.

Based on the experiences gained through the years, the cleaner production concept has been developed, expanded and redefined as “Resource Efficiency and Cleaner Production”; the new definition makes the logical connection between the productive use of resources, reduction of waste and emissions and the enterprises’ productivity and competitiveness and refers to “the continuous application of preventive environmental strategies to processes, products and services to increase efficiency and reduce risks to humans and the environment, addressing all three sustainability dimensions individually and synergistically” (VAN Berkel, 2015). It leads to production efficiency through productive use of natural resources in all production stages; environmental management through minimization of the adverse impact of the industrial activities on nature and the environment; and human development through minimization of risks to people and communities.

Resource efficiency and cleaner production programme jointly initiated by UNIDO and UNEP, aiming to enhance resource efficiency and environmental performance of firms in developing and transition countries, provided for the first time a strategic and coherent approach for mainstreaming and upscaling activities and results of National Cleaner Production Centres, nationally, regionally and globally.

As a result of 17 years’ intensive work undertaken by the National Cleaner Production Centres (NCPC’s) around the world, thousands of companies have benefited from the adoption of sustainable solutions, which contributes to improving their resource efficiency, increasing their productivity and at the same time, decreasing their negative environmental impact. RECP solutions are typically identified and assessed during intensive and time consuming in depth plant assessments, often requiring advanced expert knowledge and massive technical support to applicant companies. However, in order to ensure transition to more sustainable production systems, application and adoption of RECP methods, practices and techniques, those should be mainstreamed, scaled up and expanded beyond the in depth assessments and have higher impact on more companies, while investing less time and effort. This could be achieved by replicating well-known solutions and best practices.

Developing regions place importance on micro, small and medium enterprises (MSMEs) due to the fact that they play a critical role in economic

development and growth. They constitute 90% of the firms in Africa, contribute 25% of the region's GDP and represent 50% of employment (CAF 2016).

MSMEs usually face less scrutiny for environmental enforcement in most parts of the world due to the fact that individually they are small quantity generators (SQG) with regard to pollution, though in totality their pollution may be large (de Cerreño et al. 2002). This may be even more so in EA, as innumerable MSMEs are part of the informal economy, that is, they are unregistered and completely outside the purview of environmental regulators and enforcement. This therefore leads to the need to deal with the environmental issues among MSMEs in order to achieve a sustainable future in EA.

Studies document that MSME largest barriers to implementing RECP initiatives is lack of capital. This realization motivated our research in this area with the aim of gaining a deeper understanding of the challenges associated with financing RECP and identifying strategies for tackling this barrier. This study seeks to document the constraints for the uptake of financing for resource efficiency in MSMEs in EA region, why these limitations persist and how they can be overcome.

Currently, the adoption by firms of RECP initiatives is considered a social responsibility since on one hand it concentrates on environmental management and on the other hand focuses on a continuous improvement of the product (Alaña-Castillo et al. 2017).

Nevertheless, the adoption of the RECP initiatives and strategies in Micro, Small and Medium Enterprises (MSMEs) is not easy due to the fact that they lack information about the RECP concept and new technologies. Zhou and Zhao (2016) were of the view that the MSMEs owners often see climate change as an abstract problem that does not affect them and that they are not directly responsible for environmental issues. Additionally, the lack of finance for research and innovation, and the lack or absence of "green" credits for environmental projects also reduces the adoption of RECP (Bernal et al. 2016, Vieira and Amaral 2016). To surmount these barriers, Klewitz and Hansen (2014), who analyzed the strategic sustainability behaviors of SMEs between 1987 and 2010, found out that interaction with external actors (e.g. customers, authorities, research institutes) is an essential part to achieve a sustainable development of MSMEs. Another important aspect to support the transition is to foster a "green" company culture among staff and managers (Rizos et al. 2016).

1.1 Research Objectives

The main objective was to determine the opportunities and constraints for RECP, its advisory services and develop a sustainable financial scheme for firm-level resource efficient and cleaner production programs.

Specific objectives

- i. Explore opportunities and constraints for the commercial financing of micro, small and medium enterprise (MSME) for RECP projects in EA.
- ii. Interrogate financing opportunities for RECP advisory services allowing for the growth of the RECP agenda and providing the opportunity to make resource efficient and cleaner production programs self-sustaining
- iii. Develop a sustainable financing model to increase the use of, and investment in, resource-efficient and cleaner production (RECP) technologies by MSMEs in the EA region.

2.0 Empirical & Literature Review

The cleaner production concept has been defined as the “continuous application of an integrated preventative environmental strategy to processes, products and services to increase efficiency and decrease risks to humans and the environment” (UNEP, 1994). Since its conceptualization, cleaner production has been applied in 72 countries around the globe, using the experience of industrialized countries and their commitment of providing developing and transition countries with methods, practices and techniques for more sustainable production, by building national structures - the national cleaner production centres, and technical capacities – the national experts, in order to ensure further scaling up and replication of cleaner production applications.

Based on the experiences gained through the years, the cleaner production concept has been developed, expanded and redefined as “Resource Efficiency and Cleaner Production”. The new definition makes the logical connection between the productive use of resources, reduction of waste and emissions and the enterprises’ productivity and competitiveness and refers to “the continuous application of preventive environmental strategies to processes, products and services to increase efficiency and decrease risks to humans and the environment, addressing all three sustainability dimensions individually and synergistically” (Berkel, 2015). The three dimensions include; production efficiency through productive use of natural resources in all production stages; environmental management through minimization of the adverse impact of the industrial activities on nature and the environment;

human development through minimization of risks to people and communities.

Resource efficiency and cleaner production programmes, with the aim of enhancing resource efficiency and environmental performance of businesses in developing and transition countries, provided for the first time a strategic and coherent approach for mainstreaming and upscaling activities and results of national cleaner production centres, nationally, regionally and globally. Through the national cleaner production centres (NCPC's) around the world, thousands of companies have benefited from the adoption of sustainable solutions, which contributed to improving their resource efficiency, increasing their productivity and at the same time, decreasing their environmental impact. RECP solutions are typically identified and assessed during intensive and time-consuming in-depth plant assessments, often requiring advanced expert knowledge and massive technical support to applicant companies. However, in order to ensure transition to more sustainable production systems, application and adoption of RECP methods, practices and techniques, should be mainstreamed, scaled up and expanded beyond the in-depth assessments and have higher impact on more companies, while investing less time and effort.

Studies have unveiled that due to the scale of the East Africa region and its environment and climate-related challenges, public funding alone may not deliver successful and less polluting enterprises. Programmes have demonstrated the effectiveness of using public funds to catalyze private sector investment in clean and efficient production. This public support helps overcome perceived risk of investing in the new RECP approach and shows the private sector that profitability and corporate, social and environmental responsibilities are aligned and are not necessarily mutually exclusive. The study aims to expand on this engagement, leveraging successful partnerships to bring in new elements, such as creating sustainable financing mechanisms for RECP and creating synergies between the financial institutions, industries and national cleaner production centres.

Lending to MSMEs has traditionally been seen as presenting more risk of default compared to lending to large, established private firms and government-owned institutions. Additionally, conventional banking is subject to complex application procedures and collateral requirements which in most instances do not favour the MSMEs. Studies indicate that a risk-share programme improves volume of credit to MSMEs that have been on a downward trend over the last five years. In Kenya, this has been exacerbated by capping of interest rates. Credit Guarantee Schemes help de-risk MSME lending by providing partial guarantees in the case of default.

This study considered a number of schemes in various sectors across the world for incorporating RECP in their operations. This included; Firstly, a

roadmap for scaling up resource efficiency in Israel based on the experience from the UNIDO MED TEST II component, implemented as part of the SwitchMed programme. The roadmap addresses all aspects of mainstreaming resource efficiency in Israel and offers a wide range of instruments to respond to the needs of industries, from technical assistance at management and policy level to financing opportunities, aligned to the regulatory system.

Secondly, In Romania a study on scaling up RECP for a sustainable industrial development recommends that undertaking RECP initiatives calls for a systematic and continuous approach for identifying and evaluating the current inefficiencies and monitoring the enterprise level results. Solutions are proposed to intensify applications of RECP methods, practices and techniques and innovative approaches are used to facilitate the expansion of RECP application and transfer of existing experiences and best practices to a larger number of enterprises.

Thirdly, AfDB has successfully implemented a credit guarantee scheme for fertilizer financing in Africa. This scheme was conceived as an initiative to improve agricultural productivity by providing finance to “debottleneck” the use of fertilizers. This study further provides solutions to identifying financial institutions, beneficiaries and the technical assistance required.

2.1 Barriers to Adoption of Resource Efficient and Cleaner Production

Lack of knowledge relating to the RECP initiatives and new technologies remain one of the key hindrances in the implementation of the RECP strategies by Small and Medium Enterprises (SMEs). SMEs often consider climate change as an abstract problem that does not affect them and that they are not directly accountable for environmental concerns (Zhou and Zhao, 2016). Additionally, the lack of financial resources for research and innovation, and the lack or absence of "green" credits for environmental projects also hinders the adoption of RECP (Bernal et al. 2016, Vieira and Amaral 2016). To reduce these barriers, interaction with external actors (e.g. customers, authorities, research institutes) is an important aspect to achieve a sustainable development of SMEs. Fostering a “green” company culture among staff and managers also plays a critical role (Rizos et al. 2016).

The barriers to adoption of resource efficiency measures in almost all sectors are both external and internal. Internal barriers are entangled in company management systems such as low levels of awareness and skills amongst the workers. External barriers are largely outside of the firm's capacity to change including access to technology and cost of finance.

A low awareness of environmental issues. Some sectors e.g. the tea, may have conceptual obstacles to Resource Efficiency and particularly, where

this involves changing to a cleaner technology or retrofitting existing equipment. The conceptual obstacles include; underrating the potential of embracing cleaner and greener technologies; and having a high resistance to new changes.

Information and skills: A key hindrance to the increased implementation of energy, water and/or material efficiency and alternative energy sources is the lack of access to appropriate information and expertise. Resource efficiency provides great potential to improve MSMEs' competitiveness. Many times, they lack the ability to take advantage of such opportunities because of ignorance. Firms lack information about appropriate alternative cleaner technologies, thus contributing to risk and uncertainty regarding the adoption of these technologies. Even to the extent that they are aware of these opportunities, a lack of appropriate skills and expertise prevents them from acting upon them.

Difficulty in accessing cleaner technologies: Investment in cleaner and greener technologies such as solar thermal, redesigned drying fans, variable speed drive motors, waste to energy among others, is a major decision for factories to undertake. In addition, costs of the new technology will be substantial which may discourage them from adopting it.

Difficulty in accessing external finance: Lack of access to finance makes it difficult to implement cleaner and more efficient technology. Most industries lack the ability to make commitments in cleaner technologies due to a number of financial reasons including lack of available external capital and the absence of appropriate funding mechanisms with longer term repayment periods.

Institutional support: the support of the institution in RECP is paramount as it ensures commitment on behalf of the firms. This includes support in mobilizing financial resources.

Policy and sector guidelines: Kenya has developed a Green Economy Strategy and Implementation Plan (GESIP) to guide the country's transition towards a green economy. All sectors of the economy are required to align their policies and operations to deliver in this. Further, the country's commitment in her INDC to reduce GHG emission by 30% by 2030 requires that various sectors put in motion strategies and activities that will contribute towards this reduction. Most industries as noted from the field engagements across the region lack specific green industry policies and guidelines to inform green innovations to contribute towards these targets.

3.0 Methodology

3.1 Research Design, Data and Sampling

This study was carried out across the East Africa Community partner states and will be implemented in all the five partner states (Burundi, Kenya,

Rwanda, Uganda and United Republic of Tanzania). The study focused on both the supply side and the demand side analysis. The demand side entailed assessing the demand for financing from SMEs in the EA region for RECP measures; assessing the scope and constraints for increased RECP investments and borrowing in priority sectors (e.g. awareness of profitable investment opportunities, profitability and cash flows, cost of borrowing); and assess support and incentives needed for MSMEs to prepare bankable RECP projects and request commercial financing. The supply side was to unearth current practices of financial institutions concerning the financing for RECP projects. Specifically, the supply side analysis was to provide details on existing financial products and mechanisms in the market, the prevailing policy environment, and determine existing gaps related to sustainable financing for RECP. It also sought to unearth the demand and willingness to pay for advisory services in accelerating the adoption of RECP and growth within the industry.

A mixed method approach was used and both primary and secondary data were collected. The sample size consisted of 36 financial institutions and 42 enterprises across the EA region. Key respondents across the industries were interviewed, and a semi-structured questionnaire was used. Other key respondents included; the Executive Secretary Lake Victoria Basin Commission (LVBC), key government officials in Ministries of Environment and Industry within partner states, LVBC regional project coordinator, LVEMP Kenya National Cleaner Production Project Coordinator, and the respective country National Environment Management Authorities (NEMAs) heads.

Secondary data was collected through literature review based on documents provided by NCPCs and internet search of relevant papers and case studies. This search focused on various sectors such as: environment, health, agriculture, natural resource management and the review of experiences gained by scaling up projects of eco-efficiency practices in industry. Comparative analysis was also used to assess the financial schemes that have worked elsewhere and determine their applicability in the EA partner states.

The study used a semi structured self-administered questionnaire to collect data from the respondents. Quantitative data was analysed by descriptive analysis using SPSS and presented in form of frequency tables. Content analysis was used for the qualitative data and then presented in prose.

The data collected was prepared, coded, analysed, organized and used to report the findings as well as results of tests of hypotheses. In getting the data ready for analysis, data editing, standardization, coding and categorization was undertaken. Descriptive statistics which included measures of central tendency were computed.

4.0 Results

4.1 Response Rate

This study undertook a survey and study of 36 financial institutions and 42 enterprises across the EA region. Seventy-eight (78) questionnaires were sent out and seventy were returned and all were correctly filled. The returned questionnaires consisted of thirty-three from financial institutions and thirty-seven from enterprises across EA. The response rate was 92% from financial institutions and eighty 88% from enterprises. This rate, amounting to 90% averagely, is considered adequate and comparable to previous studies such as Kirimi (2012) who reported a response rate of 60.9%. To ensure that the questionnaires were filled by officers with appropriate knowledge of RECP, the respondents were asked to indicate their current position in the firm. The study also required that key industry sectors for each country were included. Figure 1 below shows the sectors and respondents per country.

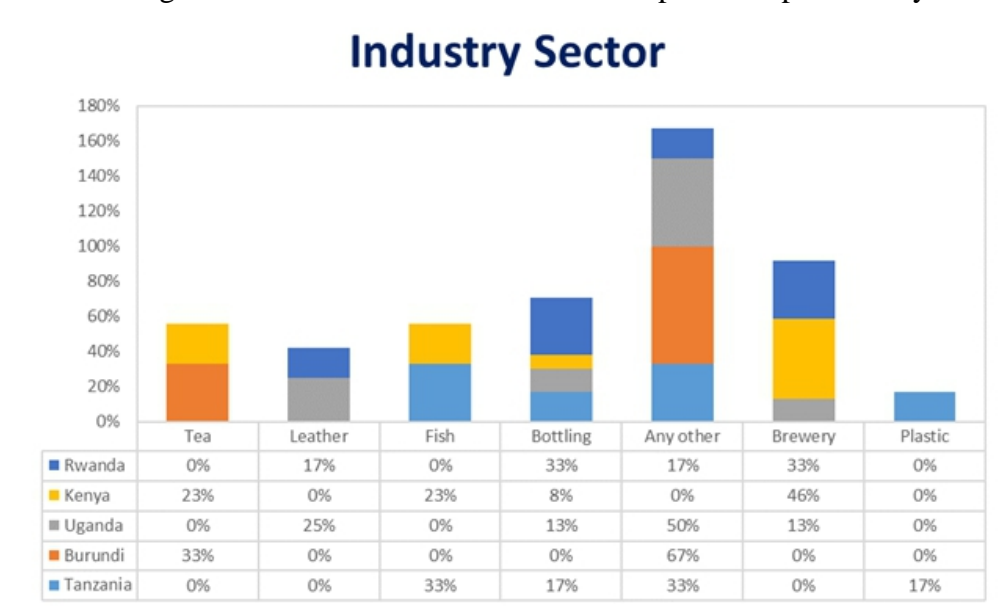


Figure 1 – Spread of respondents per country and sector

4.2 Demand Side Analysis

4.2.1 RECP Initiatives across the East Africa Industries

The MSMEs across the world have experienced tremendous growth with attendant negative impact on the environment, more so in the EA partner states. The importance of resource efficient and cleaner production cannot be overemphasized. For industries to improve on their margins/yields, they must deliberately and consciously have a policy on RECP initiative at the core of their strategy. The survey of 36 financial institutions and 42 enterprises across the EA region unpacked and measured RECP implementation across the East

Africa region in relation to RECP financing. Based on the results from the survey across the EA partner states, the firms interviewed confirm that they have been exposed to various RECP programs and are at different levels of implementation.

Developing water efficiency and effluent reduction options, developing materials efficiency and waste reductions options and energy efficiency options are the most implemented RECP programs across the EA region. For developing water efficiency and effluent reductions, the percentage results showed high recordings across the 3 countries; Tanzania 100%, Burundi 67%, Uganda 86%, except for Kenya at 17% and Rwanda 32%. From the figures established, Kenya ranks low in implementing this RECP initiative (developing water efficiency and effluent reductions). For developing materials efficiency and waste reductions, it showed high scores in terms of percentages across the 5 countries; Tanzania 100%, Burundi 83%, Uganda 86%, Kenya 84% and Rwanda 83%. This initiative is of the uttermost importance; all the countries have above 70% scores. For energy efficiency options the percentages across the countries were as follows; Tanzania 83%, Burundi 67%, Uganda 43%, Kenya 84% and Rwanda 67%. Tanzania and Kenya are the leading countries in implementing this initiative. Figure 2 explains the details of all initiatives that are being implemented.

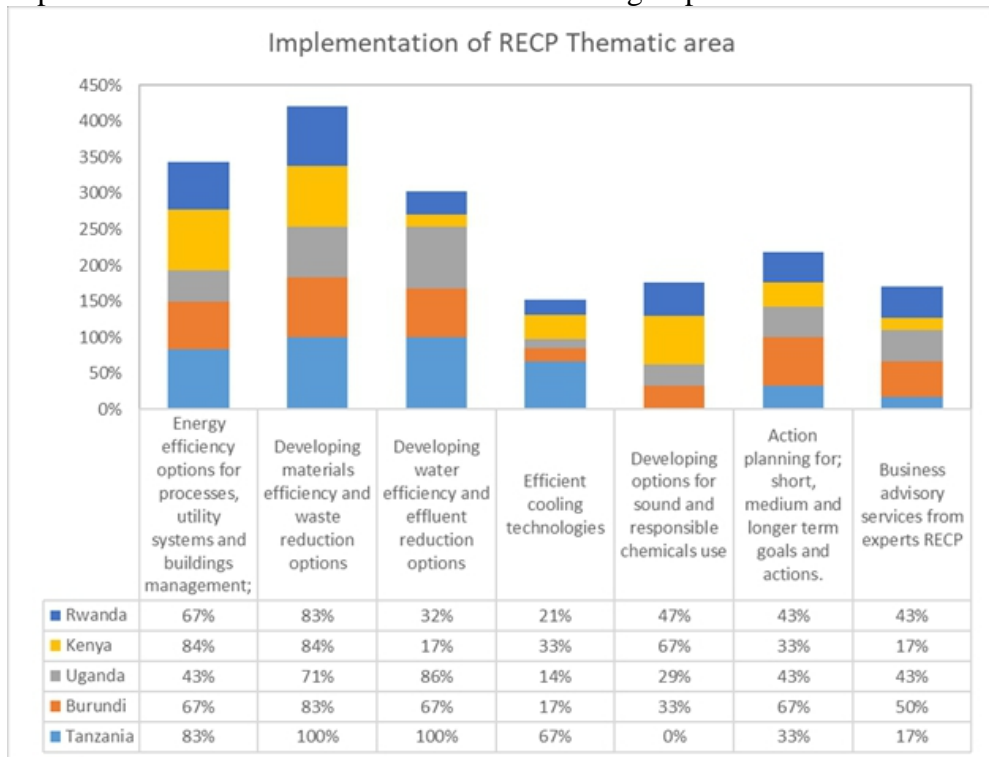


Figure 2 - Current RECP Initiatives across the EA Industries

4.2.2 Industry motivation for RECP uptake

The industry's main motivation towards RECP initiatives aligns with the goal / objectives for the RECP program. Improving profit margins, protecting the environment and improving efficiency are the key motivations for implementing RECP initiatives. This shows the demand for the program as it impacts positively to the industry's expectations. In improving margins for the business, Tanzania stands at 50%, Burundi at 80%, Uganda at 57%, Kenya 38% and Rwanda at 67%. In protecting the environment, Tanzania is at 67%, Burundi at 80%, Uganda at 71%, Kenya at 77% and Rwanda recorded minimal results. In improving efficiency; Tanzania at 50%, Burundi at 100%, Uganda at 71%, Kenya at 77% and Rwanda at 3%. Figure 3 below explains in detail the motivation towards RECP programs.

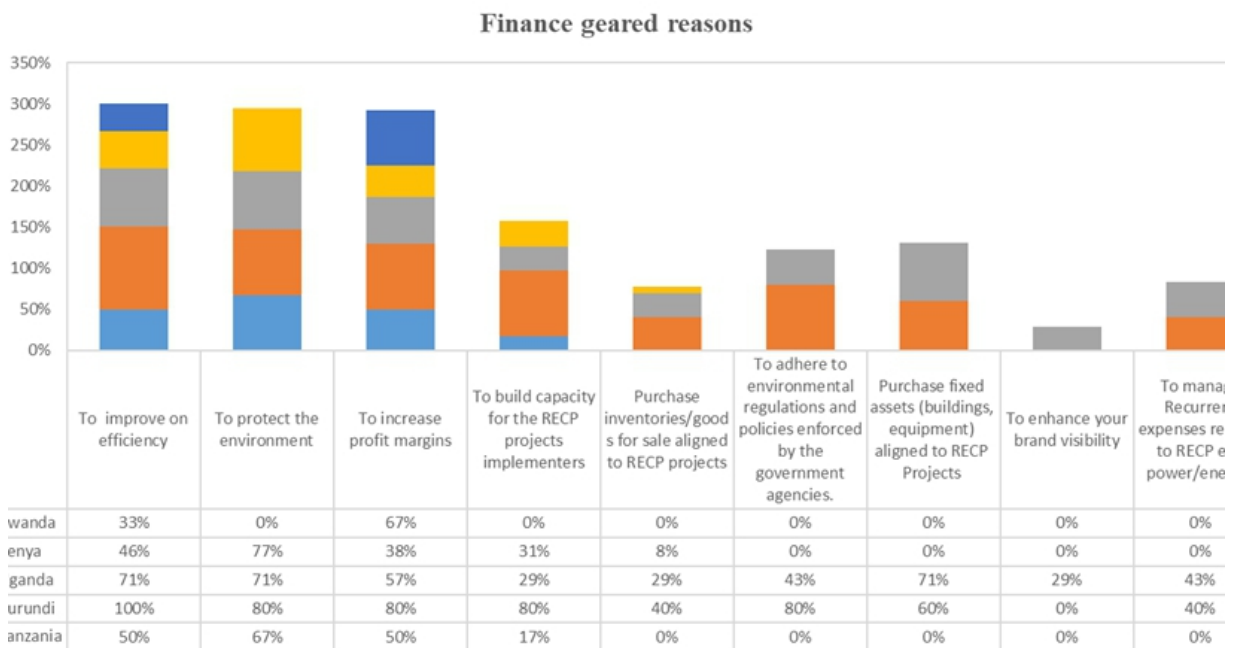


Figure 3 - Areas of focus for RECP financing in industry

Financing proved to be the greatest concern as support required by the industries, is considered as one of the key catalysts towards business growth / expansion and also improving efficiency within the industries' systems. However, access to financing was the major challenge as there are stringent and difficult measures to meet up with in order to access RECP financing from the financial institutions by the MSMEs. As a result, many industries advocated for flexibility on the conditions or a deliberate financial product/scheme to be put in place targeted at RECP programs. Various issues were highlighted as the most important for the industries that financial

institutions should consider in order to implement RECP. They rated on a scale of 1 – 5, where 5 meant the most important factor and 1 as the least important.

From the aggregate ranking of the factors across the five countries; low interest / cost of borrowing ranks at 68%, quick disbursements of loans at 56%, convenient location of financial institution at 56%, convenient repayment period at 53%, quality of service of the financial institution staff scored 50% and absence of requirement for immovable property as collateral at 47%. All factors had high level importance which demonstrated the need for banks and other financial institutions to consider a well targeted RECP financial scheme. Figure 4 below shows support and incentives needed by MSMEs to prepare bankable proposals.

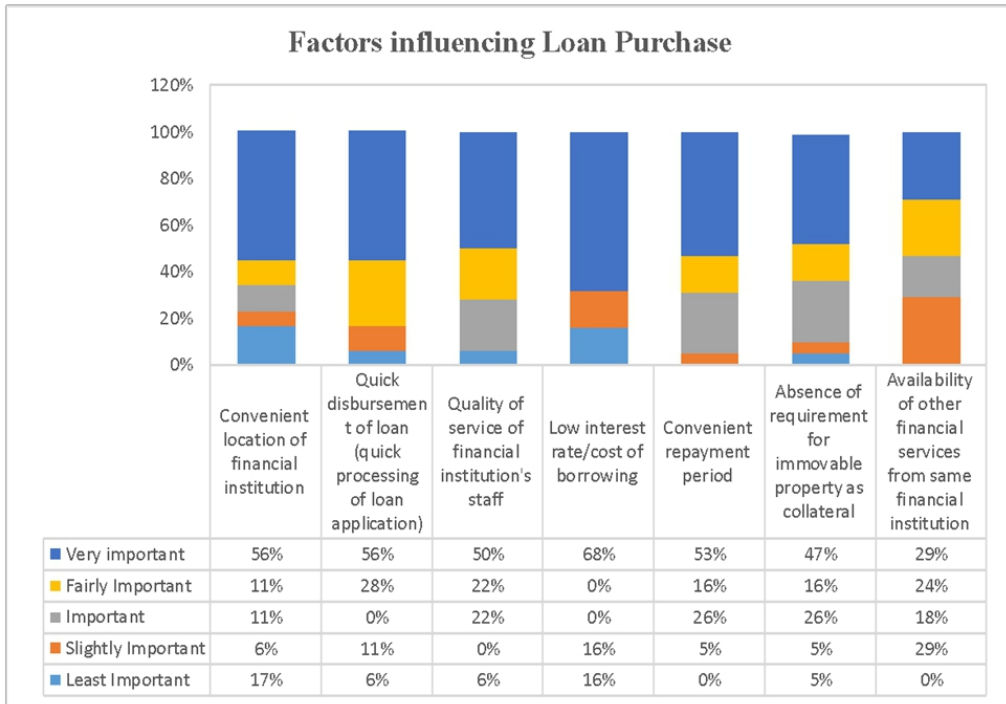


Figure 4 - MSMEs needs for development of bankable proposals

4.2.3 Investment financing by MSMEs

The current methods of financing by MSMEs are ideally through their own internal funds from retained earnings or owner/shareholders. Few industries attempt to use debt financing from banks because of the perceived constraints.

Internal funds / retained earnings is the most preferred but limits financing for RECP initiatives because of high amounts required for RECP projects. The internal funds are mainly used for day to day running of the business needs or recurrent expenses. Using internal funds / retained earnings ranks the highest, as a method of investment financing: Tanzania at 100%,

Burundi at 50%, Uganda at 88%, and Kenya at 83% while Rwanda was at 80%. Using owners' / shareholders contribution Tanzania had the lowest ranking at 5%, Burundi standing at 50%, Uganda at 63%, Kenya at 40% and Rwanda at 30%. Borrowing from private banks or state-owned organizations, Burundi leads at 50%, followed by Tanzania at 17%, Kenya and Rwanda come third with 20% while Uganda stands at 2%. Figure 5 shows various methods of RECP financing.

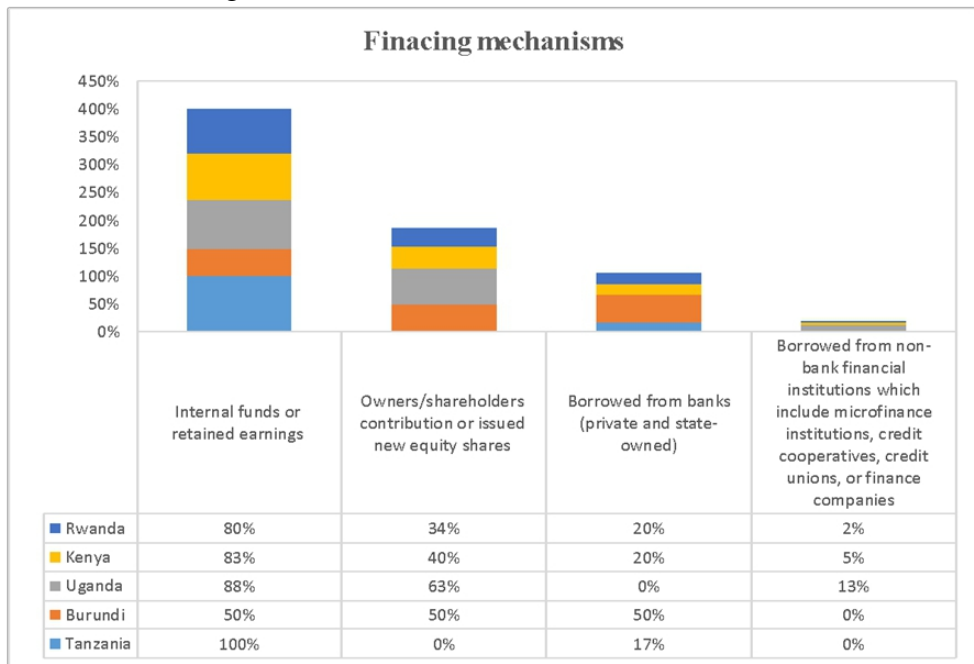


Figure 5 - Current prevailing financing mechanisms for industries in EA

4.2.3 The constraints for increased RECP investment

A bulk of the MSMEs interviewed consider RECP as a relatively new initiative in the region. Only the ones visited by the NCPCS were conversant with the RECP programs. This has impacted negatively on the potential for increased investment on RECP and its scale-up. Up to 62% of the total interviewees across the 5 countries cited lack of awareness of any form available for external financing. This was followed closely by lack of knowledge. Consequently, creating awareness of possible RECP investment and knowledge of the programs would significantly change the figures observed in the survey. Lack of awareness of any external funding for Burundi and Rwanda was, at 95% and 97% respectively, Uganda at 50%, Tanzania at 67% while in Kenya, only 24% claimed not to be aware. Due to the low awareness, most industries use internal funding towards the RECP programs but this is at the very minimal level e.g. installing transparent roofing material

for solar lighting within the production plants. Major RECP programs are not undertaken by the internal funds due to their magnitude. This also proves to be a major constraint. Figure 6 shows the prevailing constraints to RECP investments.

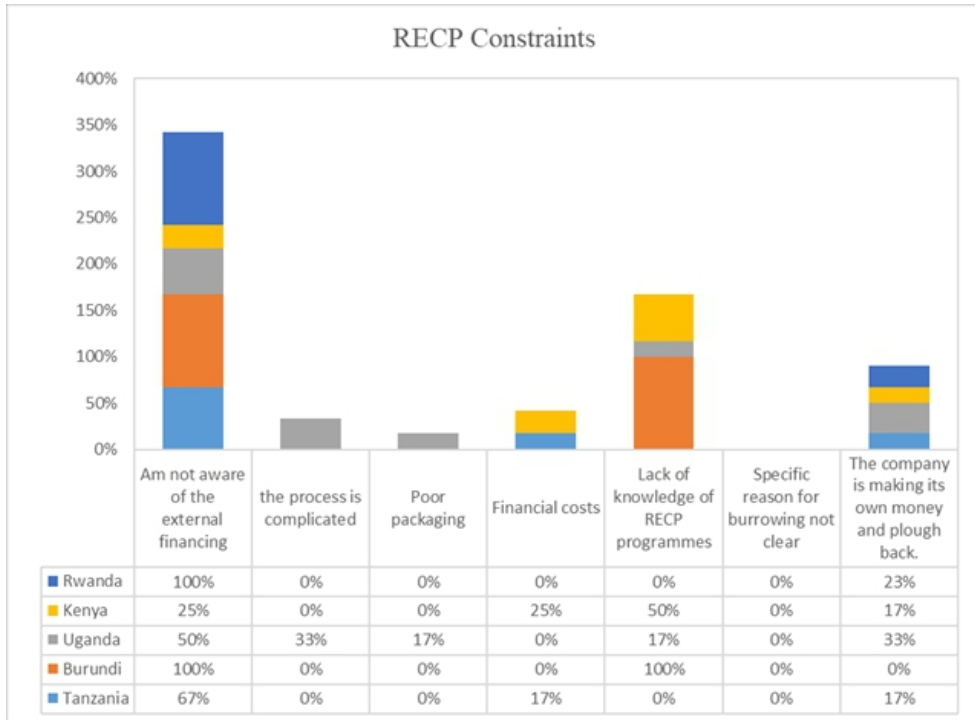


Figure 6 - Constraints in implementing RECP programs

The number of financing instruments for RECP initiatives available to MSMEs in the EA region continue to grow. However, several factors hinder their use, including lack of knowledge on their availability among the target MSME population and a perception that they are not worth the effort required to apply for them. As a result, MSMEs engage only in cheaper and more basic resource efficiency improvements that they can finance with their own resources or through grants that do not require much information from them.

Lending levels from the supply side is low. Majority of the firms indicated they required financing to undertake RECP initiatives however, the financial institutions interviewed did not have special products geared towards RECP. It was noted that financing RECP initiatives required special products from the financial institutions as the rate of return was low, making the FIs shy away from financing, due to long tenors and perceived high risks. In some financial institutions, in some countries there was zero awareness and no arrangements or schemes were available towards RECP financing. MSMEs are treated just as any other regular customer and the focus for the majority of

financial institutions is business prospects and profitability and/or quick turn over at the shortest period.

The financial institutions tend to shy away from RECP projects due to anticipated long tenors and perceived high risks. In Uganda only 25% of the financial institutions interviewed claim to have done lending towards RECP initiatives, Rwanda stands at 10%, and Kenya with the highest number of financial institutions claim the RECP concept being a new concept. Tanzania is at 10% while Burundi is the lowest scoring 2%. Figure 7 below offers a detailed explanation.

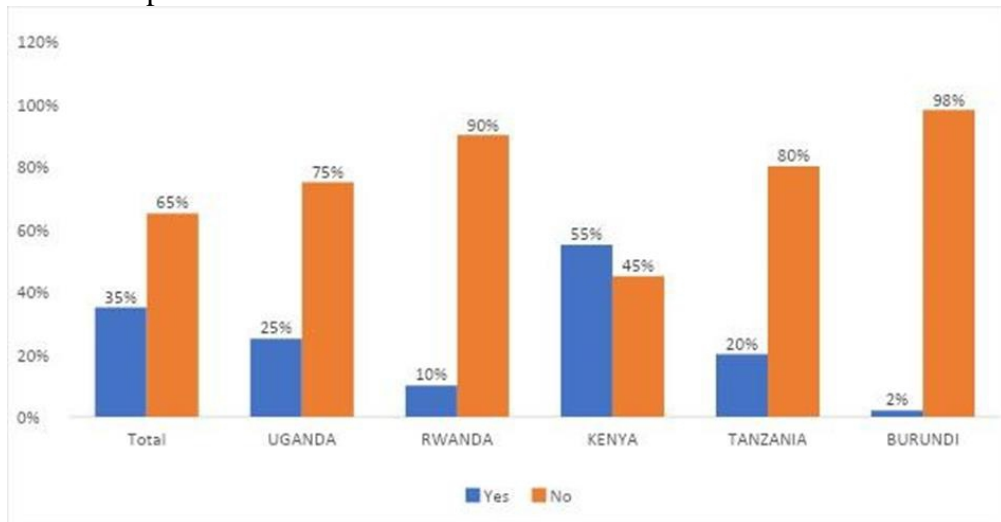


Figure 7 - Support for RECP Initiatives by financing institutions

The major obstacles from the results are eluded mainly due to low awareness and lack of internal mechanisms to cater for these MSMEs. Based on the field results, there is a willingness to develop RECP centered projects by the financial institutions as long as they have a clear, bankable plan for the projects after advancing such credit, a developed security system for funds advanced to avoid issues of falling behind repayment schedules, educate the firms on how to structure their projects to be able to cushion banks from the effects of delayed implementation plans. Figure 8 below shows that most banks have not established any working relationship with organizations offering RECP services which make RECP not well known in the banking institutions.

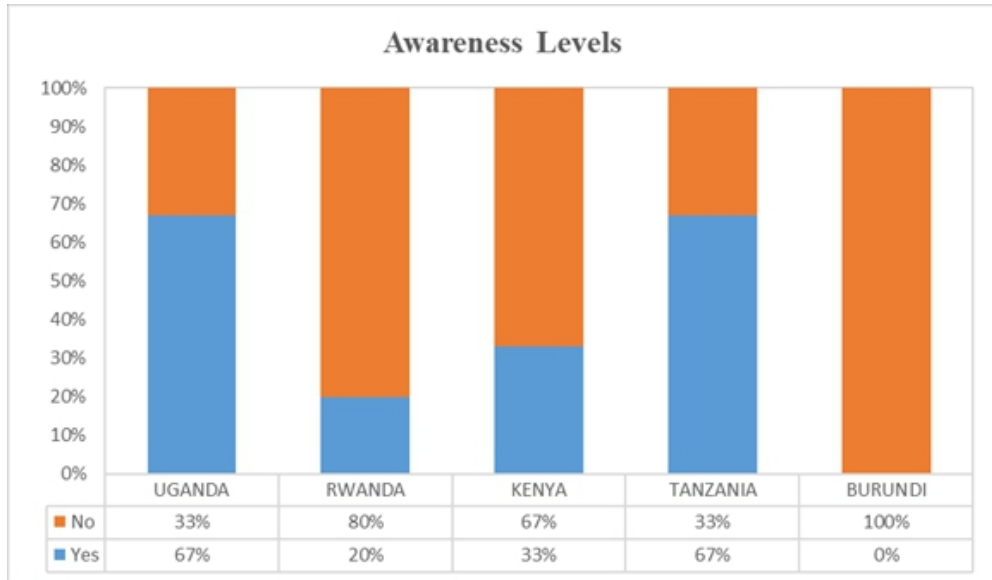


Figure 8 - RECP Awareness levels within financial institutions

From the results above, it is evident that most banks have not established any working relationships with organizations offering RECP services which make the RECP concept not well understood in the banking institutions.

4.3 The Need for advisory services

Increasingly, MSMEs in Africa and East Africa in particular view Resource Efficient and Cleaner Production (RECP) to be an important business issue. It is for this reason that all actors should find ways of supporting this initiative. The biggest challenge from the findings has consistently been lack of financing. Most banks generally do not have a deliberate policy on financing RECP.

The industries showed overwhelming support towards the RECP initiative. Up to 80% claimed that they are willing to pay for the services compared to the financial institutions. This willingness to pay for advisory services is driven by the benefits that have been witnessed by the industries already involved in RECP implementation. These advisory services are vital to enable the firms to be able to get financing for RECP from the financial institutions. So far, the RECP projects that have been implemented have shown significant improvement within the industry. As such, they would like to learn more technological aspects related to RECP. Figure 9 shows firms' willingness to contribute towards RECP.

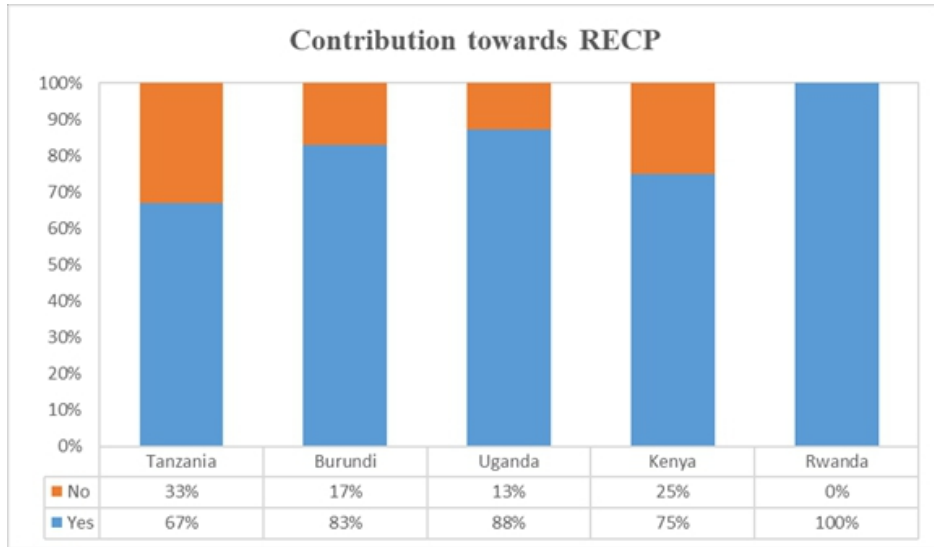


Figure 9 - Firms willingness to contribute towards RECP.

In terms of the percentage contributions, the industries are willing to pay. Majority returned a score of between 10% – 20% of the total amount of RECP cost services. However, there were reservations given the fact that they didn't know what the real total cost of the advisory service would be. Additionally, they were alive to the fact that RECP training is not cheap but would pay the required amount if specified. However, this was more for the industries that are large with more than 150 employees. Figure 10 explains the percentage distribution of what both industries are willing to pay.

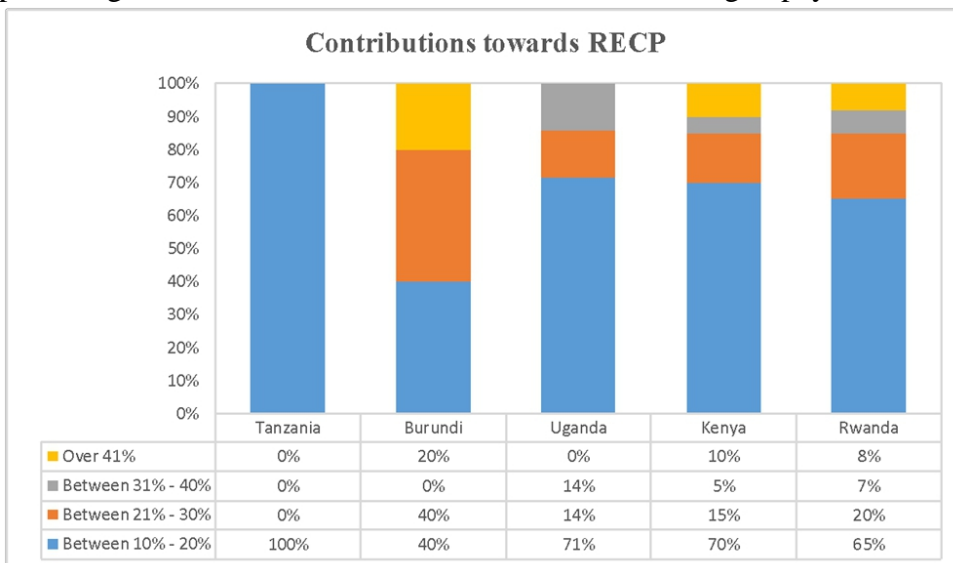


Figure 10 - Percentage Range industries are willing to contribute towards RECP advisory service

4.4 Financial Schemes

Resource efficiency and cleaner production, is an important strategy for developing countries to grow their economies in a sustainable manner. However, informational, technical and economic barriers often limit the implementation of such strategies in the private sector, particularly among smaller enterprises. MSMEs' investment in RECP may be inhibited by supply and demand conditions. On the supply side, there has been limited availability of technical and financial assistance to help companies identify and fund RECP initiatives. Business registration and collateral, as well as inadequate accounting systems and poor preparation of financial proposals were found to be the key constraints to successful RECP financing.

Studies have shown this to be common in Africa and the developing world in general. Supply may be inhibited by lack of in-country funding, administrative costs for managing small loans, competing priorities for government policies and private sector funding and generally stringent rules for financing MSMEs. On the demand side, many MSMEs may not be knowledgeable about the financing options available to them, or may not be willing to seek the options because they do not have the capacity to accomplish that.

4.4.1 Available Financial Schemes in the Market

As much as the RECP concept is gaining momentum in Africa, not much has been done to come up with a workable financial scheme. Around the globe, the United Nations Industrial Development Organization (UNIDO), Europe and Asia have developed various schemes geared towards promoting uptake of RECP initiatives. This study considered a number of schemes in various sectors across the world for incorporating RECP in their operations. This included;

Firstly, a roadmap for scaling up resource efficiency in Israel based on the experience from the UNIDO MED TEST II component, implemented as part of the SwitchMed programme. The roadmap addresses all aspects of mainstreaming resource efficiency in Israel and offers a wide range of instruments to respond to the needs of industries, from technical assistance at management and policy levels to financing opportunities, aligned with the regulatory system.

In 2009, UNIDO undertook detailed research on financing mechanisms for cleaner production and environmentally sound technology (CP/EST) in MSMEs around the world. Latin America featured prominently in this research, as the region was observed to be leading in terms of funding opportunities. These initiatives consisted of government tax incentives for purchasing clean technology (exemption from customs duties and value added tax), special/EST bankrolling offered by private banks and governments, as

well as general credit line for SMEs provided by banks. Some of the findings included a confirmation that available schemes were under-utilized by MSMEs and this was caused mainly by lack of information on funding options and appropriate financial and accounting systems.

Secondly, in Romania a study on scaling up RECP for sustainable industrial development recommends that implementing RECP requires a systematic and continuous approach for identification and evaluation of the existing inefficiencies and monitoring the enterprise level results. Solutions are proposed to intensify applications of RECP methods, practices and techniques and innovative approaches are used to facilitate the expansion of RECP application and transfer of existing experiences and best practices to a larger number of enterprises.

AfDB has successfully implemented a credit guarantee scheme for fertilizer financing in Africa. This scheme was conceived as an initiative to improve agricultural productivity by providing finance to “debottleneck” the use of fertilizers. This study further provides solutions to identifying financial institutions, beneficiaries and the technical assistance required.

The European Union’s EU4 Business was designed to contribute towards MSMEs’ access to finance in EA countries. The government-led MSME promotion mechanisms that do not have an explicit focus on RECP (e.g. interest and collateral support for lending to MSMEs in Georgia) can also potentially help MSMEs take out loans to finance their RECP measures. However, it was suggested that the potential of these measures to improve material efficiency and reduce negative environmental impact should be carefully monitored. It is also important to note that there is government support in this particular scheme in Europe.

The above schemes were reviewed mainly due to the fact that the developed countries have in most instances embraced RECP to a wider extent, financing for these initiatives is readily available, policy and regulatory support from their Governments exist.

4.4.2 The proposed Financial Schemes

The overarching strategy of the scheme is to improve uptake of the RECP initiatives. Further the aim of the scheme is to support participants in the chosen value chains in accessing sufficient financing capital to expand their activities. A key angle of the approach is to leverage the available capital within the sponsoring entity by getting commitment from financial institutions via an unfunded credit risk guarantee scheme or a revolving fund, as local financial institutions have long undeserved the RECP sector in particular.

A hybrid kind of scheme(s) was developed comprising a guarantee scheme and a revolving fund. These proposed options are detailed in the sections that follow:

Guarantee Schemes

The findings of this study recommends a guarantee scheme whereby the Government and or development partners provide a guarantee to commercial banks at 50% and the enterprises would be required to raise 50% collateral to unlock funding to enterprises.

Revolving fund

Since most MSMEs indicated the lack of capacity to raise the 50% collateral, we propose a revolving fund supported by the development funds to set aside a kitty to cater for this category of enterprises. Additionally, a rigorous process has been put in place to implement these two models of financing.

Conclusion & Recommendations

Based on the results from the study across the EA partner states, the firms interviewed confirmed that they have been exposed to various RECP programs and are at different levels of implementation of the same. Developing water efficiency and effluent reduction options, developing materials efficiency and waste reductions options and energy efficiency, emerged as most implemented RECP programs across the LVB region. Tanzania, Burundi and Uganda led on implementation of water efficiency and effluent reductions initiatives with 100%, 67%, 86% of the firms having undertaken these initiatives respectively. The results indicated that Rwanda and Kenya had 32% and 17% of the firms that had undertaken these initiatives respectively. The figures clearly indicate that Kenya ranks low in implementing this particular RECP initiative (developing water efficiency and effluent reductions).

The results further show that initiatives by firms relating to developing materials efficiency and waste reductions had high scores across the LVB region; Tanzania stood at 100%, Burundi 83%, Uganda 86%, Kenya 84% and Rwanda 83%. This parameter stood out as the most important, averaging 70% across the region. Looking at the energy efficiency, the countries scored as follows; Tanzania returned a score of 83%, Burundi 67%, Uganda 43%, Kenya 84% and Rwanda 67%. Tanzania and Kenya are the leading countries in implementing this attribute.

While there is a growing number of financing instruments available to MSMEs in the EA region, there is no particular product that deliberately targets resource efficiency and cleaner production initiatives. What exists are conventional bank products. There are several factors limiting or contributing to this situation, including low awareness of the RECP concept in the Financial Institutions (FIs) space, MSME's lack of knowledge on the same and a perception that RECP is not worth the effort required to apply for them. As a

result, MSMEs pursue cheaper and more basic resource efficiency improvements that they can fund with their own money or through grants that do not require as much information (requirements) from them.

The study results also show that most of the financial institutions tend to shy away from RECP projects due to anticipated long tenures and the inherent high risks. In Uganda, only 25% of the financial institutions interviewed claim to have done lending towards RECP, Rwanda scored 10%, while Kenya, with the highest number of financial institutions, indicated a lack of awareness on RECP financing, returning a score of 10%. Tanzania scored 10%, while Burundi is the lowest at 2%. It is clear that the concept of RECP financing is not grounded in the financial industry space.

In the role of advisory services, the consultancy performed a market survey to unearth the willingness of industries to pay for advisory services as well as the type of advisory services required by the industry specific to the sector. The industries showed overwhelming support towards the RECP initiative, up to 80% claimed that they are willing to pay for the services. The key advisory services required that came out of the study include; training on preparing bankable proposals, capacity enhancement for enterprise employees and feasibility studies of the RECP initiatives.

These findings provide pre-requisites for developing and implementing suitable financial mechanisms for RECP sustainability. These pre-requisites, designed to remove the above barriers include;

1. Create more awareness on participating financial institutions, clients and firms in order for every participant to have a better understanding of the RECP initiative.
2. Raise awareness of the RECP activities among the various firms that could implement these projects. This will entrench deeper into the enterprises.
3. Conduct sufficient research on viable projects for banks to be able to craft products that can support the initiatives.
4. Develop credit guaranteed schemes that are beneficial to both customers and financiers.
5. Have regular engagements with stakeholders to have a buy-in of the projects via monitoring and evaluation (M&E) to measure the impact of the investment.
6. Streamline certification of enterprises practicing RECP and put in place a provision for awards to encourage good practice.
7. Have government intervention through supportive legislation to encourage RECP participation by the private sector, RECP should not be voluntary but should be guided by law.

8. Enterprises / MSMEs should fully embrace financing / paying for advisory services offered by both NCPCs, Business development officers and Bank advisors.

RECP is well embraced especially by the industries that have implemented some of the initiatives. The initiatives have proven to be beneficial to the organization. The impact of RECP has been largely on improved profit margins, environmental and efficiency within their systems. They are very much willing to pay for advisory services especially on technical issues. However, the major constraint for implementation is the cost, as most industries use internal funds/ earnings to run both recurrent expenses and RECP. Recurrent expenses are given priority over RECP thus limiting its implementation. Borrowing for the purposes of RECP is a challenge given the current economic situation, where most companies claim they are not profitable which poses a risk in the event of default. In addition, the Financial Institutions rules and regulations make it difficult to access the funds. Financial Institutions are not conversant with RECP and do not have products targeted for RECP initiatives. They are not very much willing to finance the RECP initiatives given to low awareness, perceived risks, long term tenure, no guarantor, making it a challenge for MSMEs and makes it necessary to have a financial scheme that will be suitable for both parties in order to sustain RECP initiatives.

References:

1. Abor, Joshua, and Joshua, and Nicholas Biekpe, 2007, *Small Business Reliance on Bank Financing in Ghana" Emerging Markets Finance and Trade* 43(4): 93-102
2. Beck, T., L.F Klapper, and J.C. Mendoza. 2010. The Typology of Partial Credit Guarantee Funds around the World. *Journal of Financial Stability* 6, 10-25
3. Beck, Thorsten.2013, *Bank Financing SMEs - Lessons from Literature*, National Institute Economic Review 225 (1): R23-R38
4. Bek, Demirguc-Kunt and Maksimovic 2008, *Banking Services for Everyone? Barriers to Bank Access and use around the World*, The World Bank Economic Review
5. Coleman, S. (2000), Access to Capital and terms of Credit: a comparison of men and women-owned small businesses, *Journal of small business Management*, Vol.38, No.3 pp.37-52
6. Cosh, A.and Hughes, A. (Eds) (2003), *Enterprise Challenged: Policy and performance in the British SME Sector for Business Research*, Cambridge

7. Deakins, D. and Hussein, J.G (1993), Risk assessment with asymmetric information: a case study of Lending decisions by Banks, *UKMER journal*, Vol.3 No.2 pp.11-23
8. Gudger, M., 1998. *Credit Guarantees: An Assessment of the State of Knowledge and New Avenues of Research, Food and Agriculture Organisations*, United Nations
9. Hancock, D., J.A. Wilcox, 2007, *The Repercussions on Small Banks and Small Business of Bank Capital and Loan Guarantees*. Wharton Financial Institutions Centre Working Paper Number 07-22
10. Kirimi E.K. (2012). *The influence of cost leadership and differentiation strategies on the relationship between people oriented capital and competitive advantage of Kenyan firms certified by international standards organizations*, Unpublished PhD thesis, University of Nairobi.
11. *Public Credit Guarantees and Access to Finance*: Juan Carlos Gozzi, and Sergio Schmukler May 2016
12. *Roadmap for Scaling up Resource Efficiency in Israel*, Weltz Centre for Sustainable Development
13. *Scaling up Resource Efficiency and Cleaner Production for a sustainable Industrial development* Aida Szilagyi, Marian Mocan
14. Tatiana Chernyavska: *Opportunities and barriers to promoting RECP financing in Georgia*
15. UNEP (2015), *Resource-efficient and cleaner production*. United Nations Environment Programme, Nairobi
16. USEPA (2014), *Economic Incentives*. US Environmental Protection Agency, Washington
17. Van Berkel R (2010), Evolution and diversification of National Cleaner Production Centres (NCPCs), *Journal of Environmental Management* 91 (7): 1556-1565
18. Wang X (2011) Exploring trends, sources, and causes of environmental funding: a study of Florida Counties. *Journal of Environmental Management* 92(11): 2930-2938
19. Williamson D, Lynch-Wood G, Ramsey J (2006) Drivers of environmental behaviour in manufacturing SMEs and the implications for CSR. *Journal of Business Ethics* 67:317-330



ESJ Social Sciences

Les mécanismes d'exécution des projets de développement durable en Côte d'Ivoire

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[Doi:10.19044/esj.2021.v17n1p220](https://doi.org/10.19044/esj.2021.v17n1p220)

Submitted: 26 August 2019
Accepted: 22 January 2021
Published: 31 January 2021

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Cite As:

Kouassi K.B. & Adon K.P. (2021). *Les mécanismes d'exécution des projets de développement durable en Côte d'Ivoire*. European Scientific Journal, ESJ, 17(1), 220.

<https://doi.org/10.19044/esj.2021.v17n1p220>

Résumé

Cet article vise à analyser les mécanismes de réussite et de rupture d'avec les pratiques non viables, de la mise en œuvre des projets de développement durable dans la ville d'Abidjan. Il s'agit de mécanismes sociaux dont le rôle dans les projets s'accroît avec la vision globale du grand Abidjan. Ensemble de stratégies et de moyens de contournement, ces mécanismes sont souvent inefficaces et inadaptés pour affronter les résistances sociales face au développement durable. En lieu et place des mécanismes institutionnels dans les actions publiques, ont été élaborés des mécanismes sociaux et d'arrangement entre les opérateurs économiques et les agents publics chargés de mettre en œuvre le développement durable. Cette situation freine les initiatives des villes durables en Côte d'Ivoire.

Mots clé : Mécanismes sociaux, développement durable, exécution de projets, Abidjan

Enforcement Mechanisms for Sustainable Development Projects in Côte d'Ivoire

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Abstract

This article aims at analysing the mechanisms of success and break with unsustainable practices in the implementation of sustainable development projects in the city of Abidjan. These are social mechanisms whose role in the projects grows with the global vision of Abidjan. As a set of strategies and means of circumvention, these mechanisms are often ineffective and unsuitable for dealing with social resistance to sustainable development. Instead of institutional mechanisms for public action, social mechanisms and arrangements between economic operators and public agents responsible for implementing sustainable development have been designed. This situation hampers sustainable city initiatives in Côte d'Ivoire.

Keywords: Social mechanisms, sustainable development, project implementation, Abidjan

Introduction

Les revendications des pays en développement pour un ordre économique plus équitable, a fait monter les critiques à l'égard du modèle de développement industriel du fait des impacts environnementaux provoqués par les activités économiques ayant une incidence considérable sur les ressources planétaires (Gisèle Belém, 2006). Ainsi, la Côte d'Ivoire apparaît comme le pays le plus menacé par les défis du développement durable. Le contexte ivoirien présente la même situation socio-environnementale, que de nombreux pays à faible revenu, caractérisée par les inondations, le développement des quartiers précaires, la concentration des populations dans la zone littorale urbaine et industrielle avec un taux de pauvreté croissant (CEA, 2012). Les effets des changements climatiques et la baisse de la pluviométrie sont récurrents et se manifestent (Allah K. R., et Babacar C. & Grégoire, L. J., 2015) par la disparition annuelle de près d'un tiers de treize millions d'hectares de forêts en Afrique.

Malgré l'adoption par la Côte d'Ivoire en 1994 d'un livre blanc de l'environnement mettant en évidence les principaux problèmes environnementaux et à la définition d'un plan d'action pour l'environnement en 1995, la situation environnementale ne s'est pas améliorée. C'est pourquoi

certaines acteurs non gouvernementaux du développement ont initié des mécanismes pour atteindre les objectifs du développement durable (ODD). C'est pour cette raison également que le développement durable est perçu comme une table où se développent des mécanismes politiques, institutionnels et personnels. Ainsi, les acteurs (l'Etat, les collectivités locales, les opérateurs économiques et les populations) se rencontrent pour prendre des engagements, et se partager le même champ d'intérêts de développement.

La préservation de l'environnement, les objectifs de croissance économique et le développement économique local dans ce contexte relève des acteurs communaux, qui œuvrent pour le bien-être de leurs populations conformément aux objectifs du développement durable (ODD). Ainsi, devant la complexité de multiples enjeux, l'usage des mécanismes comme levier d'action s'impose aux acteurs pour réussir à engager les communes de la ville d'Abidjan dans la dynamique des villes durables. Un mécanisme social est un ensemble de combinaisons non institutionnelles mobilisées et construits, concrets et observables qui permettent de suivre des procédures, des actions et des engagements pour mettre en œuvre des projets de développement durable. Quelles sont les mécanismes utilisés par les communes de la ville d'Abidjan pour faire exécuter leurs projets de développement durable ou pour rendre la ville d'Abidjan plus durable ? Ces mécanismes contribuent-ils à mettre en œuvre des projets de villes durables par les communes de la ville d'Abidjan ?

I. Methodologie de l'étude

1. Les communes de l'étude

L'investigation a eu lieu essentiellement dans quatre communes : d'abord dans la commune d'Adjamé MACACI (SODECI) et Williams ville ; ensuite dans la commune de Cocody (Blockhaus et Anono) ; aussi dans la commune de Port-Bouët (au centre pilote et au bord de la mer) ; puis à Yopougon (à la zone industrielle). Le choix de ces zones communales a été motivé par les considérations suivantes.

D'abord, les activités industrielles et économiques se développent au détriment de l'environnement (Nyassogbo, 2011) dans ces communes urbaines où la densité des activités commerciales sur les trottoirs des rues a favorisé des déchets urbains. Par ailleurs, ces zones présentent à la fois des traits de similitudes de dégradation et sources de pollution de l'environnement. Il a été observé les mêmes types d'occupation de l'espace dans ces différentes zones même si les activités développées sont de nature différente. Ces espaces urbains sont définis comme des sites où la mise en œuvre des projets de développement durable rencontre de réelles difficultés, du fait de l'impossible construction du triptyque économie, environnement et social par les acteurs du développement qui ont des positions contradictoires. Ainsi, ce qui compte

pour les entrepreneurs, c'est comment trouver un espace pour rentabiliser leurs activités quel que soit la nature l'espace public occupé. Pour les acteurs communaux, le rôle traditionnel qui leur était dévolu n'a pas évolué au regard de la nouvelle gouvernance du développement durable. Ce qui justifie le choix des communes, c'est que le rapport du club de Rome (Meadows et al. 1972) a reconnu qu'il y a dans un contexte mondial d'interdépendances et d'interactions des différents acteurs du développement, cinq facteurs critiques (l'explosion démographique, la production alimentaire, industrialisation, l'épuisement des ressources naturelles et la pollution) du développement durable. Trois facteurs relevant principalement des pratiques de l'activité humaine sont identifiés comme éléments de la dégradation de l'environnement (Deville, 2010), une population à caractéristique jeune, une forte pression démographique sur les ressources et l'occupation de l'espace qui, de ce fait accroissent sensiblement la production des déchets urbains. Ces communes ont alors été choisies pour des raisons relevant d'un état de saturation humaine mettant en difficulté les projets de développement entrepris par les autorités communales.

Ensuite, la situation géographique a été le second critère de choix. Les communes d'Adjamé, Port-Bouët et Yopougon ont été définies comme des communes populaires et Cocody comme une commune résidentielle. Adjamé de sa position géographique, est une zone commerciale où se vendent les produits industriels. Elle est un espace d'écoulement de produits, ouvert et d'accès facile contrairement aux autres communes. Ainsi à partir du positionnement des dix communes composant la ville d'Abidjan, Port-Bouët et Yopougon présentent les mêmes caractéristiques socio-environnementales puisqu'il y a de la pollution à cause des zones industrielles. Port-Bouët représente environ 12,3% (ONU-habitat, 2012) de l'agglomération d'Abidjan. Quant à la commune de Yopougon, elle a jusqu'à aujourd'hui représenté la commune la plus peuplée d'Abidjan avec une estimation de plus d'un million habitant (INS, 2014). Cocody a été choisi parce qu'elle a été longtemps considérée comme la principale commune résidentielle de la ville d'Abidjan.

2. La collecte des données d'étude

La collecte des données a été réalisée avec des guides d'entretien concomitamment à une observation semi-directive des sites affectés par l'usage des activités humaines dans les espaces communaux de la ville d'Abidjan. Les méthodes de travail utilisées, notamment l'enquête qualitative, a permis de mener des entretiens auprès des responsables municipaux en charge d'environnement, les chargés d'étude des institutions, les responsables de petites et moyenne entreprises et les responsables d'ONG. Ces entretiens ont permis de constater que les communes d'Adjamé, Cocody, Port-Bouët et Yopougon ont été des zones urbaines polluées du fait de la densité des activités

commerciales et industrielles. Quant à la seconde méthode quantitative, un questionnaire a été administré à 150 ménages dans les différentes zones d'étude de la ville d'Abidjan. Ce qui a permis d'évaluer leur niveau de connaissance des différentes dimensions du développement durable des projets communaux initiés dans ces différentes localités.

3. Traitement et analyse des données

Les informations recueillies sur les mécanismes, développés par les acteurs du développement durable dans le contexte spécifique de la ville d'Abidjan, ont été saisies à l'aide d'un ordinateur, d'un matériel informatique Microsoft Word avec le logiciel X-Pro pour les données quantitatives. Les informations recueillies des entretiens ont été traitées à partir de l'analyse de contenu. Et les données quantitatives ont été analysées au moyen du logiciel sphinx pour apporter des réponses aux interrogations formulées sur les enjeux du développement durable, mais aussi de renforcer les informations des entretiens semi-libres. Un aspect de l'exploitation des données qualitatives a permis d'obtenir les résultats suivants.

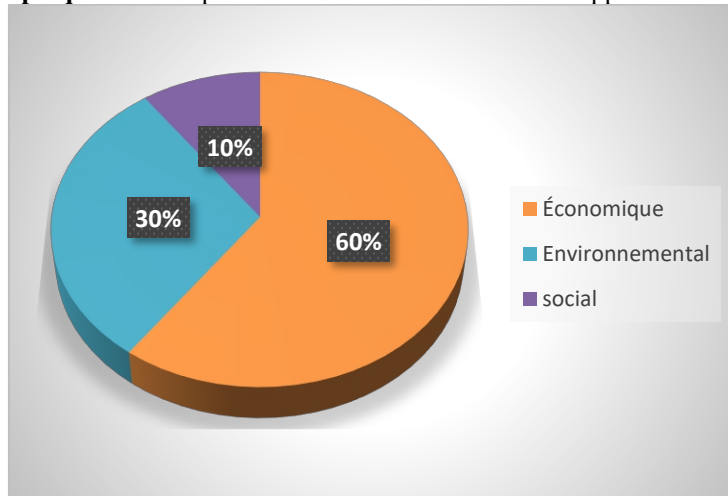
II. Resultats

Les résultats issus de l'analyse des données peuvent se présenter sous trois axes.

1. Les mécanismes des entreprises et des acteurs communaux

1.1. Les trois dimensions du développement durable

Graphique 1 : Perception des trois dimensions du développement durable



Source : données d'enquête 2018

La mise en œuvre du développement durable par les communes s'articule autour de trois dimensions économiques, environnementale et sociale. L'enquête a révélé que, dans l'échantillon étudié, 60% des actions

réalisées portent sur l'économie, 30% des acteurs ont un objectif économique sur les objectifs environnementaux et 10% ont un rapport avec la dimension sociale. Dans la majorité des cas, peu de dimensions de durabilité sont illustrées, dans les trois dimensions le résultat a été peu significatif. Ce qui permet de retenir que ces dimensions de la durabilité du développement durable ont été comme un enjeu entre les acteurs qui se sont partagés plusieurs ressources dans le champ social du développement. Conformément aux hypothèses, le modèle de croissance économique de développement durable reste dominant dans l'échantillon étudié. Ainsi, plus de 60% des activités réalisées portent sur la croissance économique et 40% seulement sur l'environnement et le social.

Toutefois il est à noter que les projets de développement durable réel n'ont été mis en œuvre que dans des cas rares. En effet, une entreprise est un entrepreneur social qui développe des activités à but lucratif. Les entreprises ont souvent été citées comme des acteurs de pollution de l'environnement. Les productions de ces dernières sont critiquées ces dernières années dans les pays du nord comme au sud. Ainsi, le développement durable a fait son entrée dans les réflexions des grandes entreprises industrielles. Or l'espace urbain de la ville d'Abidjan notamment dans les communes, représente les lieux où se produit l'activité industrielle. En effet, l'accès d'entrée aux grandes entreprises d'Abidjan, a été interdit aux agents publics des collectivités déconcentrées et des responsables communaux chargés du développement durable. Ces barrières contre ces acteurs du développement durable à l'entrée de ces entreprises de production s'est traduit par des refus de visite des mairies au sein des sites de production des entreprises.

Alors pour pouvoir assurer leur mission de développement durable envers ces entreprises, les agents communaux ont développé des stratégies de contournement qui consistent à se rattacher aux structures habilitées à mener une étude de prospection dans les entreprises. Les réponses données par deux responsables communaux (un responsable de la mairie et un responsable du district) interviewés, au sujet des entreprises qui polluent l'environnement dans leurs différentes communes, permettent de découvrir les voies de contournement : « on est allé voir les gens de CIAPOL¹ ; c'est avec eux que nous sommes partis à FILTISAC² ». Le second a dit que : « on est parti avec les gens de CIAPOL sinon quand le district va là-bas seul ils ne nous reçoivent pas ».

Ces brefs résultats issus d'entretien prouvent que l'appropriation du développement durable par certains acteurs n'est pas encore effective. Ce sont donc des relations de méfiance qui emportent sur les relations de

¹ Centre Ivoirien AntiPollution

² Filatures, Tissages, Sacs - Côte d'Ivoire (FILTISAC), est une unité de fabrication de sacs en fibre naturelle

collaborations ou de coopération pour l'exécution des projets de développement durable.

1.2. Le mécanisme développés par les agents du district d'Abidjan

Le district est une collectivité territoriale autonome qui intervient dans toutes les communes ressortissantes de la limite de son territoire propre. Dans ce contexte de développement durable, tous les acteurs communaux ont cherché à valoriser leur savoir et, à mettre en œuvre leur expérience au profit du développement durable. Le district a proposé une série d'action s'inscrivant dans cette vision de réduction des effets environnementaux des activités humaines et les dépenses dans les administrations. Ce sont des mécanismes par lesquels ont été exécutés tous les aspects des projets dans le processus du développement durable. Il s'agit aussi d'une expérience d'adaptation qui ne perçoit pas l'environnement comme un objectif mais une condition qui conduit à l'intégration des deux autres aspects relatifs aux mécanismes de développement durable. Pour le responsable en charge d'hygiène et d'environnement du district d'Abidjan, la procédure consiste à « *d'identifier d'abord les entreprises très polluantes, changer le système qui là et mettre en place un nouveau système. Ensuite, on va voir deux entreprises très polluantes, on les fait fonctionner par coco au lieu d'essence, et à la fin on essaie de voir l'écart si c'est toujours le même problème d'argent. Si on voit qu'avec le coco on dépense moins, on abandonne l'utilisation de l'essence pour consommer ce qui est moins cher* ». A ce mécanisme, le district a encore mis en place un système permettant de détecter la pollution de l'environnement dans la ville d'Abidjan. Celui-ci démontre qu'à partir des installations, un appareil peut donner des informations sur la qualité de vie. C'est le cas des agents de la SODEXAM³ installés par le district dans leur zone de couverture. « *Il y a des agents de la SODEXAM qui collectent des données pluviométriques dans chaque commune de la ville d'Abidjan. Il y a un agent dans chaque commune qui relève le niveau de pluviométrie dans la commune et le district passe pour ramasser les ordures* ». C'est un mécanisme qui est adapté au contexte d'environnement. La rupture avec le modèle traditionnel nécessite la transformation de nouvelles technologies performantes avec une conversion ou formation des acteurs qui s'appuie sur des compétences professionnelles. Cela nous permet de comprendre l'inadaptation des matériels de gestion de l'environnement face aux nouveaux défis.

³ Société D'Exploitation de développement Aéroportuaire Aéronautique Météo

2. Les mécanismes de gestion environnementale et de la salubrité urbaine

2.1. Mécanisme de gestion de l'environnement communal

La gestion environnementale a été un enjeu compétitif qui fait appel à un esprit de créativité et d'imagination pour surmonter les problèmes environnementaux. Dans la ville d'Abidjan, les efforts des communes en matière de gestion de l'environnement, notamment d'assainissement du milieu, s'est traduit par des mécanismes propres liés aux communes. Cela suppose que pour s'adapter à la situation, résoudre la question de salubrité et de nettoyage, une seule chose s'impose à eux, l'invention. Parallèlement à cette situation, certains auteurs ont développé un système de proximité avec les populations de leur commune. Il s'agit des personnes ressources qui peuvent les aider à faire écouter et à mobiliser. C'est un mécanisme qui a permis à un grand nombre de résidents des quartiers d'être informée et de s'impliquer dans les activités qui concernent les actions publiques de leurs communes. Selon les propos d'un responsable de la commune d'Adjamé, les mécanismes développés pour la gestion de l'environnement paraissent édifiants. « *Les chefs de quartiers nous aident quand il y a les grands ménages. On travaille avec les ONG. Ils ont leurs activités propres à eux. On est en train de voir comment créer les communes de salubrité au niveau de la commune* ». D'autres mécanismes ont été mis en œuvre par les agents de la commune d'Adjamé pour résister aux pratiques de la salubrité. C'est le cas de la gestion de la salubrité confiée aux entreprises privées. C'est une pratique qui consiste à confier la gestion de la salubrité à des entreprises privées sous-traitantes. En effet, face aux contraintes liées aux ressources matérielles, technologiques et financières faisant défaut à la gestion de la salubrité, différentes localités municipales ont préféré solliciter l'aide de ces entreprises. Cette approche adoptée révèle une gestion non participative des populations résidentes et l'incapacité de ces dernières à assurer leurs tâches environnementales. Ce mécanisme traduit la limitation des technologies et le manque de priorité accordé aux besoins des résidents à faible revenus.

2.2. Mécanisme de gestion de la salubrité urbaine

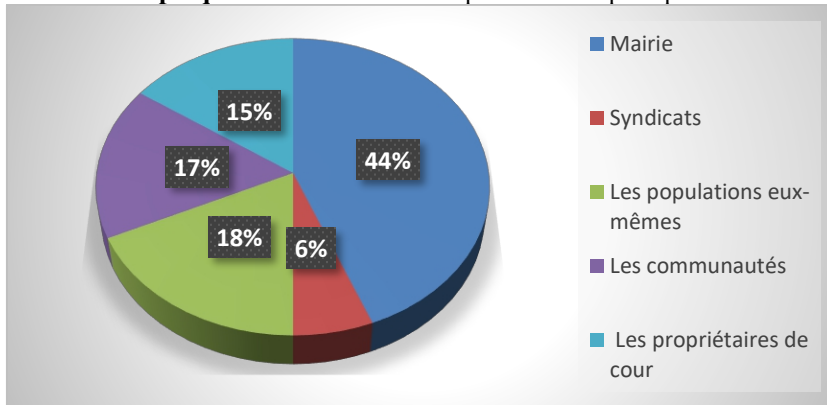
L'Agence nationale de la salubrité urbaine est un établissement à caractère industriel et commercial (EPIC) créé le 4 octobre 2007. Elle a pour mission la planification, l'extension, l'équipement des infrastructures de salubrité urbaine, la maîtrise d'ouvrages délégués de tous travaux d'entretien et de réhabilitation des infrastructures, l'assistance aux collectivités et le contrôle de conformité à la réglementation de l'intervention des entreprises prestataires du service public de salubrité aux termes de références définis par les cahiers de charge. A ce titre, elle a une compétence transversale, contrairement aux communes intervenant dans la limite de leur territoire, qui

lui permet d'intervenir dans toutes les communes de la ville d'Abidjan. Pour ce faire, et pour s'assurer de l'évolution des missions qui lui ont été confiées, elle a mis en place un mécanisme de suivi des mesures et des tâches confiées aux agents sur le terrain, les efforts déjà entrepris. Ce sont des comités de suivi et d'évaluation des missions que mènent les enquêtés sur le terrain pour suivre des activités de salubrité. Le chargé d'étude de la direction de la salubrité interviewé dans le cadre de cette étude a révélé que : « *nous avons des agents sur le terrain, nos agents sont chargés de suivre le suivi de l'adjudication, les projets ou les ordures ne sont pas ramassés en quarante-huit heures, il y a une sanction. S'il y a une nuisance, pour les voisins, la population nous interpelle, et nous prenons des mesures* ». Disons que cette structure s'est dotée d'un mécanisme qui traduit sa volonté d'améliorer la qualité de vie des abidjanais. Cette volonté est manifeste dans les textes réglementaires instituant l'Agence nationale de la salubrité urbaine, mais n'est pas suivie d'action. Cette volonté est en réalité une intention cachée. Car, ces déterminations élucidées par cette approche (Généviève Michon et al., 1995 : 21) ont montré qu'au niveau national un État peut être signataire d'une convention et ne rien faire pour en favoriser la mise en application sur son territoire si cela ne gêne pas ses intérêts. L'État peut aussi édicter des politiques environnementales qui ne sont que des façades. Le regard que nous portons sur l'environnement suffit pour s'en convaincre du retour à la situation initiale traduisant une absence de mécanisme de suivi des textes et mesures de protection de l'environnement. Ces idéologies sont plus fréquentes dans les structures étatiques et des acteurs communaux chargés du développement durable en Côte d'Ivoire.

3. Mécanismes de contournement et stratégies de maintien des acteurs

3.1. L'occupation du domaine public et mécanismes d'évitement des pertes d'activités

Graphique 2 : Raison de l'occupation de l'espace public



Source : donnée 2018

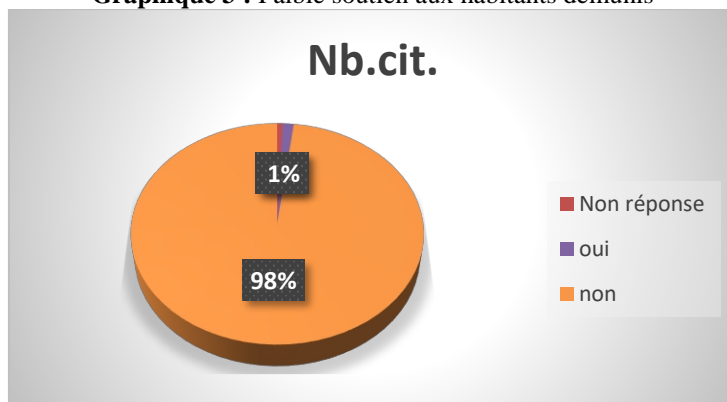
L'octroi du domaine public à des fins commerciales ou d'habitation est un enjeu qui relève de plusieurs acteurs. Cependant, conformément au décret d'autorisation d'occupation du domaine public, l'État ivoirien représente l'acteur principal (44%). L'idéologie qui sous-tend cet octroi (recherche de bien-être) de l'État pour ses populations traduit un acte de désengagement et d'irresponsabilité face à sa population croissante. En effet, devant l'ampleur des besoins d'une population ivoirienne qui croît annuellement à environ 3,7%, l'État a fini par trouver les domaines publics comme une soupape de sécurité, pour leur permettre d'avoir de meilleures conditions matérielles d'existence. Cette volonté des acteurs étatiques et communaux est aussi soutenue par des mécanismes.

Certaines activités développées en milieu urbain représentent une source de pollution et de maladies pour les abidjanais. Pour éviter que les effets induits par ces activités ne portent atteintes à la qualité de vie et au niveau de vie en général, les responsables communaux ont développé un système qui consiste à faire déplacer les activités identifiées comme polluantes. C'est ce qui ressort du discours d'un agent communal de Yopougon : « *certaines activités ne sont pas autorisées en ville. Pour exercer ces activités, on demande aux acteurs de nous produire une autorisation pour exercer en ville, pour les activités comme les fermes, les élevages de porc. On a été saisi dans ces cas, on avait été interpellé au quartier millionnaire, une dame qui élevait des lapins, elle avait constaté que ces lapins mouraient alors que à côté d'elle son voisin fait l'élevage de porc. Quand elle a invité un vétérinaire pour faire un diagnostic et qu'il est arrivé sur les lieux il a*

confirmé que c'est l'odeur des porcs qui tuaient les lapins. Quand elle nous a interpellés on est allé arrêter le monsieur, on l'a déplacé. Les activités industrielles quand aussi on les repère on leur demande de se délocaliser ». C'est un mécanisme qui permet aux concernés de conserver leurs emplois et d'avoir toujours des revenus et d'épargne de la population. Ce mécanisme est inclusif par rapports aux objectifs et aux dimensions du développement durable.

3.2. Mécanismes de maintien sur les voiries et les espaces publics

Graphique 3 : Faible soutien aux habitants démunis



Source : Donnée 2018

Le développement durable sensé prendre en compte les besoins des populations démunies tels que l'emploi, le cadre de vie, le logement etc, semble être détourné de ses fonctions par les autorités communales. En effet, un nombre d'abidjanais enquêtés sont marginalisés au sujet de la question de financement des projets. 98% ont répondu ne pas bénéficier de financement de projets. Cette situation est à l'origine de mécanismes initiés par les commerçants et des opérateurs économiques.

Dans la gestion de la salubrité les relations se construisent et se développent entre plusieurs acteurs en interactions. Dans la ville d'Abidjan, la gestion de la salubrité est perçue par certains commerçants ou opérateurs économiques comme une activité où les arrangements peuvent se faire. C'est le cas de certains commerçants qui développent un système de contrôle psychologique visant à agir sur la conscience des agents de salubrité de la mairie par des propos dissuasifs pendant les opérations de déguerpissement et des saisis de marchandises. A ce propos un agent de la mairie a affirmé : « *Quand tu trouves quelqu'un qui vend sur la route, si tu lui de mandes de se déplacer, il va commencer à te raconter tous les problèmes du monde. Il va commencer sur tes grands parents pour arriver sur tes petits fils* ». Ce discours semble s'inscrire dans une logique de faire comprendre les raisons de sa présence, raisons qui ne dépendent pas de lui mais des circonstances (pauvreté,

marginalisation, politique d'inégalité dans la répartition des ressources etc...). La remarque est plus accentuée chez les femmes que chez les hommes comme l'a témoigné dans les propos de cet agent « *Pardon je n'ai personne pour m'aider, je suis seule, mon mari est décédé, j'ai deux enfants, trois enfants qui vont à l'école c'est avec ça je les mets à l'école* ». Ces mécanismes traduisent le résultat d'une situation où les agents ont été mis en responsabilité devant la précarité des populations et de l'État. Ils traduisent également le retour imminent de certaines sur ces sites illégalement occupés. Ces mécanismes d'arrangement entre les opérateurs économiques et les responsables en charge de l'environnement ont été perçus par les premiers comme un acte généreux à l'endroit des plus démunis. L'agent communal de développement pense plus au bien-être de son prochain que l'Etat.

III. Discussion

Les acteurs de développement ont toujours eu recours aux mécanismes pour atteindre leurs objectifs de développement durable. Dans les collectivités locales où le développement durable connaît sa vogue, chaque acteur élabore en amont et en aval des mécanismes pour surmonter les éventualités pendant l'évolution de son activité. Cette approche des acteurs consiste à s'appuyer sur des mécanismes s'inscrivant dans un cadre de référence qui ne s'éloigne pas du cadre légal et des règles formelles.

A ce sujet, Éric de Roose et al., (2012), s'appuyant sur l'expérience paysanne et scientifique du Mali, montre que la restauration rapide de la productivité des sols en milieu tropical demande le respect de quelques règles. La première consiste à prévoir une gestion adéquate des eaux de surface (Cordons de pierres, haies, cuvette) ; ensuite à recourir à la macroporosité et à stabiliser (travail du sol et d'enfouille de matières organiques) ; à la revitalisation d'horizon de surface par l'apport de matières organiques fermentées, à nourrir les plantes, à adopter le ph du sol, à choisir les végétaux bien adaptés aux conditions locales. Ces idées ne s'éloignent pas de la pensée d'Aronson al. (1995) qui a montré que la « restauration » au sens strict, consiste à interrompre les facteurs de dégradations pour permettre au milieu de retrouver la flore et la faune primitive et plus tard les propriétés physiques, chimiques et biologiques des sols originaux.

Ces expériences maliennes, témoignent que les mécanismes mis en œuvre par les acteurs ivoiriens dans la dynamique du développement durable sont loin d'être adaptés au contexte. Contrairement aux premiers auteurs, ce sont plus tôt les documents de référence qui sont perçus (Georges Lanmafankpotin, 2012 : 1) comme un mécanisme pour atteindre les objectifs du développement durable. Celui-ci, à travers la référence aux textes et aux documents montre comment agir en évaluant la place de l'évaluation environnementale. Il s'agit, ensuite, de déterminer si les procédures liées au

montage des projets de politiques durables dans les domaines prioritaires retenus ont été appliquées. Enfin, les acteurs de développement peuvent proposer et analyser les instruments et mécanismes qui permettent par exemple aux populations victimes de l'environnement d'engager une démarche d'indemnisation. C'est un mécanisme centré sur un guide qui permet aux acteurs communaux et aux agents publics de s'en servir comme modèle de levier d'action pour l'exécution des projets de développement durable.

Quant à l'organisation des nations unies pour l'éducation, la science et la culture (UNESCO, 2014), elle a proposé un programme d'action global, une feuille de route destinée à l'ensemble des parties prenantes afin de faciliter et soutenir l'apprentissage et la formation sur les projets de développement durable. Selon l'UNESCO (2014), la feuille de route précise le but, les objectifs et les domaines d'actions prioritaires du programme dans le but de définir une orientation stratégique et de favoriser l'engagement des parties prenantes ainsi que les stratégies de mise en œuvre et de suivi. Il s'agit d'un mécanisme d'intégration et de prise en compte des intérêts des parties prenantes. Julien F. (2012) a abordé la question des mécanismes de levier d'action sous un autre angle pour la gestion intégrée des ressources en eau. Celui-ci a présenté un système qui prend en compte toutes les dimensions du développement durable, basé sur des valeurs d'éthiques sociales, de durabilité environnementale, l'efficacité et la rationalité économique. L'un des mécanismes proposés (Lavigne, 2015) pour réussir la réhabilitation des polders du Prey au Cambodge est celui est la stratégie de la mobilisation. Cette stratégie s'appuie sur la délégation des rôles attribués à chaque acteur impliqué dans le projet durable, la prise en considération des besoins des communautés et la stabilisation des institutions sociales. Cette stratégie selon l'auteur ne peut réussir que par la relation avec le chef d'équipe sur le terrain, basé sur les principes de réorganisation de la logique du projet autour de l'appui à la consolidation de l'association des usagers, considéré comme le cœur du projet. Enfin, le dernier principe est centré sur le rôle des acteurs institutionnel qui doivent jouer un rôle temporaire d'intermédiation entre les acteurs locaux et les institutions.

Conclusion

Les mécanismes mobilisés par les acteurs de projets de développement durable dans les communes de la ville d'Abidjan ont été souvent inadaptés au contexte environnemental. Si les mécanismes sont devenus pour un certain nombre d'acteurs aujourd'hui, un moyen pour atteindre les objectifs du développement durable, la quasi-totalité des mécanismes ne sont pas de nature à s'inscrire dans le processus de développement durable. Les autorités locales, le gouvernement et l'ensemble des acteurs de développement durable doivent

prendre ne doivent pas laisser aggraver la situation déjà vulnérable, liée à la pauvreté, au chômage dans les grandes villes d'Afrique (Nyassogbo, 2011). Les mécanismes de développement durable partiels initiés, ou de contournement des barrières expliquent l'absence de réactualisation des valeurs et des normes issus du modèle traditionnel. Ces mécanismes ont permis néanmoins, de construire et de développer des relations entre les acteurs privés et certains acteurs communaux dans la gestion de l'environnement, un système qui permet de préserver et de stabiliser les emplois des démunis. C'est un mécanisme créatif, motivé face à l'incapacité de l'Etat à satisfaire les aspirations des besoins des couches sociales défavorisées, élément essentiel tiré de la définition du développement durable. Cependant, ce type de mécanisme porté sur les arrangements pour maintenir dans l'activité des agents privés contribue à accentuer la dégradation de l'environnement. Le développement durable ne peut être possible sur la base de construction de rapports d'intérêts, et en trouvant dans les ressources publics un enjeu auquel chaque acteur peut compétir pour survivre. Ces mécanismes auxquels les acteurs de développement durable ne semblent pas accorder une importance particulière, nécessite une réflexion en profondeur et une prise de conscience réelle de tous les acteurs de la ville pour aspirer à un développement durable.

References :

1. AKAM M., (1994). Le marché de l'expertise et la place du socio-anthropologue : le chercheur en sciences sociales en Afrique. Illustrations camerounaises, *Bulletin de l'APAD* [En ligne], 7 | 1994, mis en ligne le 13 décembre 2007, consulté le 15 août 2019. URL : <http://journals.openedition.org/apad/2293>
2. ALLAH K. R., BABACAR C., et GREGOIRE, L. J., (2015). *Développement durable et émergence de l'Afrique*. Paris, Edition Grandvaux, 782 p.
3. ARONSON, J., et al., (1995). *Restauration et réhabilitation des écosystèmes dégradés en zones arides et semi-arides. Le vocabulaire et les concepts*, in R. Pontanier, A. M'Hiri, N. Akrimi, J. Aronson, E. Le Floch, (1995). *L'homme peut-il refaire ce qu'il a défait ?* John Libbey Eurotext, Paris, pp. 11-29.
4. BELEM G., (2006). Le développement durable en Afrique : Un processus sous contraintes. Expérience de l'industrie minière malienne, *Vertigo, la revue électronique en sciences de l'environnement*, vol. 7, 2, DOI : 10.4000/vertigo.2242
5. CEA, (2012). *Progrès de mise en œuvre du développement durable en Afrique*, Addis-Abeba, Commission Economique pour l'Afrique (CEA). Rapport récapitulatif, 54 p.

6. DEVILLÉ H., (2010). *Économie et politiques de l'environnement : Principe de précaution, Critères de soutenabilité, Politiques environnementales*, Paris, L'Harmattan, 297 p.
7. DIA Touré F. (dir.), (2012). Evaluation environnementale stratégique et citoyenneté. A la recherche de modèles adaptés de développement durable. *La revue liaison Energie-Francophone*, numéro 91, 112 p.
8. FORSTER R., (1994). L'expertise socio-anthropologique et la coopération technique – Quelques réflexions sur une relation délicate lors des 3èmes Journées de l'APAD à Bamako, *Bulletin de l'APAD* [En ligne], 7 | 1994, mis en ligne le 13 décembre 2007, consulté le 15 août 2019. URL : <http://journals.openedition.org/apad/2313>
9. INS, (2014). *Recensement Général de la population et de l'Habitat 2014 en Côte d'Ivoire*, Institut National de la Statistique (INS) de Côte d'Ivoire, En ligne :
<http://www.ins.ci/n/templates/docss/RGPH2014D.pdf>
http://www.ins.ci/n/documents/RGPH2014_principaux_indicateurs.pdf
<http://www.ins.ci/n/RESULTATS%20GLOBAUX.pdf>
10. JULIEN, F., (2012). *La gestion intégrée des ressources en eau en Afrique subsaharienne. Paradigme occidental, pratiques africaines*. Collection Géographie contemporaine. Presse de l'université de Québec.
11. LAVIGNE, D. P (2015). Un projet de développement qui n'aurait jamais dû réussir ? La réhabilitation des polders de Prey (Cambodge). *Anthropologie et développement*, Vol 42-43, pp. 59-84
12. LANMAFANKPOTIN, G. (2012). Procédures et pratiques de la participation du public en évaluation environnementale stratégique au Bénin. *LIAISON Énergie Francophonie*, Vol 91, pp. 46-53
13. MEADOWS, D., RANDERS, J., BEHRENS, W., (1972). *The limits to growth: a report for the club of Rome's project on the predicament of mankind*. Universe Books. En ligne URL: <https://www.clubofrome.org/report/the-limits-to-grow/> consulté le 19 avril 2018
14. MICHON G., DE FORESTA H., LEVANG P., (1995). Les stratégies agroforestières paysannes et développement durable : les agro-forêts à Damar de Sumatra. *Natures-Sciences- sociétés*, 3 (3). pp. 207-223
15. NYASSOGBO Kwami G. (2011). Les activités informelles et l'occupation des espaces publics. Les trottoirs de Lomé au Togo. *Revue de Géographie Tropicale et d'Environnement*, n°2, pp. 22-33
16. OBLE-LOHOUES J., et al. (1988). *La décentralisation : études comparées des législations ivoiriennes et françaises*. Centre de valorisation de la recherche de Toulouse, 228 p.

17. ONU-HABITAT (2012). *Cote d'Ivoire : Profil urbain de la commune de Port-Bouët*, Programme des nations unies pour les établissements humains, 32 p. En ligne : http://www.worldurbancampaign.org/sites/default/files/cote_d_ivoire_-_port_bouet.pdf?
18. ROOSE, É., DUCHAUFOR H. et DE NONI G. (Sous la dir.), (2012). *Lutte antiérosive. Réhabilitation des sols tropicaux et protection contre les pluies exceptionnelles*, Marseille, IRD Editions, 758 p.
19. ROOSE, É., DUCHAUFOR, H., et DE NONI, G., (2012). *Notion de transfert Ville-Campagne à Port-au-Prince (Haïti) : en quoi la ville peut-elle apporter une valeur ajoutée pour la campagne par la gestion de ses déchets organiques et la campagne vers la ville par la production de produits alimentaires ?* Marseille, IRD Editions
20. UNESCO (2014). *Feuille de route pour la mise en œuvre du programme d'action global pour l'éducation en vue du développement durable*. Paris, UNESCO, Résolution 37/C12, 38 p.



Testing the Moderating Effect of Gender on Job Satisfaction and Employees' Behaviours Relationship: Evidence from Mobile Telecommunication Network (MTN) Buea, Cameroon

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[Doi:10.19044/esj.2021.v17n1p236](https://doi.org/10.19044/esj.2021.v17n1p236)

Submitted: 01 October 2020
Accepted: 30 December 2020
Published: 31 January 2021

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Cite As:

Nwahanye E. & Atabong N.L.A. (2021). *Testing the Moderating Effect of Gender on Job Satisfaction and Employees' Behaviours Relationship: Evidence from Mobile Telecommunication Network (MTN) Buea, Cameroon*. European Scientific Journal, ESJ, 17(1), 236. <https://doi.org/10.19044/esj.2021.v17n1p236>

Abstract

With the quest of personalization of actions from their employees, organisations are constantly looking for means that allow them to consider all employees' needs in designing satisfaction tools that will enable their employees to portray adequate behaviours at work. The present study explored whether gender moderates the relationship between job satisfaction and employees' behaviours within a telecommunication company in Cameroon (MTN, Buea). A quantitative cross-sectional method was used with a sample size of 212 respondents. The hierarchical moderated regression and the multi-groups regression approach were used as data analysis tools. Findings showed that gender moderates the effect of job satisfaction on employees' commitment and employees' citizenship behaviour. It is a quasi-moderation and the size effect is characterized as low. Contrariwise, gender does not moderate the effect of job satisfaction on employees' intention to quit. These findings can help inform intervention efforts by identifying gender-fit job satisfaction tools and policies to optimize the adoption by each group of adequate behaviours in the company.

Keywords: Job satisfaction, employees' commitment, employees' citizenship behaviour, employees' intention to quit, gender, moderation

Introduction

As a result of globalisation, the business environment has become more complex, hostile, dynamic and uncertain, pushing organisations to get more involved in change management, focus on customer service, higher business ethics and so on. In that context, as all organisations are trying to carry out their activities effectively and efficiently to achieve high performance, managers began to realize that their employees represent their most valuable assets as depicted by the Resource-Based View Theory developed by Barney (1991). Employees play an important role in the provision of quality services. The availability and sustainability of the right type of human resources at the right time and right place is of essence to every organisation's success. A long term well-maintained employer-employees' relationship, not only ensures sustainability and competitive advantage over rivalry but also promotes good organisational culture and motivation at the workplace.

However, for employees to be able to act as the engine and life sustainers of their various organisations, they must be able to exhibit adequate behaviours. Adequate behaviours in this study refer to high commitment, high citizen behaviour and less intention to quit. All these behaviours can be explained by job satisfaction as indicated by previous studies (Hassan, 2014; Yumuk, 2018). According to Spector (2008), job satisfaction has the capacity to influence the attitudes of employees towards their work and various aspects of their jobs. However, as the 21st Century world of work is characterized by unprecedented levels of talents mobility as employees seek to satisfy their own individual demands, there is a growing concern among organisations about job satisfaction and employees behaviours (Lumley et al., 2011). More specifically, there is a continuous demand for personalization of actions by management. Personalization of actions is a means of separately meeting the needs of each employee effectively and efficiently. This personalization of actions poses a serious problem to managers because it is very expensive and, almost impossible to achieve as it requires that the organisation designs policies for their workers individually. This research intends to contribute to the resolution of this problem by investigating whether grouping workers into homogeneous groups can help to solve this problem of personalization of actions. This will be done by applying different strategies and policies to identified homogeneous groups instead of considering employees individually.

In this regard, several researchers have begun to consider the role of other factors such as gender, age, tenure, etc. in explaining the differences that

exist in the literature. In fact, since workforce diversity is being increasingly integrated into organisations as more and more women are seeking for equality in the workplace, research on job satisfaction and employee behaviour has taken a different turn (Rouhan & Xueyu, 2016). It has been observed over the years that the proportion of jobs filled by women in Cameroon workforce is increasing considerably. Furthermore, many previously male-dominated occupations are also being filled by women. This trend is likely to continue for two reasons: firstly, there is a remarkable increase in the supply of qualified female applicants on the job market and, secondly, there is also the need for organisations to integrate workforce diversity as a competitive tool. Considering the differences between females and males in terms of job satisfaction and employees behaviours therefore, gender is used in this research as a criterion in grouping employees (as moderator).

Recent studies are now looking at the role gender plays in explaining the effect of job satisfaction on employees' behaviours. It should be noted firstly that, previous research had shown that job satisfaction has an effect on employees' behaviours (Blau, 1964; Tett & Meyer, 1993; Carol & Richard, 2001; Nadiri & Tanova, 2010; Lumley et al., 2011; Bouckennooghe et al., 2013; Yumuk, 2018), and few studies have been conducted on the potential moderating effect of gender on the relationship between job satisfaction and employee commitment (Russ & McNeilly, 1995; Gangai & Agrawal, 2015), turnover intention (McNeilly & Goldsmith, 1991; Jiang et al., 2012; Ramatu & Kabiru, 2015; Mete & Sökmen, 2017) and OCB (Ren-Tao, & Heung-Gil 2009; Anu & Radhey, 2017; Awan et al., 2018). Secondly, the three behaviours have not been studied simultaneously in the same study. In addition, no study has been conducted in the telecommunication sector, one of the most competitive sectors in the world. The keen competition observed in this industry has made it necessary for companies operating in this sector to have a workforce that portrays adequate behaviours. In fact, this sector is confronted by the challenging task of developing effective methodologies to ensure the behaviours and attitudes of frontline employees that are consistent with the management and expectations of customers (Hartline & Ferrell, 1996). Based on the above, this research sought to provide an answer to the question: **does gender moderate the effect of job satisfaction on employees' behaviours?**

The objective of this article is to test the moderating effect of gender on job satisfaction and employees' behaviours relationship. In pursuing this objective, we propose to make two contributions to the literature on the field of research. First, we test the moderating role of gender in the telecommunication sector. Next, we test the precepts of the Social Role Theory (or Gender Socialization Theory) by Eagly (1987). To achieve this objective, a quantitative study was carried out among employees of MTN

Cameroon, Buea branch. Before presenting the findings of this study, the theoretical aspects on which this article is based and the research methodology are specified.

1. Gender as a moderator between job satisfaction and employees' behaviours

Although employees' behaviours may be engaged by both men and women, relevant literature provides substantial evidence of gender differences in the link between job satisfaction and employees' behaviours (Russ & McNeilly, 1995; Lyness & Judiesh, 2001; Khalid et al., 2009; Miao & Kim, 2009; Ramatu & Kabiru, 2015; Mete & Sökmen, 2017).

Theoretically, the Gender Socialization Theory also known as Social Role Theory by Eagly (1987) has been applied in previous studies to examine gender differences in employees' behaviours and, more specifically turnover intention. This theory suggests that due to differences in the biology and psychology of men and women, there are also significant differences in their attitudes and behaviours (Yelkur & Chakrabarty, 2006). In the workplace, for example, organisational citizenship behaviour (OCB) is expected more from women than men because some of its dimensions have been described as having certain womanly qualities such as helping others and being courteous (Lovell et al., 1999). In addition, women are more likely to leave their job than their male counterparts (Johnsrud & Heck, 1994; Zhou & Volkwein, 2004). Thus, satisfied men may not behave like satisfied women, making gender to be a potential moderator of the effect that job satisfaction can have on employees' behaviours.

Globally, gender is an important factor to take into account, given the differences that exist in men and women, regarding their family demands, their motivations to engage in work and non-work activities at work. As a matter of fact, the increasing presence of women in the labour market brought different challenges in their lives, because they have to comply with their professional and family duties, intensified by their maternal role (Stam et al., 2014).

Prior research has examined gender as a moderator in studies regarding the antecedents and consequences of employee turnover intention (McNeilly & Goldsmith, 1991; Jiang et al., 2012; Ramatu & Kabiru, 2015; Mete & Sökmen, 2017). McNeilly and Goldsmith (1991) explored whether gender and performance do moderate the relationship between job satisfaction and intent-to-leave of 138 salespersons drawn from a variety of companies, and showed a tendency for men and women salespersons to leave their current sales position because of dissatisfaction with different aspects of the job. In their meta-analytic investigation of 65 independent samples, Jiang et al. (2012) found that the negative relationship between on-the-job embeddedness and turnover criteria were stronger in female-dominated samples than in male-

dominated samples. Ramatu and Kabiru (2015) proposed a conceptual framework that depicts the relationship between job satisfaction and employee turnover intention, as well as the potential moderating role of gender in this relationship in the health sector in Malaysia. The authors' assumption was that gender will moderate the positive relationship between job satisfaction and employee turnover intention, such that the relationship is stronger for women than for men. Mete and Sokmen (2017) investigated the moderating role of gender on job satisfaction and turnover intention among employees in the hospitality industry. The results showed that gender moderates the relationship between job satisfaction and turnover intention. Male employees had higher significant turnover intention than female employees and female employees had higher job satisfaction than male employees.

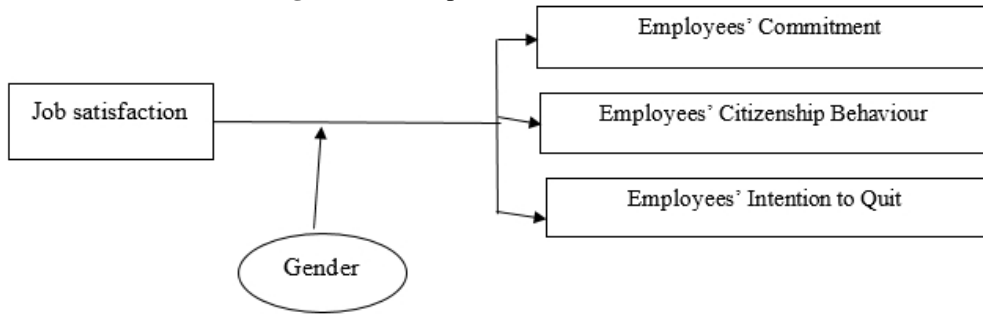
Concerning organisational commitment, Russ and McNeilly (1995) developed hypotheses about the moderating impact of experience, gender, and performance on the relationships among job satisfaction dimensions, organisational commitment, and turnover intentions. In the 168-person salesforce (approximately half women) of a publishing firm, gender did not moderate the links between job satisfaction dimensions (supervisor, co-workers) and organisational commitment. In Gangai and Agrawal (2015)'s study, gender did not moderate the relationship between job satisfaction and organisational commitment.

Regarding OCB, Awan et al. (2018) showed that gender moderates the effect between job satisfaction and sportsmanship one of the dimensions of OCB. Anu and Radhey (2017) conducted a study on gender differences between organisational citizenship behaviour and job satisfaction in the information technology sector intending to determine whether men and women really differ in the kind of behaviour they display. The result showed that gender moderates the relationship between organisational citizenship behaviour and job satisfaction and this relationship was stronger for females than for males.

2. Conceptual Framework and Research Hypotheses

In line with the Gender Socialization Theory assumptions and, the findings of related empirical studies, this study proposes a conceptual framework depicted in figure 1. This conceptual framework shows the relationship between job satisfaction and the three employees' behaviours retained in this study, as well as the potential moderating role of gender on this relationship.

Figure 1: Conceptual Research Framework



This framework is used to study the moderating role of gender on the relationship between job satisfaction construct and employees' behaviours in MTN-Buea, Cameroon. The unit of analysis for the study is the individual employee of MTN-Buea Cameroon. From this framework the following hypotheses are formulated:

H1: Gender moderates the effect of job satisfaction on employee commitment.

H2: Gender moderates the relationship between job satisfaction and employee intention to quit.

H3: Gender moderates job satisfaction and employee citizenship behaviour relationship.

3. Methodology

3.1. Data collection

Data used in this study were collected through questionnaires from 212 employees of MTN Buea selected using a stratified sampling technique (50% males and 50% females). As depicted in Appendix 1, the majority of them aged between 18-25 years (62.3%), are well educated with an undergraduate and postgraduate level of education (81.1%), and have been working for less than 5 years with MTN (95.8%). In addition to that, as observed in Appendix 2, it should be noted that male employees appear to be more satisfied (Mean = 3.3363 versus 3.2745 for females), more committed (Mean = 3.9015 versus 3.7049 for females), exhibit more citizenship behaviour (Mean = 3.3396 versus 3.1067) and paradoxically are more inclined to leave than their counterpart female employees (Mean = 3.4340 versus 2.7956).

3.2. Measurement of variables and reliability test

The scales included in Table 1 below were used to measure the variables for this study:

Table 1: Measures of variables and Reliability Test

Variables	Measurement	Reliability Test (alpha of Cronbach)
Job satisfaction	Minnesota Satisfaction Questionnaire scale of 20 items by Weiss et al. (1967)	0.845
Employee Commitment	Employee Commitment Survey containing 18 items by Meyer, Allen and Smith (1993) revised version scale	0.711
Employee Citizenship Behaviour	Organisational Citizenship Behaviour Scale of 13 items measuring just three of its dimensions, Helping behaviour, Civic Virtue and, Sportsmanship (Organ, 1964; Podsakoff et al., 1990)	0.653
Employee intention to quit	Employee intention to quit scale comprising 3 items by Mobley et al. (1979)	0.753
Gender	1 = Male 0 = Female	

The measures used are internally consistent and reliable following Ho (2006).

3.3. Data Analysis Methods

Two methods were used as data analysis tools: the hierarchical moderated regression and the multi-groups regression approach.

Hierarchical Moderated Regression

This method was used by Abdul Raziq et al. (2019) and Awan et al. (2018). In the moderated regression analysis, the moderator variable *gender* (G) is connected to the exogenous variable *job satisfaction* (JS) multiplicatively and is integrated into the analysis as interaction term *JS.G*, so that the moderator effect can be interpreted concerning its scope and significance. To test the moderator effect, the implementation of a hierarchical regression was used, whereby the variables are taken in the regression equation in several successive steps (Aiken & West 1991; Cohen et al. 2003). Assuming a pure moderation in the first step (Basic Model (1)), a regression model is formulated including both the predictor and the moderator variable. After that, in a second step (Interaction Model (2)), the product term is additionally taken into the regression equation (Aiken & West, 1991; Cohen et al., 2003; Holmbeck, 1997; McClelland & Judd, 1993).

$$EB_i = \beta_0 + \beta_1 JS + \beta_2 G \quad (1)$$

$$EB_i = \beta_0 + \beta_1 JS + \beta_2 G + \beta_3 JS * G \quad (2)$$

Where;

EB_i = Employee behaviour (Employee commitment, Employee Citizenship Behaviour, Employee Intention to Quit)

JS= Job Satisfaction,

G= Gender,

β_0 = Contant term,
 $\beta_1, \beta_2, \beta_3$ = coefficients of the respective explanatory variables

The validation of a moderating effect is judged first of all by the significance of β_3 belonging to the interaction term in the interaction model. Alternatively to the t-test for the regression parameter β_3 , the moderating effect is examined with the Fisher test whether the change of the coefficient of determination R^2 from the basic model to the interaction model is significantly different from zero. The change of the coefficient of determination (ΔR^2) is also a measure for the effect size of the moderator effect. The increase of the R^2 from the basic model to the interaction model indicates how much criterion variance is additionally explained by the product term and therefore can be ascribed to the moderator effect (Aguinis 2004). The strength of the moderator effect is determined based on the effect size index (f^2). Thus, this study assumes that there is moderation when there is a significant difference in the R^2 and f^2 ($\Delta R^2, \Delta f^2$) from the basic model to the interaction model. Globally, when these differences are greater than zero there is moderation.

Multi-groups analysis

With this approach, the whole sample was divided into two groups using the moderator variable (gender). Thereafter, an ordinary least square regression was conducted separately for each partial sample examining the relationship between job satisfaction and employees' behaviours as mentioned by Helm and Mark (2012). It is admitted that the difference of the regression slope of the estimated regression equations between the partial samples expresses the influence of the moderator variable. Thereby, the proof of moderator effect was based on the following consideration: in analyzing the effect separately in each particular moderator group, there should be a disparity concerning the strength of influence, the direction of influence or the significance of this effect. This disparity is expressed by the partial regression coefficients of the estimated regression equations. Thus, the moderator effect in this study was identified by a comparison of the partial regression coefficients (non-standard) of the regression equations as advocated by Jaccard et al. (1990) and Zedeck (1971). The existence of a moderating effect was then admitted when there was a disparity in the significance level and the coefficients of the different groups.

$$EB_i = \beta_0 + \beta_1 JS \quad (3)$$

4. Findings

4.1. Gender, a moderator of Job Satisfaction and Employee Commitment Relationship

Table 2 below presents the results related to the moderating effect of gender on job satisfaction and employee commitment relationship.

Firstly, from the hierarchical moderated regression analysis, it can be observed that all the regression coefficients in the basic model are statistically significant with $p < 0.01$ for job satisfaction (0.237) and $p < 0.1$ for gender (0.182), while for the interaction model just two of the three regression coefficients are statistically significant namely gender ($\beta_2 = -1.052$; $p < 0.1$) and the interaction term JS*G ($\beta_3 = 0.374$; $p < 0.05$). Based on the significance of β_3 belonging to the interaction term we can assume that there is a moderating effect of gender in the relationship between job satisfaction and employee commitment (Aguinis, 2004; Baltes-Gotz, 2006). However, we proceeded with the analysis to ascertain the moderation effect with alternative tests such as the Fisher Test to identify whether the change of the coefficient of determination R^2 from the basic model to the interaction model is significantly different from zero. From that perspective, it can be observed that the integration of the product term (combined effect of job satisfaction and gender) leads to an increase of R^2 with 0.021 and a change in $F=4.679$ significant at 5%. This result confirms the existence of a quasi-moderation. The effect size (f^2) of the moderating effect is 0.0227 and can be characterized as low according to Cohen et al. (2003).

Table 2: Moderating Effect of Gender on Job Satisfaction and Employees Commitment Relationship

Independent variables	Moderated Regression Analysis				Multi-groups Analysis			
	Basic Model		Interactive Model		Male Group		Female Group	
	B	t	B	t	β	t	β	t
Intercept (β_0)	2.930***	10.296	3.694***	8.170	2.642***	7.335	3.694***	8.175
JS (β_1)	0.237***	2.801	0.003	0.025	0.378***	3.556	0.003	0.025
G (β_2)	0.182*	1.951	-1.052*	-1.821				
JS*G (β_3)			0.374**	2.163				
R^2	0.056		0.076		0.108		0.000	
Adjusted R^2	0.047		0.063		0.100		-0.010	
F	6.153***		5.734***		12.646***		0.001	
ΔR^2			0.021					
f^2 (Effect Size)			0.0227					
F change			4.679**					

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$, β = unstandardized coefficients

Source: Authors, 2020.

Subsequently, for both characteristics of the moderator variable gender (subgroup 1: Male; and subgroup 2: Female), a separate regression of job

satisfaction on employee commitment was estimated and a check-up of the regression coefficients β_1 is carried out concerning a significant difference. From the findings, it can be observed that job satisfaction significantly affects employee commitment in the male group ($\beta_1 = 0.378$; $p < 0.01$), while it does not have a significant effect in the female group. Therefore, it can be concluded that gender moderates the effect of job satisfaction on employee commitment. This result is consistent with the result of the moderated regression analysis that attests a significant interaction effect of 0.374 with $p < 0.05$.

Globally, the above result is in line with our a priori expectation and, the theoretical framework of this study. Hence we accept our first hypothesis (H1) which states that “gender moderates the effect of job satisfaction on employees’ commitment”. This result indicates that men who are satisfied with their jobs tend to be more committed to their jobs than their female counterparts. This can be explained by the fact that averagely male employees are more satisfied than female employees in their jobs and therefore should be more committed (see Appendices 3 and 4). Also, male employees may feel more obliged than female employees to engage with their organisation as they may internalize the conviction that they should assist their organisation in achieving success. This result is contrary to those of Gangai and Agrawal (2015) and, Russ and McNeilly (1995) who showed that gender does not moderate the relationship between job satisfaction and employee commitment.

4.2. Gender, not a moderator in Job satisfaction and employee intention to quit relationship

Table 3 below presents the result of the moderating effect of gender on the effect of job satisfaction on employee intention to quit.

Table 3: Moderating Effect of Gender on Job Satisfaction and Intention to quit Relationship

Independent variables	Moderated Regression Analysis				Multi-groups Analysis			
	Basic Model		Interactive Model		Male Group		Female Group	
	B	t	B	t	β	t	β	t
Intercept (β_0)	2.223***	5.441	2.570***	3.918	2.638***	5.501	2.570***	3.643
JS (β_1)	0.175	1.439	0.069	0.347	0.239*	1.687	0.069	0.323
G (β_2)	0.628***	4.687	0.068	0.081				
JS*G (β_3)			0.170	0.676				
R ²	0.106		0.108		0.027		0.001	
Adjusted R ²	0.098		0.095		0.017		-0.009	
F	12.435***		8.421***		2.848*		0.104	
ΔR^2			0.002					
f ² (Effect Size)			0.002					
F change			0.457					

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors, 2020

From the hierarchical regression analysis, it can be observed that just the regression coefficient of gender in the Basic Model is statistically significant with $p < 0.01$ (0.628). For the interaction model, no regression coefficient is statistically significant. Based on the non-significance of the regression coefficient β_3 belonging to the interaction term we can assume that there is no moderating effect of gender in the relationship between job satisfaction and employee intention to quit. This is confirmed by the alternative Fisher Test whether the change of the coefficient of determination R^2 from the Basic Model to the Interaction Model is significantly different from zero, which shows that the increase in the coefficient of determination R^2 is not significant (change in $F = 0.457$ not significant).

Contrary to the above result, the multi-groups analysis findings show that job satisfaction significantly affects employee intention to quit in the male group ($\beta_1 = 0.239$; $p < 0.1$), while it doesn't have a significant effect in the female group. Therefore, it may be concluded that gender moderates the effect of job satisfaction on employee intention to quit. But, focusing on the previous analysis we maintain that gender does not moderate the effect of job satisfaction on employee intention to quit. Thus, we reject our second hypothesis (H2) which states that "*gender moderates the relationship between job satisfaction and employee intention to quit*".

However, focusing on the result obtained in the multi-groups analysis, male workers who are satisfied with their jobs will tend to have a higher intention to quit. This result contradicts the turnover intention models which globally show that turnover intention is a function of dissatisfaction and can be explained by the fact that male employees are always looking for better deals despite the satisfaction they receive from their current jobs. They are usually more mobile than their counterpart female employees, due to the dynamics of demands around them (more specifically family demands). It also contradicts the ideas of Khalid et al. (2009) who indicated that gender might moderate theoretically the relationship between job satisfaction and employee turnover intention, as women are more likely to leave their job because they have a weak attachment to the labour market. This finding confirmed those obtained by Mete and Sokmen (2017) who found out that male employees had higher significant turnover intention than female employees. It is by contrary to the findings of Ramatu and Kabiru (2015) who investigated the moderating role of gender between job satisfaction and employee turnover intention and found that the negative significant relationship between job satisfaction and employee intention to quit was moderated by gender. This relationship was stronger for women than men.

4.3. Gender, a moderator on job satisfaction and employee citizenship behaviour relationship

Table 4 presents the result of the moderating effect of gender in the effect of job satisfaction on employees' citizenship behaviour.

The finding of the moderated regression analysis shows that all the regression coefficients in the Basic Model are statistically significant with $p < 0.01$ for Job satisfaction (0.391) and $p < 0.01$ for gender (0.209), while for the Interaction Model, gender ($\beta_2 = -1.148$; $p < 0.01$) and the interaction term JS*G ($\beta_3 = 0.411$; $p < 0.01$) are statistically significant. From this perspective, it can be concluded that gender moderates the relationship between job satisfaction and employees citizenship behaviour as the coefficient β_3 belonging to the interaction term is significant. This result is confirmed by the alternative perspective in analysing the moderation effect through Fisher Test whether the change of the coefficient of determination R^2 from the Basic Model to the Interaction Model is significantly different from zero. It can be observed that the integration of the product term (combined effect of job satisfaction and gender) leads to an increase of R^2 with 0.043 and a change in $F = 12.176$ significant at 1%. This result confirms the existence of a quasi-moderation. The effect size (f^2) of the moderating effect is 0.058 and can be characterized as low according to Cohen et al. (2003).

Table 4: Moderating Effect of Gender on Job Satisfaction and Citizenship Behaviour Relationship

Independent variables	Moderated Regression Analysis				Multi-groups Analysis			
	Basic Model		Interactive Model		Male Group		Female Group	
	B	T	B	t	β	T	β	t
Intercept (β_0)	1.825***	9.251	2.665***	8.651	1.518***	6.732	2.665***	8.048
JS (β_1)	0.391***	6.677	0.135	1.447	0.546***	8.218	0.135	1.347
G (β_2)	0.209***	3.230	-1.148***	-2.914				
JS*G (β_3)			0.411***	3.489				
R^2	0.216		0.259		0.394		0.017	
Adjusted R^2	0.209		0.249		0.388		0.008	
F	28.808***		24.291***		67.541***		1.813	
ΔR^2			0.043					
f^2 (Effect Size)			0.058					
F change			12.176***					

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors, 2020.

Subsequently from the multi-groups analysis regressions, job satisfaction significantly affects employee citizenship behaviour in the male group ($\beta_1 = 0.546$; $p < 0.01$), while it does not have a significant effect in the female group. Therefore, it can be concluded that gender moderates the effect

of job satisfaction on employee citizenship behaviour. This result is consistent with the result of the hierarchical moderated regression analysis.

Globally, the above result shows that gender moderates the relationship between job satisfaction and employees' citizenship behaviour, and this is stronger for male employees than female employees. Hence, we accept our third hypothesis (H3) which states that "*gender moderates job satisfaction and employees' citizenship behaviour relationship*". This can be explained by the fact that satisfied male employees are usually deeply involved in exhibiting citizenship behaviour as most of their work is done in teams. They tend to be more helpful in their workplace, more involved and engaged with every activity of the company and have a high team spirit with co-workers than the female employees. This result confirms the findings obtained by Awan et al. (2018) and Anu and Radhey (2017). However, it contradicts the direction of the moderation obtained by Anu and Radhey (2017). They found that gender moderated the relationship between job satisfaction and organisational citizenship behaviour but the effect was stronger for female than male workers, while for this research the effect is stronger for male employees.

Conclusion

The study aimed at testing the moderating effect of gender on job satisfaction and employees' behaviours relationship in MTN Cameroon, Buea. The hierarchical moderated regression and multi-groups regression analysis were used as data analysis tools. Based on the findings, it appears that gender moderates the relationship between job satisfaction and two of the employees' behaviours retained in this study (employees commitment and employees citizenship behaviour). In addition, this moderation was a quasi-moderation with low effect and it was stronger for male employees than female employees, implying that male workers who were satisfied with their jobs were more committed towards their jobs and exhibited more citizenship behaviours than their counterpart female employees.

The findings reported may have some interesting implications for managers of MTN Cameroon. First of all, job satisfaction appears to be an important factor in enhancing adequate behaviours. Managers should put in place a corporate culture of job satisfaction by designing and conducting a satisfaction survey that will serve as a guide in designing job satisfaction tools and policies. Additionally, as the focus was on gender which changed the relationship between job satisfaction and employees' behaviours, this study recommends that managers should design satisfaction tools and policies on gender base as an alternative to the personalization of actions. Finally, since the moderations observed were stronger for male employees, the study advises the management of MTN to pay attention to and even consult male employees

by listening to their constructive suggestions. However, the management of MTN should not create gender stereotyping by collaborating more with male employees than female employees.

Despite its contribution, this research should be viewed in light of several limitations. Firstly, the data used was collected through self-administered questionnaires, since it was a cross-sectional study, this makes it biased because the perception of individuals change from time to time and their responses to different questions most often depend on their state of being of that day, this limits a generalization of the study's findings. Secondly, this study focused only on three types of employees' behaviours amongst other behaviours that employees' portray at work making it difficult to determine whether those other behaviours like employee involvement, engagement and solidarity could have affected the results of the study. Thirdly, the study was only limited to MTN Cameroon, Buea branch.

To further this study, a longitudinal study can be realised to ascertain the dynamic effect over time. Also, the area of study can be extended to the telecommunication sector or even include other sectors of activity and therefore even call for comparative studies. Finally, other behaviours can be studied.

References:

1. Abdul Raziq, Ilyas, R. M., & Talpur, M. G. H. (2019). Impacts of Gender on Job Satisfaction and Work Motivation Relationship: A Case of Teachers in Balochistan, Pakistan. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 10 (13), 1-10. DOI: 10.14456/ITJEMAST.2019.170.
2. Aguinis, Z. (2004). Modelling Job Satisfaction and Work Commitment among Lecturers: A Case of UiTM Kelantan. *Journal of Statistical Modeling and Analytics*, 1 (2), 45-59.
3. Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and Interpreting Interactions*. New Publication.
4. Anu, P. P., & Radhey, S. (2017). Gender Differences in Organizational Citizenship Behaviour (OCB) and Motives underlying Organizational Citizenship Behaviours. *Psychology and Behavioral Science International Journal*, 4(2), 555633. DIO:10.19080/PBSIJ.2017.04.555633
5. Awan, R-U-N., Ali, G., & Anjum, S. (2018). The Moderating Role of Gender in the Relationship among Organizational Justice, Commitment, Job Satisfaction and Organizational Citizenship Behaviors of Secondary School Teachers. *Pakistan Journal of Education*, 35 (1), 97-112.

6. Baltes-Gotz. (2006). Relationship between Job Satisfaction, Job Performance Attitude Towards Work and Organizational Commitment. *European Journal of Social Sciences*. 18(2), 257-267.
7. Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17 (1), 99-129.
8. Blau, P. M. (1964), *Exchange and Power in Social Life*. Transaction Publishers, New York.
9. Bouckenooghe, D., Raja, U. & Butt, A. N. (2013). Combined Effects of Positive and Negative Affectivity and Job Satisfaction on Job Performance and Turnover Intentions. *The Journal of Psychology*, 147 (2), 105-123
10. Carol, D., & Richard, G. S. (2001). The Impact of Various Factors on the Personality, Job Satisfaction and Turnover Intentions of Professional Accountants. *Managerial Auditing Journal*, 16 (4), 234-245
11. Cohen, A. (2003). *Multiple Commitments in the Workplace*. Mahwah, NJ: Lawrence Erlbaum.
12. Cohen, J., Cohen, P., West, L. S., & Aiken, S. G. (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*. Mahwah, NJ: Erlbaum
13. Eagly, A. H. (1987). *Sex Differences in Social Behaviour: A Social-role Interpretation*. Hillsdale, NJ: Erlbaum.
14. Gangai, K. N., & Agrawal, R. (2015). Job Satisfaction and Organisational Commitment: Is it important for Employee performance?. *International Journal of Management, Business and Research*, 5(4), 269-278.
15. Hartline, M. D., & Ferrell, O., C. (1996). The Management of Customer-Contact Service Employees. *J Mark*, 60(4):52 –70.
16. Hassan, T. G. (2014). The Relationship between Perceived Organizational Support and Turnover Intentions in a Developing Country. *African Journal of Business Management*, 4(6), 942-952.
17. Helm, R., & Mark, A. (2012). Analysis and Evaluation of Mediator Effects in Regression Models: State of Art, Alternatives and Empirical Example. *Review of Managerial Science*, 6(4), 307-332. DOI 10.1007/s11846-010-0057-y
18. Ho, R. (2006). *Hanbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. Chapman & Hall/CRC, New York: USA.
19. Holmbeck, G. N. (1997). Toward Terminological, Conceptual, and Statistical Clarity in the Study of Mediators and Moderators: Examples from the Child-Clinical and Paediatric Psychology Literatures. *Journal of Consulting and Clinical Psychology*, 65, 599-610.

20. Jaccard, J., Turrisi, R., & Wan, C. K. (1990). Interaction Effects in Multiple Regression, *Sage University Paper Series on Quantitative Applications in the Social Sciences* 07–072. Sage, Newbury Park, CA
21. Jiang, K., Liu, D., McKay, P. F., Lee, T.W and Mitchell, T.R. (2012). When and how is Job Embeddedness predictive of Turnover? A Meta-analytic Investigation. *Journal of Applied Psychology*, 97 (5), 1077-1096.
22. Johnsrub, L., & Heck, R. (1994). A University's Faculty: Predicting those who will Stay and those who Leaves. *Journal of Higher Education Management*, 10 (1), 71-84
23. Khalid, S A., Jusoff, H. K., Ali, H., Ismail, M. Kassim, K. M., & Rashman, N. A. (2009). Gender as Moderator of the Relationship between OCB and Turnover Intention. *Asian Social Science*, 5 (6), 108-117.
24. Khalid, S. A., HJ.Kamaruzaman J., Hassan A., Mohammed, I., Kamsol, M. K., & Norshimah, A. R. (2009). Gender as a Moderator of the Relationship between OCB and Turnover Intention. *Asian Social Science*, 5(6), 108-117.
25. Lovell, S. E., Anton, J., Mason, C., & Davidson, A. (1999). Does Gender Affect the Link between Organisational Citizenship Behaviour and Performance Evaluation? *Sex Roles*, 41, 469-479.
26. Lumley, E.J., Coetzee, M., Tladinyane, R., & Ferreira, N. (2011). Exploring the Job Satisfaction and Organisational Commitment of Employees in the Information Technology Environment. *Southern African Business Review*, 15(1), 100-118.
27. Lyness, K. S, & Judiesch, M. K. (2001). Are Female Managers Quitters? The Relationships of Gender, Promotions and Family Leaves of Absence to Voluntary Turnover. *Journal of Applied Psychology*, 86 (6), 1167-1178.
28. McClelland, G., H., & Judd, C. M. (1993). Statistical Difficulties of Detecting Interactions and Moderator Effects. *Psychological Bulletin*, 114(2), 376–390.
29. McNeilly, K., & Goldsmith, R. E. (1991). The Moderating Effects of Gender and Performance on Job satisfaction and Intentions to Leave in the Sales Force. *Journal of Business Research*, 22 (3), 219-232.
30. Mete, E. S., & Sökmen, A. (2017). Exploring the Relationship between Job Satisfaction and Turnover Intention among Employees in Hospitality Industry: The Moderating Role of Gender. *International Review of Management and Business Research*, 6 (3), 1287-1298.
31. Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to Organisations and Occupations: Extension and Test of a Three-

- Component Conceptualization. *Journal of Applied Psychology*, 78(4), 538-551.
32. Mobley W., Griffeth R., Hand H., & Meglino B. (1979). Review and Conceptual Analysis of the Employee Turnover Process. *Psychology Bulletin*, 86(3), 493-522.
33. Nadiri, H., & Tanova, C. (2010). An Investigation of the Role of Justice in Turnover Intentions, Job Satisfaction and Organizational Citizenship Behaviour in Hospitality Industry. *International Journal of Hospitality Management*, 29, 33-41
34. Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational Leader Behaviors and their Effects on Followers' Trust in Leader, Satisfaction, and Organizational Citizenship Behaviors. *The Leadership Quarterly*, 1(2), 107-142.
35. Ramatu, A. A., & Kabiru, M. K. (2015). Does Gender Moderate the Relationship between Job Satisfaction and Employee-Turnover? A Proposed Model. *International Journal of Accounting & Business Management*, 3 (1), 254-259. DOI: 10.24924/ijabm/2015.04/v3.iss1/254.259
36. Ren- Tao, M., & Heung-Gil Kim (2009). Gender as a Moderator of the Relationship between Organizational Citizenship Behaviour and Team Effectiveness in China. *Asian Social Science*, 5(10), 98-108.
37. Ruohan, W., & Xueyu C. (2016). Gender Equality in the Workplace: The Effect of Gender Equality on Productivity Growth among the Chilean Manufacturers. *The Journal of Developing Areas* 50(1):257-274.
38. Russ, F. A., & McNeilly, K. M. (1995). Links among satisfaction, commitment, and turnover intentions: The moderating effect of experience, gender, and performance. *Journal of Business Research*, 34(1), 57-65. [https://doi.org/10.1016/0148-2963\(94\)00042-D](https://doi.org/10.1016/0148-2963(94)00042-D)
39. Spector, P. (2008). Introduction: Conflict in Organizations. *Journal of Organizational Behavior*, 29(1), 3-4. Retrieved from <http://www.jstor.org/stable/30162613>
40. Stam, K., Verbakel, E., & Graaf, P. (2014). Do Values Matter? The Impact of Work Ethic and Traditional Gender Role Values on Female Labour Market Supply. *Social Indicators Research*, 116(2), 593-610.
41. Tett, R. P. and Meyer, J. P (1993), Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, 46, 259-293.
42. Weiss, D., J., Dawis, R., V., England, G., W., & Lofquist, L., H. (1967) Manual for the Minnesota Satisfaction Questionnaire.

43. Yelkur, R., & Chakrabarty S. (2006). Gender Differences in service quality expectation in the Fast Food Industry. *Journal of Service Marketing Quarterly*, 26 (4), 141-151.
44. Yumuk, N. (2018). The effect of job satisfaction on organizational commitment. *Journal of Management Sciences*, 4, 21-56.
45. Zedeck, S. (1971). Problems with the Use of “Moderator” Variables. *Psychol Bull*, 76, 295–310
46. Zhou, Y., & Volkwein, J. F. (2004). Examining the Influence on Faculty departure intentions: A Comparison of tenured versus no tenured faculty at research universities using NSOPF-99. *Research in Higher Education*, 45 (2), 139-176.

Appendices

Appendix 1: Summary of Respondents’ Profile in frequencies and percentages

Variables and modalities	Frequencies	percentages	Cumulative percentages
Gender			
Male	106	50.0	50.0
Female	106	50.0	100.0
Total	212	100.0	
Age group			
18-25	132	62.3	62.3
26-35	54	25.5	87.8
36-45	25	11.7	99.5
55 and Above	1	0.5	100
Total	212	100.0	
Educational Qualification			
No Certificate	1	0.5	0.5
Primary	1	0.5	1.0
O-level	9	4.2	5.2
A-level	29	13.7	18.9
Undergraduate	118	55.7	74.6
Post-graduate	54	25.5	100.0
Total	212	100.0	
How long have you been working with the company (Years of Service)			
For 1 Year	63	29.7	29.7
For 2 Years	83	39.2	68.9
For 3 Years	37	17.5	86.4
For 4 Years	20	9.4	95.8
For 5 Years	6	2.8	98.6
For 6 Years	2	0.9	99.5
For 7 Years	1	0.5	100.0
Total	212	100.0	

Appendix 2: Descriptive Statistics

Gender		EMPLOYEES SATISFACTION	EMPLOYEES COMMITMENT	CITIZENSHIP BEHAVIOUR	INTENTION TO QUIT
Female	N	106	106	106	106
	Mean	3.2745	3.7049	3.1067	2.7956
	Std. Deviation	.47979	.66809	.49393	1.04357
	Minimum	2.05	2.28	1.54	1.00
	Maximum	4.25	4.94	4.23	4.67
Male	N	106	106	106	106
	Mean	3.3363	3.9015	3.3396	3.4340
	Std. Deviation	.61789	.70849	.53777	.90287
	Minimum	1.60	2.06	1.85	1.00
	Maximum	4.65	6.00	4.31	5.00

Appendix 3: Employees Job Satisfaction Appreciation

Statements	Percentages (%)						
	VD	D	N	S	VS	M	Std. D
The chances of advancement on this job	5.2	22.2	34.0	29.2	9.4	3.16	1.039
The working condition	2.4	17.5	34.0	32.5	13.7	3.38	1.002
The chance to different things from time to time	4.7	16.5	33.5	32.1	13.2	3.33	1.050
The chance to be "somebody" in the community	4.7	14.6	25.0	36.8	18.9	3.50	1.099
The way my boss handle his/her workers	7.5	12.7	25.9	32.5	21.2	3.47	1.178
The competence of my supervisor in making decisions	4.2	15.1	27.8	39.6	13.2	3.42	1.034
Being able to do things that don't go against my conscience	5.2	16.0	24.5	38.7	15.6	3.43	1.093
The way my job provides for steady employment	9.4	20.8	25.9	39.2	4.7	3.09	1.078
The chance to do things for other people	4.7	16.5	30.7	32.5	15.6	3.38	1.079
The chance to tell people what to do	3.8	12.3	29.2	37.7	17.0	3.52	1.032
The chance to do something that makes use of my abilities	5.7	16.0	28.8	25.5	24.1	3.46	1.182
The way company policies are put into practice	8.0	21.2	21.7	34.4	14.6	3.26	1.183
My pay and the amount of work I do	8.0	18.9	24.5	31.6	17.0	3.31	1.191
The freedom to use my own judgment	10.8	20.3	33.0	26.4	9.5	3.03	1.133
Being able to keep busy all the time	7.5	13.7	38.7	32.5	7.5	3.19	1.018
The chance to try my own methods of doing the job	10.8	28.8	22.2	29.2	9.0	2.97	1.174
The possibilities (chance) to work alone on the job	9.4	26.9	29.2	29.7	4.7	2.93	1.064
The way my co-workers get along with each other	8.0	11.8	37.3	35.4	7.5	3.23	1.024
The praise I get for doing a job	6.1	10.4	26.9	35.4	21.2	3.55	1.119
The feeling of accomplishment I get from the job	6.6	13.7	21.7	39.6	18.4	3.50	1.137

Appendix 4: Means of Employees Job Satisfaction items based on gender

	Statements	Mean	
		Female	Male
1	The chances for advancement on this job	3.25	3.07
2	The working conditions	3.37	3.39
3	The chance to do different things from time to time	3.14	3.51
4	The chance to be “somebody” in the community	3.58	3.42
5	The way my boss handle his/her workers (human relations)	3.52	3.42
6	The competence of my supervisor in making decisions	3.40	3.45
7	Being able to do things that don’t go against my conscience	3.35	3.52
8	The way my job provides for steady employment	2.99	3.19
9	The chance to do things for other people	3.30	3.45
10	The chance to tell people what to do	3.49	3.55
11	The chance to do something that makes use of my abilities	3.44	3.48
12	The way company policies are put into practice	3.50	3.03
13	My pay and the amount of work I do	3.48	3.13
14	The freedom to use my own judgment	3.00	3.07
15	Being able to keep busy all the time	3.14	3.24
16	The chance to try my own methods of doing the job	2.76	3.17
17	The possibilities (chance) to work alone on the job	2.72	3.15
18	The way my co-workers get along with each other	3.09	3.36
19	The praise I get for doing a good job	3.46	3.64
20	The feeling of accomplishment I get from the job	3.50	3.49



Moderating Effect of Firm Characteristics on the Relationship between Electric Power Outage Dynamics and Financial Performance of Manufacturing Firms in Kenya

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[Doi:10.19044/esj.2021.v17n1p256](https://doi.org/10.19044/esj.2021.v17n1p256)

Submitted: 21 November 2020

Accepted: 08 January 2021

Published: 31 January 2021

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Cite As:

Njiraini W.W., Mwangi M., Kaijage E., & Ganesh P. (2021). *Moderating Effect of Firm Characteristics on the Relationship between Electric Power Outage Dynamics and Financial Performance of Manufacturing Firms in Kenya*. European Scientific Journal, ESJ, 17(1), 256. <https://doi.org/10.19044/esj.2021.v17n1p256>

Abstract

Past literatures on the correlational link between electric power outage dynamics and performance of manufacturing firms, in most economies, have portrayed a controversial conceptual debate amongst scholars with little focus on the moderating role played by firm characteristics. This paper focuses on determining the effect of firm characteristics (capital structure) on the relationship between electric power outage dynamics and financial performance of manufacturing firms in Kenya. Positivism philosophical point of view and descriptive survey research design was utilized. A population of 447 manufacturing firms in Kenya, which were also members of Kenya Manufacturers Association, was selected out of which a sample size of 138 firms was drawn using stratified random sampling methodology. Structured questionnaires were utilized to collect data which involved drop and pick approach. The research results indicate that the relationship between electric power outage dynamics and performance of manufacturing firms in Kenya is not significantly moderated by firm characteristics. This study outcome

augments existing knowledge on electric power outage dynamics in relation to firm characteristics and financial performance. This is because it is evident that top management should not focus on capital structure as a conditional factor when making decisions aimed at enhancing firm financial performance under power outage conditions. The study has also made an input to the academic literature ascending from empirical reinforcement of tradeoff theory and pecking order theory in making determination on firms' capital investments. Policy makers and power utilities benefit in understanding the negative effect of power outages on the performance of firms are therefore guided in overseeing the planning and implementation of proper electricity infrastructure. Kenya Association of Manufacturers (KAM) will find these research findings useful in guiding their member firms on strategies to adopt to ensure continuous productivity and safeguard damages to the firm as a result of electric power outages.

Keywords: Electric Power Outage Dynamics, Firm Characteristics, Financial Performance

Introduction

Electricity is a fundamental input factor for many production processes and is also the dominant source of energy for firms (Karen, Erin & Qiong, 2015). The major role of energy in most firm productivity endeavors renders any deficiencies negative to production efficiencies and further results into a reduction in output (Abotsi, 2015). Inefficient supply of electricity is portrayed by electricity unreliability characterized by power outages and/or power quality oscillations (Eto et al., 2001). Although adverse influence of electricity power outage is evident in most economies, the extent to which this damage occurs depend on other moderating variables such as firm characteristics (Dean, Bülent & Christopher, 2000).

Firm characteristics are the managerial and demographic features that differentiate one organization from others such as firm size, leverage, liquidity, firm growth rate, asset growth, and turnover even when operating in the same industry. It also describes the unique internal factors surrounding the firm. Further perspectives that are useful in distinguishing the firm and are categorized as firm characteristics include firm ownership layout, board of director features, firm age, ease at which a firm accesses debt from the capital bourse, and available opportunities to grow (Subrahmanyam & Titman, 2001).

Kouki and Guizani (2009) defined capital structure as the combination of the debt and equity of a company. This structure is also referred to as the debt equity ratio or gearing ratio which is expressed as the quotient of long-term debt to owners' claim. It is a ratio that depicts the level of utilization of both internal and external financial resources of an organization in facilitating

capital ventures within a certain time frame, usually per annum (Gill, Biger & Tibrewala, 2010). One of the most efficient mechanisms to manage the cost of capital is through capital structure. An optimum capital structure is attained at the point of minimum cost of the capital (Ellili & Farouk, 2011). Corporate finance considers the cost of capital to be one of the most important issues. As a result, firm managers strive to maintain a capital structure that minimizes financial and business risks on the firm, while maximizing shareholders' wealth through positive effect on firm performance (Green, Murinde & Suppakitjarak, 2012).

An electric power outage is a short or long-term loss (supply interruption) of electric power (Eto *et al.*, 2001). Power outage is a major challenge for firms and has a negative effect on the productivity and performance of firms (Cissokho & Seck, 2013; Allcott, Allan & Stephen, 2014). These effects manifest in various ways within the firm which includes: effect on firm efficiency, additional costs to the firm's production processes through investment in alternative sources of energy or costs incurred in replacement or repairs of affected equipment due to power outages, and impact on the quality of goods or services as a result of power outage (Cissokho & Seck, 2013). Therefore, these dynamics have an adverse impact on firm performance in a variety of ways (Steinbuks & Foster, 2010). Electric power outages are characterized by dynamics which may include aspects such as time of occurrence of the outage, length/duration of outage, frequency of outage, source of outage, perceived reliability level of power supply and notification of outage, or lack of it among others (Nooij, Koopmans & Bijvoet, 2007).

Power outage frequency or number of occurrences refers to the number of power blackouts over a specific time period, either per day, week or on monthly basis. Power outages may also be defined based on fluctuations of electricity supply in a certain locality (Schoeman & Saunders, 2018; Moyo, 2012). Power outage duration measures the amount of time the curtailed supply of electricity is experienced by individual or commercial customers (Fisher-Vanden, Mansur & Wang, 2015). The duration of the power outage is known to determine the costs of the interruption to firms (Nooij, Koopmans & Bijvoet, 2007). Power outage frequencies and the duration are characteristics that are known to trigger strains for some industries, mainly those that rely on electricity as a major input resource (Frederick & Selase, 2014).

Power outage notification is an advance communication to end users of electric power within a reasonable duration before the power outage. A notification before an interruption lowers the consequences of that interruption (Nooij, Koopmans & Bijvoet, 2007). On the other hand, unmitigated loss due to lack of notification may cause various damages that may affect product quality and cause significant increase in costs of operations (Lai, Yik & Jones, 2008). The time of electric power outage is also a component of electric power

outage dynamics. This perspective refers to the timing of blackout occurrence whether planned or unplanned (Frederick & Selase, 2014). The time power blackouts occurrence has diverse implications such as the number of users affected and the costs thereof.

Firm performance is the firm's effectiveness and efficiency in which it conducts its affairs (Chakravathy, 1986). Organizational performance is defined as a set of fiscal and non-fiscal parameters based on the level of attainment of objectives and outcomes (Lebans & Euske, 2006). This study considered the financial based Return on Assets to measure performance of firms in the manufacturing sector in Kenya, which are also members of Kenya Association of Manufacturers (KAM). The choice of this class of firms is backed by the following reasons: First, electricity is a major input of the firm production processes and, therefore, a disruption in electricity supply has a significant impact on the operations of the firms. Second, manufacturing firms in Kenya comprise of firms in varying categories of industries that provide heterogeneous analysis of the impact of electric power outage dynamics on the performance of firms.

The capital structure to firm performance linkage varies from one firm to another across various industrial set ups in any country. In some cases, the association could be positive and others negative (Dhillon, 1986). For firms involved in production and with a heavy reliance on electricity as a source of input to production, organizational characteristics such as capital structure influence their coping mechanisms to avert the negative effects of power outages.

The relationship amongst electric power outage dynamics, firm characteristics, and performance is underpinned by trade-off theory proposed by Myers (1984) and the pecking order theory by Myers and Majluf (1984). The trade-off theory hypothesizes that a profit maximizing firm will endeavor to ensure that it maintains a balance between marginal benefits and marginal costs when a firm is maintaining some cash balances and investing in capital goods. Thus, this is with the aim of avoiding cases of impairment between liquidity and profitability. When a firm is planning to invest in a profitable opportunity, there are benefits and costs to that effect. The theory underscores an equilibrium between a reduction in bankruptcy, financial distress costs, and agent costs with tax saving arising from debt. The optimal leverage level is obtained by balancing the costs of debt issue and the benefits from interest payments. On the other hand, the pecking order theory advocates the use of cheapest sources of finance before opting for the costly alternative. In view of the above theories, capital structure optimality has a potential effect to regulate financial and/or business risks to a firm that may arise due to power outages and their resultant impact on firm performance in pursuit of shareholder wealth maximization.

Therefore, this paper focuses on determining the effect of firm characteristics on the relationship between electric power outage dynamics and performance of manufacturing firms in Kenya. The paper seeks to provide greater insights on a critical input to manufacturing firm's production process - the electric power outage dynamics and their resultant impact on firm performance. Capital structure moderation of these variables is also analyzed. Such analysis have hardly been undertaken for Kenyan firms other than in generalized studies based on panel data sets. Thus, the outcomes of these studies provide generalized data that may not be fully relied on for Kenyan manufacturing firms, which is a gap this paper seeks to fill. In addition, the paper seeks to make contribution to existing body of theoretical knowledge, managerial policy, and practices. The paper covers various sections as follows; introduction, literature review, research methodology, results and discussions, and conclusion.

Literature Review

A review of the literature reveals that electric power outages have varying degrees of impact of firms in various jurisdictions. The critical role of electricity as a firm input is common in most studies, with varying actions undertaken to mitigate effects of power failure. The coping mechanisms in such dire situations are influenced by firm characteristics. The characteristics of a firm are dominated by the demographic and decision-making qualities that make a distinction between one firm and another. Firm characteristics describe elements of its internal environment. Hence, organizations are demarcated by variables such as firm size, capital structure, liquidity, age of the firm, access to capital markets, and growth opportunities (Zou & Stan, 1998).

Abdisa (2018) in a study of Ethiopian firms examined the characteristics of power outages and their resultant response to mitigate the outages towards safeguarding firm performance. The study found that power outages increased unit costs of production by 15% through factor adjustments and this have affected firm productivity negatively. Firms substituted grid supplied electricity through self-generation during periods of power outages, the factor share of electricity and capital decreased, and overall, the output level suggested that outage is particularly costly for large firms.

Adewuyi and Emmanuel (2018) evaluated the moderating role of corruption in mitigating the effect of electricity outages on firm performance across the six geo-political zones in Nigeria. In addition, the study analyzed the effect of self-generation on firm performance across the six geo-political zones and comparison was made as to whether it is more profitable for firms to self-generate electricity during outage periods or bribe electricity officials to mitigate the effect of electricity outages on their performance. The study

employed a cross sectional Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) techniques. The study found that bribery mitigated the effect of electricity outages on some geo-political zones and not others. In addition, self-generation was found to be a form of indirect tax which had a negative effect on firm performance.

In another study by Bawuah and Anaman (2018), the aim was to establish whether power outages in Ghana had an effect on performance of firms listed at the Ghana Stock Exchange. Explanatory research design was adopted and quantitative methods employed. Thus, this made it possible to carry out trend analysis of six years of firm performance 'before' and 'during' power outage periods. The sample size selected entailed 25 firms from a population of 35 firms using purposive sampling technique. Key performance indicators measured include profitability, revenue, and growth rate. The research conclusions were contrary to the past studies as power outages did not have an adverse outcome on revenues of listed firms. In this study, the firms attained greater maximum revenues for periods when power outage was experienced. An average growth rate of 122.26 percent was achieved for periods of power outages against 79.0 percent mean rate of growth for periods with consistent power supply. The study therefore concluded that power outages had no effect on the growth rate of listed firms in Ghana. However, power outages had an influence on the profitability of listed firms' and more so, were responsible for a significant increase in operation expenses.

In the study of Oseni and Pollitt (2013), the researchers investigated the effect of firm characteristics in the creation of incentives for backup generation leading to reduced unmitigated outage costs. The study was conducted in 12 African countries and involved 6854 firms. The study evaluated the effect of firm characteristics as the independent variable towards motivating firms to self-generate power and investigate whether these motivations led to lesser unmitigated outage costs that affected a firm performance. The study used cross-sectional data and applied incomplete backup, marginal cost, and individual assessment methodology. It was concluded in the study that firms which concentrated on export transactions, big firms, and those that required the internet for operations suffered greater outage costs that were not mitigated notwithstanding their greater inclination to venturing in the self-generation of electricity. Unmitigated costs of power outage accounted for the bigger share of total costs of outage notwithstanding the high levels of backup power generation investments. Also, there is an indication of a low level of backup investment as a result of small capacity of back up accessed by firms.

Alam (2014) conducted a study in India to evaluate the effect of power outage on firm size, productivity levels, and profitability. The analysis adopted a model to generate comparative static predictions about input choices, output,

and changes in profits while increasing the occurrence of power outages. The conclusion of the study indicated that the effect of power outage differs across industries. In some power-intensive industries, increased frequency of outages was found to lower production and profits, while some industries were less affected due to availability of greater adaptation mechanisms. For instance, a rise in the occurrence of power outages lowered the yield and returns of only some electricity-intensive industries. In addition, the study found that short-run changes in power outages do not induce firms to install back up power generators. This study was bivariate for the focus was on the link between power outage and profitability, firm size, and productivity.

In a similar study by Moyo (2012), the aim was to evaluate the impact of power supply interruptions on productivity of firms in the manufacturing sector of Nigeria. Tobit and OLS models were utilized. Productivity variables that were used as outcome factors were estimated using plant and machinery replacement costs. Output was measured using sales total value, while material inputs were measured using total expenses of direct materials and transitional items utilized in production. The age of the firm was computed by determining the change in duration between the year the organization was incorporated and the year the study was undertaken. Firm size was computed based on the number of workers engaged. All firms with less than twenty workers were categorized as small and the large one had more than 20 employees. The aim of using this methodology was to assess whether power outages affected firms arbitrarily or whether the impact depended on the firm's size. Power outage was estimated by the number of days firms experienced power outage per month, the number of hours a firm went without power per day, and the percentage of yield lost due to power outages in any given year. The research finding revealed that power outage variables had adverse and significant consequence on productivity, more so for small firms. It was further depicted that inadequate electric supply had an inverse impact on the growth rate of small and medium businesses, and operational costs increased significantly during periods that power outages were experienced. The cost of backup power source also pushed up the cost of business operations significantly and therefore negatively affected performance.

Oladele, Omotunde and Adeniyi (2017) also conducted a study which classified capital structure as an independent variable. The study assessed the influence of capital structure on performance of listed organizations at the Nigeria Stock Exchange from 2004-2013. The study is set to establish the general impact of capital structure on corporate performance of the quoted organizations by ascertaining the linkage between determination of capital structure of Nigerian firms and their ROE, ROA, EPS and turnover growth rate. Here, the factors were used as proxies to measure corporate performance.

Multiple regression was used to carry out the data analysis. The study outcome depicted that capital structure did not have substantial impact on ROE but had significant impact on ROA, Earning per Share (EPS), and sales growth of listed manufacturing firms in Nigeria. The study advocated for the listed firms critical need to ensure optimization of capital structure so as to increase the returns on equity, assets, and earnings per share.

Saeedi and Mahmoodi (2011) carried out a study to determine the correlation between the capital structure and the performance of firms listed at the Tehran exchange bourse. The outcome of the study was that there was a direct association between market related measures of performance and capital structure. ROE and capital structure did not have significant association, while ROA had a positive link to capital structure. Hence, the study concluded that financial leverage has a significant impact on the various measures of performance in distinct ways.

Kisengo and Kombo (2014) carried out a study in Nakuru, Kenya to assess the impact of firm characteristics on performance of microfinance sector. Both primary and secondary data was gathered through the use of questionnaires. Using census approach, analysis was conducted for the 48 registered microfinance institutions. Firm characteristics and organizational performance were analyzed using descriptive statistics. Relationship between firm characteristics and performance was interrogated using correlation analysis. Furthermore, the impact of firm characteristics on the performance of microfinance institutions was done using regression analysis approach. It was established that firm characteristics had statistically significant direct effect on performance of MFIs. Features that were capital related had the least effect on performance of microfinances, whereas those that were structure related had the greatest impact.

Over the years, the debate on the association between electric power outage dynamics and financial performance of manufacturing firms has been characterized by conflicting results amongst scholars. Various studies on the extent to which electric power outages affect performance of firms have been carried out in well-developed economies including Germany, China, India, and Pakistan. Whereas little attention has been given to developing countries in Africa, with the exception of Nigeria, to which a considerable number of studies pertaining the same subject matter of power outage dynamics have been undertaken. Past studies revealed mixed outcome on the influence of firm characteristics on financial performance of firms. Most past studies on determinants of firm performance were bivariate and categorizes firm characteristics as pure predictors without testing their probable moderating role in the association between power outage dynamics and financial performance. Furthermore, the research findings on this association by

scholars portrayed dissimilar results although some of the factors incorporated in the study were the same.

The current study is focused on the moderating role that firm characteristics (capital structure) has on the relationship between electric power outage (outage frequency) and financial performance. The study hypothesized that the relationship between electric power outage dynamics and financial performance of manufacturing firms in Kenya is not moderated by firm characteristics.

Research Methodology

This current study made use of positivism philosophical paradigm and descriptive survey research design respectively. A population of 447 firms whose main area of focus is manufacturing in Kenya and were also members of Kenya Manufacturers Association was considered out of which a sample size of 138 of such firms was selected. Structured questionnaire were utilized to collect data which involved drop and pick methodology for five years from 2014 to 2018. Questionnaire return rate was used to present the percentage of the successfully returned questionnaires.

The conforming null supposition stated that the relationship between electric power outage dynamics and performance of manufacturing firms in Kenya is not significantly moderated by firm characteristics. A two-step stepwise multiple regression process was carried out to test the null hypothesis. To establish the moderating effect of industry (Baron & Kenny, 1986; Aiken & West, 1991), this approach was used. The guideline entails, first, fitting a regression model (model 1) to test the main effects of the predictor variable and the proposed moderator. Step two of Baron and Kenny (1986) involves entering the interaction term in the previous model (model 1) so as to generate a second model (model 2). The interaction term is developed by determining the product of the predictor and the moderator.

Data analysis was undertaken using SPSS computer software version 21. Coefficient of variation and standard deviation were applied to analyze the variability of association amongst the variables. The strength of fit was assessed using the coefficient of multiple determination. Measures of dispersion were applied to investigate the fundamental qualities of the data collected for the analysis. This study incorporated Electric power outage dynamics-frequency as the predictor variable. Nonetheless, financial performance was the dependent variable and return on assets was used as the proxy.

Results and Discussion

Questionnaire Return Rate

To determine the questionnaire return rate, the number of questionnaires received from the respondents as compared to those issued was analyzed. Thus, the results are indicated in Table 1 below.

Table 1. Questionnaire Return Rate

Particulars	Returned	Not Returned	Distributed Questionnaires
Frequencies	73	65	138
Percentages	53%	47%	100%

Out of 138 questionnaires which were distributed, 73 were returned inclusive of 6, which were totally spoiled (returned with no useful information). Therefore, 67 were properly filled and returned. This translates to a 51% $((73-6)/132)$ questionnaire return rate. This response rate is acceptable as per Richardson (2005) who regards a questionnaire return rate of at least 50% as being acceptable in social research survey.

Electric Power Outage Dynamics

Electric Power Outage Dynamics (EPOD) is represented by power outage frequency indicator as follows;

Power Outage Frequency

The rate at which power supply involuntarily goes on and off is critical to manufacturing firms. This is because the more frequent the power outage, the more unreliable it is. Therefore, each firm's officials were requested to give their opinion pertaining the extent to which power outage occurred (frequency) in a month and responses were obtained as shown in Table 2.

Table 2. Power Outage Frequency

	Frequency	Percent (%)
X<5 Times	25	37
5-10 Times	34	51
11-15 Times	4	6
16-20 Times	1	1
Over 20 Times	3	5
Total	67	100

Power outage frequency was not high for the majority of the firms (88%) that reported up to 10 cases of blackout occurrences in a month. Whereas, 12% of the manufacturing firms experienced over 10 outages in a month.

Financial Perspective

The study further interrogated the financial performance trend for the manufacturing firms in Kenya for five years from 2014 to 2018. Descriptive data analysis from the data provided by the respondents is shown in Table 3 below.

Table 3. Financial performance

Var	n	Mean	SD	CV	Min	Max	Sk	Kurt
EBIT	67	576.24	1862.276	3.232	-363	9837.4	4.003	18.668
ROA	67	13.986	14.358	1.027	21.85	56.67	0.142	4.554

In the case of financial performance, data from the firms depicted that financial performance was presented by Profit Before Tax and Return on Assets. The latter is a quotient of Earnings Before Taxation and Total Assets which is made up of both fixed and current assets. The average Profit Before Tax for manufacturing firms is approximately Kshs. 576 million with most profitable firm making a profit of about Kshs. 9.8 billion (see Table 3). The least profitable firm made a loss of about Kshs. 363 million. The average return on assets among manufacturing firms was about 13.98%. The firm which made least profits had a negative return of about 22%, while the highest firm had a positive return of over 57%. Profit Before Tax had the highest variation while Return on Assets had the least variation. Only Return on Assets had a skewness value that is close to zero and a kurtosis value that is close to three. Therefore, it is likely to be normally distributed unlike Profit Before Tax and Total Assets whose skewness and kurtosis value are far from zero and three respectively.

To establish the moderating effect of firm characteristics, capital structure (Baron & Kenny, 1986; Aiken & West, 1991) approach was used. The guideline entailed, first, fitting a regression model (model 1) to test the effects of the predictor and the proposed moderator factors which present the main effect. The effect for both the predictor and the moderator should be significant and also the model in general (R^2). Step two involved entering the interaction term in the previous model (model 1) to generate a second model (model 2). Hence, a hierarchical multiple regression was performed.

Consequently, the moderation results of capital structure as a component of firm characteristics is shown in Table 4 below.

Table 4. Results of Hypothesis Testing of EPOD and Financial Performance as Moderated by Capital Structure

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics F	df1	df2	Sig. F Change
1	.256 ^a	.065	.036	.10497	.065	2.240	2	64	.115
2	.303 ^b	.092	.049	.10429	.026	1.830	1	63	.181

a. Predictors: (Constant), CS, EPOD
b. Predictors: (Constant), CS, EPOD, CS*EPOD
c. Dependent Variable: FIN

ANOVA						
Model		Sum of Squares	df.	Mean Square	F	Sig.
1	Regression	.049	2	.025	2.240	.115 ^b
	Residual	.705	64	.011		
	Total	.755	66			
2	Regression	.069	3	.023	2.123	.106 ^c
	Residual	.685	63	.011		
	Total	.755	66			

a. Dependent Variable: FIN
b. Predictors: (Constant), CS, EPOD
c. Predictors: (Constant), CS, EPOD, CS*EPOD

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.146	.013		11.418	.000
	EPOD	-.058	.033	-.210	-1.741	.087
	CS	-.074	.063	-.142	-1.173	.245
2	(Constant)	.147	.013		11.518	.000
	EPOD	-.056	.033	-.205	-1.704	.093
	CS	-.038	.068	-.074	-.564	.575
	CS*EPOD	-.264	.195	-.176	-1.353	.181

a. Dependent Variable: FIN

From Table 4, both model 1 and model 2 computed did not show statistically significant moderating effect of capital structure on EPOD and financial performance. Thus, this is because the effect for both the predictor and the moderator was not statistically significant and also the model in general (R^2). Therefore, it was depicted that no moderation effect was inferred for both the main effect and the new interaction term as they did not significantly influence financial performance.

Conclusion

The negative effect of electric power outage on performance of firms is documented in the current study as well as in various studies such as Abdisa (2018), Adewuyi and Emmanuel (2018), Alam (2014), and Oseni and Pollitt (2013) among others. However, in the current study, the firm characteristics,

i.e., capital structure, did not depict moderation effect on the relationship between electric power outage dynamics and financial performance of manufacturing firms in Kenya. The research findings portrayed that capital structure is not a conditional factor when making decisions aimed at enhancing firms' financial performance as a result of negative effects of electric power outages. Top management of manufacturing firms therefore should not have a consideration of leverage in making decisions on ameliorating negative effects of power outage on financial firm performance.

In connection to the current research findings, past studies portrayed both similar and dissimilar outcomes pertaining to the influence of capital structure on firm performance. Similar studies that did not establish significant influence of capital structure on financial performance include Oladele, Omotunde and Adeniyi (2017) that established that no statistically significant association existed between capital structure and return on equity. However, in the case of return of assets (ROA), earnings per share (EPS) and sales growth of listed manufacturing firms in Nigeria, it was portrayed that a statistically significant association prevailed. Furthermore, in the study of Saeedi and Mahmoodi (2011) that aimed interrogating the link between capital structure and performance of firm listed at Tehran Stock Exchange, the study findings portrayed that capital structure and performance has a direct correlation. In Kisengo (2012), ROA was positively related to capital structure, while ROE had no statistically significant association with capital structure.

This study shows that policy makers benefit in understanding the effect of poor quality of power supply on the performance of firms. As a result, they are guided in overseeing the planning and implementation of proper electricity infrastructure that will eliminate inefficiencies in power supply as experienced during power outages. In addition, the study also provides power utilities information that will aid their investment in adequate infrastructure and enhanced maintenance towards efficient power supply to firms at all times. This study also provided information to the power and petroleum sector regulatory body, i.e., the Energy and Petroleum Regulatory Authority (EPRA), which would enhance the protection of power consumers and manufacturing firms, for whom power outages have negative effects on performance. The regulator could put in place punitive mechanisms to power utilities when power outages are experienced due to their acts or omissions. This should work to minimize power outages and resultant effects on consumers. Top management of manufacturing firms are also advised that the level of leverage has no impact when determining effective ways of mitigating negative effects of power outages on firm performance. Subsequently, suitable mitigation may be found in seeking backup generation facilities during periods of power outage.

This study had a limited focus on manufacturing firms registered under KAM; hence the contextual gap emanating from global, regional, and local perspectives of manufacturing firms with no affiliation in membership with KAM has not been fully realized. Future research activities could focus on wider scale of firms. In addition, future studies could evaluate additional moderators based on the relationship between electric power outage on firm performance as firm characteristics (capital structure) did not have a moderating effect on this relationship.

References:

1. Abdisa, L. T. (2018). 'Power Outages, Its Economic Cost and Firm Performance: Evidence from Ethiopia', *Utilities Policy*, 53: 111–120.
2. Abotsi, A.K. (2015). Foreign ownership of firms and corruption in Africa. *International Journal of Economics and Financial Issues*, 5(3), 647-655.
3. Adewuyi, A. O. & Emmanuel, Z. (2018): Electricity Outages and Firm Performance across the Six Geo-Political Zones in Nigeria: The Role of Corruption – MPRA Working Paper Series
4. Aiken, L. S. & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage.
5. Alam, M. (2014). Coping with blackouts: Power outages and firm choices. Ph.D. Thesis, Yale University, New Haven, CT, USA.
6. Allcott, H., Allan, C.W. & Stephen, D. (2014). How do electricity shortages affect productivity? Evidence from India. *American Economic Review*, 106(3), 587-624.
7. Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in Social Psychological Research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
8. Bawuah, B. & Anaman, D.K. (2018). Power outages in Ghana: Did they have an effect on the financial performance of listed firms? *International Journal of Management Excellence*, 3(10), 1434-1439.
9. Chakravathy, B. S. (1986). Measuring strategic performance. *Strategic Management Journal*, 7(5), 437-458.
10. Cissokho, L. & Seck, A. (2013). Electric power outages and the productivity of small and medium enterprises in Senegal. ICBE-RF Research Report N0. 77/13.
11. Dean, D. L., Christopher. P. & Bülent, M. (2000). Revisiting Firm Characteristics, Strategy, and Export Performance Relationship: A Survey of the Literature and an Investigation of New Zealand Small Manufacturing Firms. *Industrial Marketing Management*, 29, 461–477.

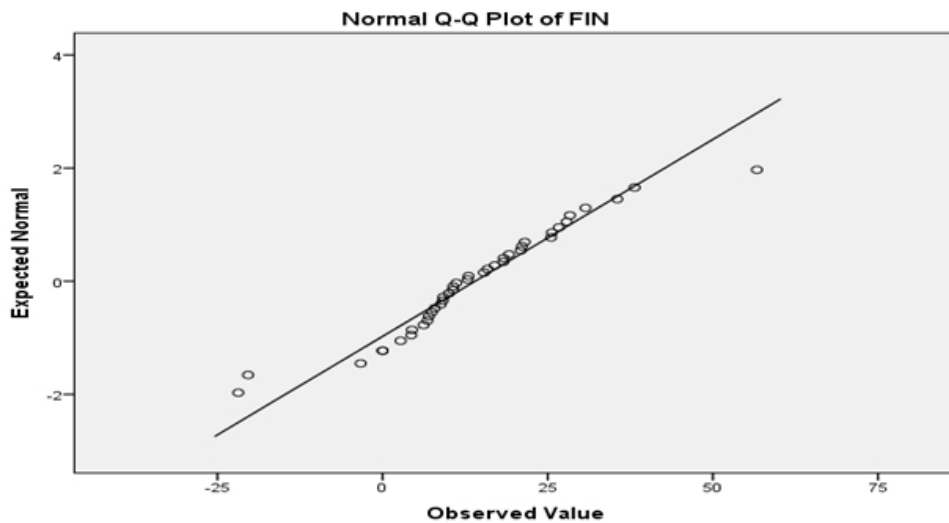
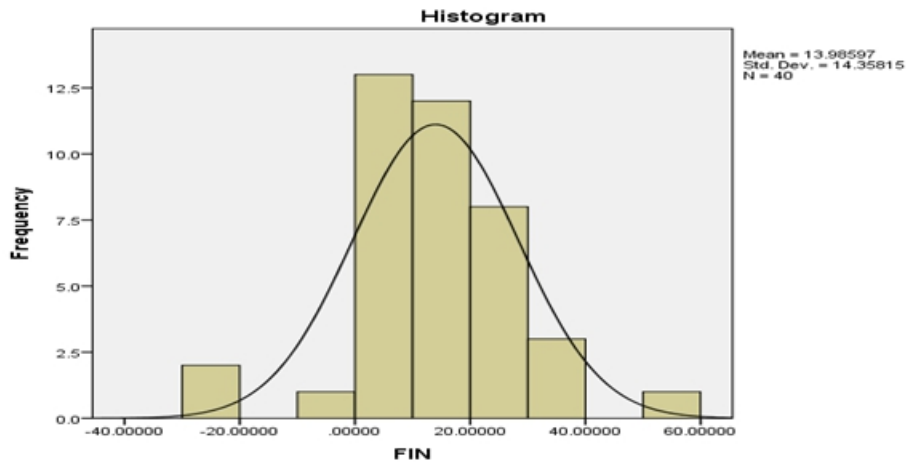
12. Dhillon, U. P. (1986). Corporate ownership, dividend policy, and capital structure under asymmetric information. (Ph.D. Thesis) Louisiana State University and Agricultural & Mechanical College.
13. Ellili, N. O. D. & Farouk, S. (2011). Examining the capital structure determinants: Empirical analysis of companies traded on Abu Dhabi Stock Exchange', *International Research Journal of Finance and Economics*, 67(12), 234-241.
14. Eto, J. J., Koomey, B., Lehman, N., Martin, E., Mills, C., Webber & Worrell, E. (2001). Scoping study on trends in the economic value of electricity reliability to the U.S. economy. Lawrence Berkeley National Laboratory. LBNL-47911. June. Berkeley CA.
15. Fisher-Vanden, K., Mansur, E. & Wang, Q. (2015). Electricity Shortages and Firm Productivity: Evidence from China's Industrial Firms. *Journal of Development Economics*, 11(4), 172-188.
16. Frederick, D. & Selase, A. E. (2014). The effect of electric power fluctuations on the profitability and competitiveness of SMEs: A study of SMEs within the Accra Business District of Ghana. *Journal of Competitiveness* 6(3), 32-48.
17. Gill, A., Biger, N. & Tibrewala, R. (2010). Determinants of dividend payout ratios: Evidence from United States, *The Open Business Journal*, 31(3), 8-13.
18. Green, C. J., Murinde, V. & Suppakitjarak, J. (2012). Corporate financial structure in India. Economic Research Paper No. 02/4. Centre for International, Financial and Economics Research, Department of Economics, Loughborough University, Loughborough.
19. Karen, F. V., Erin, T. M. & Qiong, W. (2015). Electricity shortages and firm productivity: Evidence from China's Industrial Firms. *Journal of Development Economics* 11(4), 172-188.
20. Kisengo, Z.M. & Kombo, H. (2014). Effect of Firm Characteristics on Performance of the Microfinance Sector in Nakuru, Kenya, *International Journal of Science and Research*, 10,(3), 1791-1799.
21. Kouki, M. & Guizani, M. (2009). Ownership structure and dividend policy evidence from the Tunisian stock market, *European Journal of Science and Research*, 25(1), 42-53.
22. Lai, J., Yik, F. & Jones, P. (2008). Expenditure on operation and maintenance service and rental income of commercial buildings. *Facilities*, 26(5/6), 242-265.
23. Lebens, M. & Euske, K. (2006). A Conceptual and Operational delineation of Performance, Business Performance Measurement. Cambridge University Press.

24. Marithumu, F. (2019). Capital Structure and Financial Performance of South African State-Owned Entities. PhD Thesis, University of Kwa Zulu Natal.
25. Moyo, B. (2012). Do Power Cuts Affect Productivity? A Case Study of Nigerian Manufacturing Firms. *International Business & Economics Research Journal*, 11(10), 1163-1173.
26. Myers, S. C. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.
27. Myers, S.C. & Majluf, NS. (1984). Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics*. 13(2): 187–195.
28. Nooij, M., Koopmans, C. & Bijvoet, C. (2007). The value of supply security. The costs of power interruptions: Economic input for damage reduction and investment in networks, *Energy Economics*, 29, 277-295.
29. Oladele, S. A., Omotunde, O. & Adeniyi, SD. (2017). Effect of capital structure on the performance of Nigerian listed manufacturing firms, *European Journal of Business and Management*, 7(9), 21-32.
30. Oseni, M. & Pollitt, M. (2013). The economic costs of unsupplied electricity: Evidence from backup generation among African firms. PhD Thesis. University of Cambridge, Faculty of Economics.
31. Saeedi, A. & Mahmoodi, I. (2011). Capital Structure and Firm Performance: Evidence from Iranian Companies, *International Research Journal of Finance and Economics*, 70(7), 20-29.
32. Schoeman, T. & Saunders, M. (2018). The Impact of Power Outages on Small Businesses in the City of Johannesburg. 10th Int'l Conference on Education, Business, Humanities and Social Sciences Studies, Cape Town (South Africa), 328-333.
33. Steinbuks, J. & Foster, V. (2010). When do firms generate? Evidence on in-house electricity supply in Africa. *Energy Economics*, 32(3), 505–514.
34. Subrahmanyam, A. & Titman, S. (2001). Feedback from stock prices to cash flows. *Journal of Finance*, 56(18), 2389-2413.

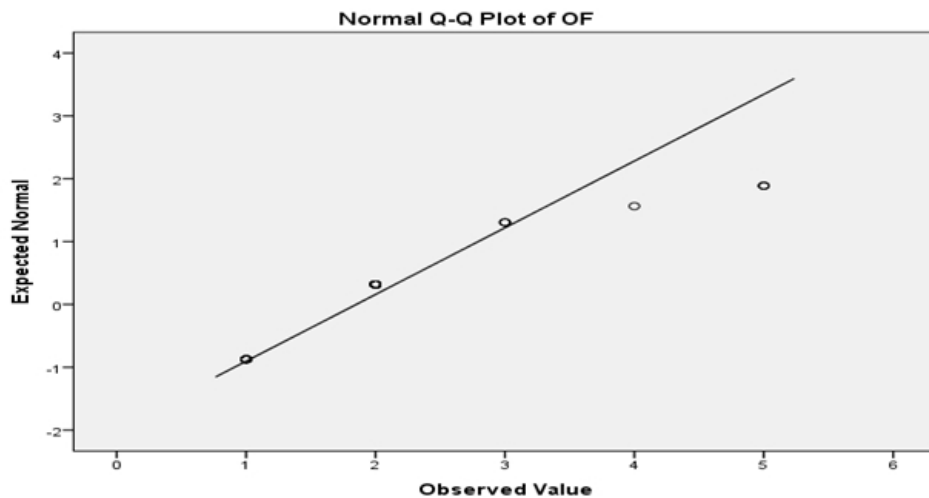
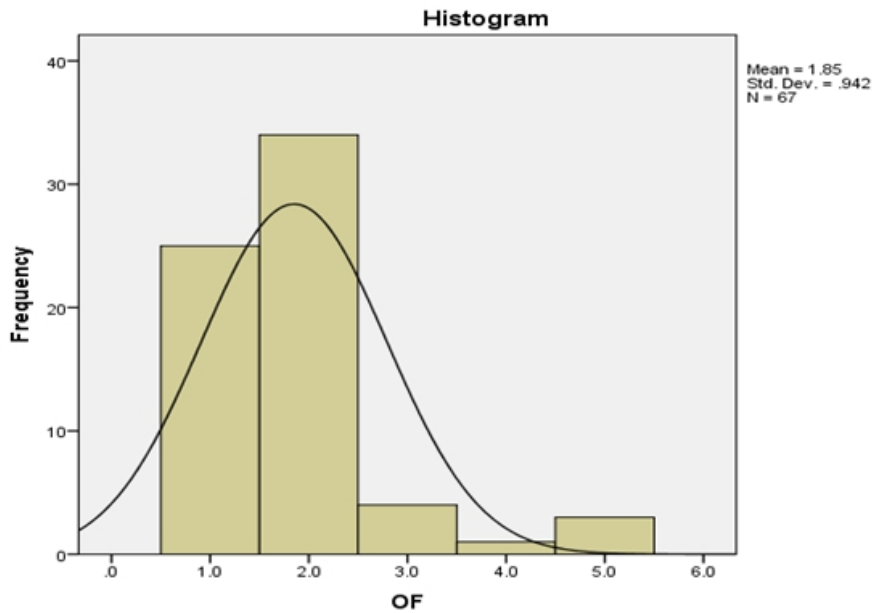
APPENDICES

Appendix I: Normality Test Summary for Individual Study Variables

Financial Performance



Power Outage Frequency



L'analyse des variables explicatives de l'adoption du Social CRM par les PME de Tourisme au Maroc : Résultats d'une étude exploratoire

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[Doi:10.19044/esj.2021.v17n1p274](https://doi.org/10.19044/esj.2021.v17n1p274)

Submitted: 30 September 2020

Accepted: 04 January 2021

Published: 31 January 2021

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Cite As:

Bouarrakia B.M. & Chafik K. (2021). *L'analyse des variables explicatives de l'adoption du Social CRM par les PME de Tourisme au Maroc : Résultats d'une étude exploratoire*. European Scientific Journal, ESJ, 17(1), 274.

<https://doi.org/10.19044/esj.2021.v17n1p274>

Résumé

Le « Social CRM » est un nouveau paradigme qui a récemment émergé pour décrire l'utilisation des médias sociaux en faveur de la gestion de la relation client. Aujourd'hui, le « Social CRM » offre aux entreprises l'opportunité d'être à l'écoute des clients et de pouvoir créer de la valeur en partenariat avec eux. L'objectif de ce papier est d'expliquer l'adoption du « Social CRM » par les PME de tourisme au Maroc. Il propose un modèle conceptuel regroupant différents facteurs déterminants de l'adoption, et qui a pour fondement théorique la théorie d'adoption des innovations de Rogers et le cadre TOE de Tornatzky and Fleischer 1990. Pour apporter des éléments de réponse à notre problématique de recherche, nous avons mené une première étude exploratoire auprès d'une dizaine de PME à la région Tanger-Tétouan-Al Hoceima. L'analyse des résultats a été faite à l'aide du logiciel N vivo12. L'analyse a montré que les principaux facteurs influençant l'adoption du « Social CRM », sont le soutien du Top Management, les connaissances des employés en SI, l'avantage relatif, la compatibilité, la facilité d'utilisation, la testabilité, l'observabilité des résultats, et la pression concurrentielle. Aussi bien, un nouveau groupe de facteurs est à ajouter au modèle initial qui sont les

caractéristiques liées au dirigeant de la PME. Pour pouvoir généraliser les résultats, une nouvelle étude quantitative confirmatoire sera mise en œuvre à l'échelle nationale.

Keywords: Inadequate Flexibility, Resistance, Enterprise Resource Planning (ERP), Information System

Exploring the adoption of Social CRM by Tourism SMEs in Morocco : Results of an exploratory study

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Abstract

« Social CRM » is a new paradigm that has recently emerged to describe the use of social media for Customer Relationship Management. Today, the “Social CRM” offers companies the opportunity to communicate with customers and create value in partnership with them. The purpose of this paper is to explain the adoption of “Social CRM” by tourism SMEs in Morocco. It proposes a conceptual model of different adoption determinants, based on the theoretical theory of adoption of Rogers innovations and the Tornatzky and Fleischer 1990 TOE framework. To provide some answers to our research problem, we conducted an initial exploratory study among a dozen SMEs in the Tangier-Tetouan-Al Hoceima region. The results were analysed using the N vivo12 software. The analysis showed that the main factors influencing the adoption of the «Social CRM», are the support of Top Management, the knowledge of employees in IS, the relative advantage, the compatibility, the ease of use, the testability, the observability of the results, and competitive pressure. Thus, a new group of factors is to be added to the initial model, which are the characteristics related to the SME leader. In order to generalize the results, a new confirmatory quantitative study will be implemented at a national level.

Keywords: IS Adoption - CRM- Social CRM- TOE framework- Diffusion of Innovation theory

1. Introduction

Les médias sociaux et le web 2.0 ont donné naissance à une nouvelle forme d'interaction avec les clients. Ces clients qui ont gagné plus de pouvoir avec la possibilité de se renseigner et d'exprimer leurs opinions. Ils ont devenu actifs et influents, et leur voix passe désormais au-delà de leur voisinage immédiat. Selon (Teixeira 2009), avec les médias sociaux, les internautes peuvent faire fructifier ou anéantir les efforts de commercialisation des professionnels du marketing. Les organisations n'ont donc plus le choix que d'entrer en conversation avec les clients et d'avoir une forte présence sur les médias sociaux, pour se défendre et se vendre.

Un nouveau concept a émergé pour décrire cette nouvelle façon d'interagir et de gérer les relations avec les clients via les médias sociaux, le « *Social CRM* » (Malthouse et al. 2013). En fait, les entreprises du monde entier se reposent de plus en plus sur les médias sociaux pour améliorer leurs relations avec les clients (Harrigan et coll., 2015).

L'objectif de notre recherche est d'étudier les facteurs déterminants qui influencent l'adoption du « *Social CRM* » par les PME du tourisme au Maroc, et d'examiner l'état des lieux de cette adoption au niveau national.

Notre travail de recherche s'inscrit dans un processus de continuité avec les travaux antérieurs de notre groupe de recherche GREMSI, et notamment celui de (Chafik et Benjelloun, 2014), qui a traité les facteurs déterminants de la réussite de l'intégration des projets CRM au sein des entreprises de services Marocaines.

L'étude portera sur les PME de tourisme au Maroc, vu que le tourisme est le secteur d'activité le plus réceptif à l'essor du numérique, et représente un secteur clé dans l'économie Marocaine. Aussi bien, la recherche dans le domaine du *Social CRM* s'est intéressée principalement aux grandes entreprises, intégrant les données issues des médias sociaux à leurs systèmes de gestion de la relation client (CRM) Charoensukmongkol et Sasatanun (2017). Cependant, peu de recherche ont essayé d'expliquer l'adoption du *Social CRM* par les PME. Pour (Harrigan et al. 2014), le *Social CRM* peut être la solution technologique de CRM la plus appropriée pour les PME, principalement parce qu'il semble correspondre à leur façon intuitive de gérer les relations avec la clientèle. Pour (Cappuccio et al. 2012), le *Social CRM* peut même remplacer d'autres solutions CRM pour le cas des PME.

2. Du CRM vers le Social CRM

Le « *Social CRM* » est composé de deux concepts fondamentaux : Le CRM qui est l'acronyme de la gestion de relation client en anglais (Customer Relationship Management), et le volet social qui fait référence aux médias sociaux. Pour une meilleure compréhension de ce nouveau concept, il s'avère

nécessaire de passer en premier lieu par la définition du CRM classique et des médias sociaux afin d'arriver à la définition du « Social CRM ».

Avec l'arrivée de l'internet et des nouvelles technologies d'information, les entreprises ont bénéficié de plus de canaux pour mieux communiquer avec les clients. C'est dans ce contexte que vont apparaître, en fin des années 1990, les premiers progiciels CRM (Customer Relationship Management). Ces progiciels peuvent être définis comme des sortes d'ERP (Entreprise Resource Planning), spécialisés dans la gestion de la relation client. Pourtant, la gestion de la relation client ne se limite pas à un progiciel, mais nécessitent l'adhésion de toute l'entreprise à une culture orienté client. En outre si chaque projet CRM repose sur une solution technologique, sa réussite est conditionnée par les différents processus, l'organisation et la culture de l'entreprise.

En parcourant la littérature scientifique, nous avons constaté l'absence d'un cadre conceptuel consensuel et d'une définition uniforme de CRM. Selon (Jallat, Stevens et Volle, 2005), le CRM est une stratégie par laquelle l'entreprise vise à comprendre, à anticiper et à gérer les besoins des clients actuels et futurs. Cette stratégie impacte les différentes fonctions de l'entreprise (marketing, service informatique, service clientèle, logistique, finance, production etc.). Cova et al. (2006) ont également définis le CRM comme étant une stratégie « *visant à attirer, à identifier, à mieux connaître le client et à le fidéliser en mettant en place un système d'information global qui s'appuie sur une architecture logicielle adaptée, dans le but d'augmenter la rentabilité de l'entreprise et la satisfaction des clients*¹ ». En résumé, Le CRM a pour objectif l'amélioration du service offert au client, l'augmentation des revenus et la réduction des coûts.

Aujourd'hui avec le développement du Web 2.0 et des médias sociaux, le CRM classique a connu de grands changements. En effet, les médias sociaux ont donné plus de pouvoir aux consommateurs. Le client n'est plus le simple récepteur de l'information et du contenu crée par les marketeurs, il est lui-même acteur et influenceur. Selon Lévy-Bencheton (2012), le consommateur n'hésite plus à partager son expérience et à donner son avis sur les marques, ce qui influence positivement ou négativement leur notoriété. D'où la nécessité pour les entreprises de réorienter leurs stratégies de gestion de la relation client vers les médias sociaux. Cette fusion des médias sociaux avec le CRM traditionnel a fait émerger un nouveau concept, le « *Social CRM* ».

(Faase et al., 2011) définissent le Social CRM comme une stratégie utilisant les médias sociaux pour encourager l'engagement et la participation

¹ Cova et al. (2006), *Innover en marketing: 15 tendances en mouvement*, coll.« EDF R&D », p. 59.

active des clients. Pour (Trainor et al. 2014) le Social CRM est l'intégration des médias sociaux avec les activités CRM, pour améliorer la relation client. Selon la revue de littérature, la définition la plus citée par les chercheurs en Social CRM est celle de Paul Greenberg, qui définit le social CRM comme « *une philosophie et une stratégie commerciale reposant sur une plateforme technologique, des règles commerciales, un processus de travail, des procédures et des caractéristique sociales, conçues pour inviter le client à prendre part à un échange collaboratif et source de valeur pour les deux parties, dans un environnement de travail où règnent la confiance et la transparence. C'est la réponse de l'entreprise au dialogue dont le client est propriétaire* ». Pour Paliouras et Siakas (2017), il s'agit d'une stratégie d'affaires basée sur des plateforme technologiques sociales, dans le but de créer de la valeur dans un environnement où règne la confiance. Ahani et al. (2017b) définit le Social CRM comme « l'utilisation d'au moins un des médias sociaux pour la gestion de la relation client ».

Aujourd'hui, on parle aussi du «Client social», un terme qui fait référence aux personnes qui ont choisi de placer leur confiance dans les avis et les expériences des personnes de leur entourage, au lieu des messages publicitaires des entreprises (Greenberg 2010; Leary 2008; Sigala 2011; Woodcock, Green, et Starkey 2011).

3. Les cadres théoriques mobilisés

Tous les travaux de recherche, traitant la problématique de l'adoption des SI, peuvent être scindés en deux parties : Les travaux qui expliquent l'adoption selon la perspective de l'utilisateur, qui cherchent les facteurs déterminants influençant l'intention individuelle de l'adoption, comme le cas du modèle TAM (Davis, 1985), et les travaux qui cherchent à expliquer l'adoption des SI par les organisations. Pour notre recherche, nous avons choisi de se placer dans la deuxième perspective, car notre unité d'analyse est l'organisation. Le tableau ci-dessous regroupe les principales théories traitant l'adoption des technologies d'information au niveau organisationnel avec leur index h.

Théorie ou modèle	Auteurs et année	L'index h	Niveau d'adoption	
			Individuel	Organisationnel
La théorie de diffusion des innovations	Rogers (1983, 1995, 2003)	Cité 62653 fois	*	*
La théorie institutionnelle	Dimaggio et Powell (1988)	Cité 3049 fois		*
Modèle de diffusion et d'implantation	Kwon & Zmud (1987)	Cité 1618 fois		*
Modèle tri-Core	Swanson (1994)	Cité 978 fois		*

Modèle Technologie-Organisation-Environnement (TOE)	Tornatzky et Mitchell Fleischer (1990)	Cité 1985 fois		*
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Tableau 1 : les théories d'adoption des IT au niveau organisationnel avec l'index H
Source (ElAbbassi et Chafik, 2014)-Adapté

Cependant, on compte juste une dizaine de travaux de recherche qui se sont intéressés à étudier l'adoption du « Social CRM » au niveau organisationnel. La majorité de ces études ont choisi le cadre technologique-organisationnel-environnemental (TOE) comme base théorique de leurs modèles en ajoutant d'autres caractéristiques. En effet, Mousavi et Demirkan (2013) ont ajouté des caractéristiques individuelles, Hasani et al. (2017) ont ajouté des caractéristiques managériales, et Ahani et al., (2017) ont ajouté des caractéristiques du processus d'information. (Askool et Nakata 2011) font l'exception en choisissant le modèle d'acceptation des technologies (TAM) comme fondement théorique de leur modèle. Le tableau ci-dessous, résume les principales études sur l'adoption du social CRM, leurs fondements théoriques et leurs variables.

Auteurs	Type d'adoption	Le contexte	Les fondements théoriques	Les variables
(Askool et Nakata 2011)	Social CRM	Les banques de l'Arabie Saoudite	TAM + les caractéristiques des médias sociaux	Les variables qui influencent positivement l'intention d'adoption du Social CRM sont : La facilité de navigation, la facilité de collaboration, la facilité de participation, l'attention, le partage d'information et la confiance perçue.
(Hasani, Bojei, et Dehghant anha 2017a)	Social CRM	Start-up Malaisiennes	DOI- TOE	Les variables qui affectent positivement l'adoption du social CRM par les start-ups sont : L'Observabilité, la compatibilité, la testabilité, la disponibilité des ressources financières internes, le support des bailleurs de fonds, le support des business Angel's, le support gouvernemental- la pression externe.

(Ahani, Rahim, et Nilashi 2017a)	Social CRM	PME au Malaisie	TOEP	Les variables qui affectent positivement l'adoption du Social CRM par les PME sont : Le support du Top Management, la connaissance des SI par les employés, le coût de l'adoption, l'avantage relatif, la complexité, la compatibilité, la capture d'information, le partage d'information, l'utilisation de l'information Client, la pression du consommateur, la pression concurrentielle, et le support gouvernemental.
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Tableau 2 : les travaux de recherche traitant l'adoption du Social CRM

Pour développer notre modèle, nous avons mobilisé le cadre TOE de Tornatzky et Fleisher, et la théorie d'adoption et de diffusion de Rogers. En effet, le cadre TOE offre une vision plus large du phénomène de l'adoption dans la mesure où il englobe trois dimensions importantes : la technologie, l'organisation et l'environnement (Sila et Dobni 2012).

Ce fameux cadre a été adapté et utilisé par plusieurs chercheurs pour expliquer l'adoption des innovations technologiques dans différents contextes. Il présente un cadre d'analyse avec des bases théoriques solides, une validation empirique par plusieurs études, et le potentiel d'expliquer l'adoption des différents types d'innovation technologique. Il a été utilisé par (Kuan et Chau, 2001) pour l'adoption de l'EDI, par des sites Web (Oliveira et Martins 2008) pour les sites Web, pour l'adoption d'E-commerce (Liu, 2008, Martins et Oliveira 2009), de l'ERP (Pan et Jang, 2008) ainsi que pour expliquer l'adoption du Social CRM dans les PME (Ahani, Rahim, et Nilashi 2017a; Hasani, Bojei, et Dehghantanha 2017a). Le cadre TOE est souvent complété par la théorie de l'adoption et de diffusion de l'innovation DOI de Rogers 1995. Selon Rogers (1995), il y a cinq attributs de l'innovation qui influence son adoption, et qui sont l'avantage relatif, la compatibilité, la complexité, la possibilité d'essai, et enfin l'observabilité.

4. Le Modèle Conceptuel De Recherche

L'objet de ce paragraphe est de présenter notre modèle conceptuel, qui se base sur, la théorie d'adoption et de diffusion des innovations (DOI) de Rogers, et le cadre théorique TOE de Tornatzky et Fleisher. Ci-dessous, les

principaux facteurs retenus, présentés selon les trois grandes catégories du cadre TOE :

- **Les caractéristiques de l'innovation :**

L'avantage relatif : Il s'agit du degré avec lequel une innovation ou une nouvelle idée est perçue par les « adoptants » potentiels comme étant meilleure que celle existante. Le degré d'avantage relatif peut être mesuré économiquement, mais également en termes de satisfaction, de facteur de prestige social ou le fait que l'innovation soit pratique (Rogers, 1962, 2003). Pour le Social CRM, nous estimons qu'il a plusieurs avantages perçus, dont le principal est le coût d'acquisition. Vu la gratuité des différents médias sociaux qui sont ouverts au public, le Social CRM a un avantage relatif par rapport au CRM traditionnel dont le coût d'acquisition reste très élevé. Aussi bien, le social CRM permet une meilleure fidélité des clients et renforce la loyauté envers la marque, ainsi qu'une co-crédation de la valeur en partenariat avec les clients (Harrigan et Choudhury 2012). D'où la première hypothèse :

H1 : L'avantage relatif perçu influence positivement l'adoption du Social CRM.

La complexité : Il s'agit du degré avec lequel une innovation est perçue comme difficile à comprendre et à utiliser. Plus une innovation est perçue comme complexe, moins on essaiera de l'adopter (Handfield et Pagell 1995). La facilité d'utilisation et la familiarité des utilisateurs avec les médias sociaux, font que le Social CRM est perçu comme une technologie facile à utiliser et moins complexe, ce qui favorise son adoption.

H2 : la complexité influence négativement l'adoption du Social CRM.

L'observabilité : (Venkatesh et al. 2003) la définissent comme le degré auquel les résultats de l'innovation sont visibles pour les autres. Il est fort probable que les individus adoptent l'innovation s'ils peuvent observer les avantages relatifs à la technologie en question, ce qui pourrait réduire l'incertitude à son égard.

H3 : L'observabilité des résultats du Social CRM influence positivement son adoption.

La testabilité : il s'agit de la possibilité d'essai de l'innovation avant de s'engager dans l'utilisation de celle-ci. Dans notre cas, la possibilité de tester et d'utiliser les médias sociaux avant de s'engager joue un rôle favorable pour l'adoption du Social CRM.

H4 : la testabilité du Social CRM influence positivement l'adoption du Social CRM.

La compatibilité : représente le degré avec lequel une innovation est perçue comme « compatible » avec les valeurs, les expériences et les besoins des « adopteurs » potentiels (Rogers, 1962, 2003). Ainsi, si une innovation est considérée comme « compatible », son adoption est perçue comme moins risquée.

H5 : La compatibilité de la culture du Social CRM avec la culture de l'entreprise influence positivement l'adoption.

- **Les caractéristiques organisationnelles :**

Le niveau de connaissance des employés en systèmes d'information : Le passage à l'ère des technologies d'information et de communication ne s'effectue pas avec la même facilité pour tous les employés, certains se sentent dépassés par ces technologies. Ils peuvent avoir l'impression que leurs connaissances sont désuètes et se sentir démunis face aux nouvelles compétences nécessaires (Boisvert et Bégin 2002). (Mansell et Wehn 1998) ont souligné l'importance de l'expérience, des compétences et des connaissances dans l'adoption des TIC. Aussi bien, (Ahani, Rahim, et Nilashi 2017a) ont démontré dans leur étude, une relation positive entre le niveau de connaissance des employés en SI et l'adoption du Social CRM.

H7 : Le niveau élevé de connaissance des employés en médias sociaux influence positivement l'adoption du Social CRM.

- **Les caractéristiques environnementales**

La pression mimétique : elle correspond à une pression subie par l'organisation qui l'incite à imiter le comportement innovant d'autres organisations. Plus la pression mimétique est forte dans l'environnement d'une organisation, plus son degré d'innovativité est supposé être élevé. L'adoption basée sur le mimétisme est déterminée par la volonté d'imiter les pratiques managériales des entreprises pionnières dans l'utilisation d'innovations.

H8 : La forte pression mimétique de l'environnement influence positivement l'adoption du Social CRM.

La pression concurrentielle : elle représente le degré de concurrence propre à l'environnement de l'organisation. Plus la pression concurrentielle est forte, plus le degré d'innovativité d'une organisation est supposé être élevé. Les différentes recherches empiriques font toutes apparaître une association positive entre le degré de pression concurrentielle et l'innovativité organisationnelle, qu'il s'agit d'innovations de produit (Capon et al., 1992 ; Miller et Friesen, 1983), technologiques (Kitchell, 1995, ElAbbassi et Chafik, 2014) ou managériales (Kimberly et Evanisko, 1981).

H9 : la forte pression concurrentielle influence positivement l'adoption du Social CRM.

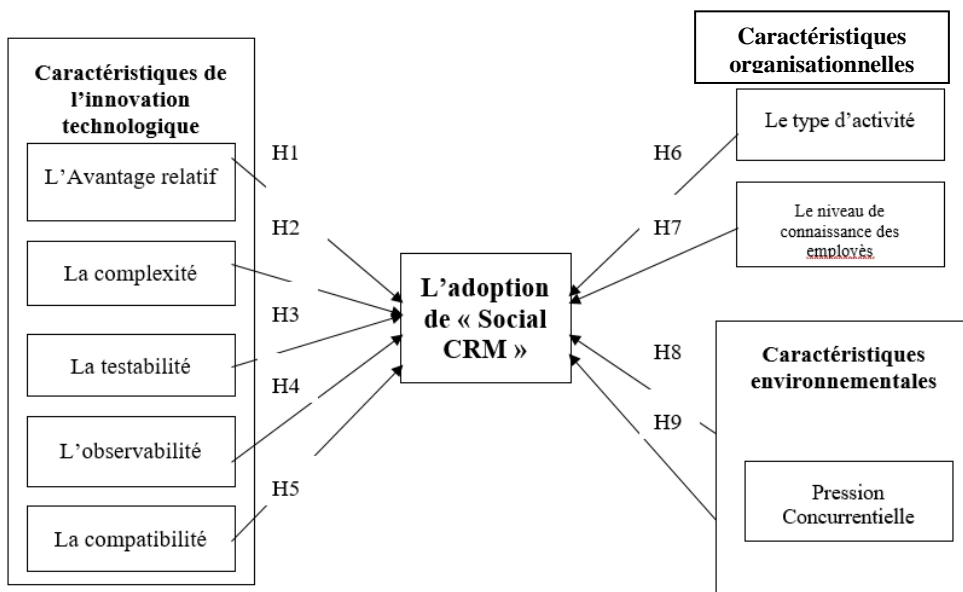


Figure 2 : Le modèle conceptuel initial de recherche

5. La Demarche Methodologique

5.1. Une méthode de nature qualitative

La méthodologie repose sur un certain nombre de choix de la part du chercheur qu'il doit justifier. Pour Gauthier (2003), peu importe le type de recherche, le but est de réduire l'incertitude « *en reconnaissant mieux notre environnement, nous réduisons les risques que renferment de nouvelles situations, nous réduisons l'incertitude* ».

Vu la nature complexe du sujet et sa nouveauté, de même le manque de littérature scientifique consacrée spécifiquement à l'étude de ce phénomène au Maroc, nous avons choisi de commencer par une étude qualitative, qui va nous permettre d'affiner notre modèle conceptuel et de le contextualiser. A la différence de l'analyse quantitative, l'approche qualitative permet d'atteindre une compréhension en profondeur d'un phénomène ou d'un problème grâce notamment à la richesse et la complexité des données qualitatives.

5.2. Les techniques d'échantillonnage

L'échantillon des entreprises que nous avons interviewées a été constitué par choix raisonné. Nous avons également, utilisé la technique « de la boule de neige ». Cette technique nous a permis d'avoir les contacts d'autres personnes qui peuvent nous aider à réaliser notre étude.

Pour déterminer la taille de l'échantillon, nous avons suivi le principe de la saturation théorique. Selon (Glaser et Strauss 1967), la taille adéquate d'un échantillon est celle qui permet d'atteindre la saturation théorique. Cette saturation est atteinte lorsqu'on ne trouve plus d'information supplémentaire

capable d'enrichir la théorie. Il est donc impossible de déterminer *a priori* la taille de l'échantillon. Comme le soulignent Royer et Zarlowski (1999, p.216), « *ce principe est difficile à mettre en œuvre de manière parfaitement rigoureuse car on ne peut jamais avoir la certitude qu'il n'existe plus d'information supplémentaire capable d'enrichir la théorie. Il revient donc au chercheur d'estimer s'il est parvenu au stade de saturation. Généralement la collecte de données s'arrête lorsque les dernières unités d'observations analysées n'ont pas apporté d'éléments nouveaux* »².

Le tableau ci-dessous représente une description de notre échantillon d'étude :

Poste occupé	Genre	Niveau d'étude	Expérience	Secteur d'activité	Département
Commercial	Homme	BAC + 3	2 ans	Hôtel	Marketing
Sales excutive	Homme	BAC + 5	4 ans	Agence de voyage	Ventes
Responsable des ventes	Homme	BAC + 3	5 ans	Agence de voyage	Ventes
Responsable développement des affaires et directeur adjoint	Homme	BAC + 5	20 ans	Agence de voyage	Développement des affaires
Agent de réservation	Homme	BAC + 3	3 ans	Hôtel	Réservation
Coordinatrice commerciale	Femme	BAC + 3	7 ans	Agence de voyage	Marketing
Sales excutive	Homme	BAC + 5	3 ans	Hôtel	ventes
Chargé de clientèle	Homme	BAC + 3	5 ans	Hôtel	Marketing
Chargé des ventes	Homme	BAC + 3	2 ans	Agence de voyage	Ventes
Agent de réservation	Homme	BAC + 3	4 ans	Hôtel	Réservation

5.3. Techniques de collecte de données

Comme technique de collecte des données, nous avons choisi l'entretien semi-directif à l'aide d'un guide d'entretien. Les entretiens se sont déroulés dans une durée moyenne d'une heure. Les premières minutes ont été consacrées à l'explication de l'objet de l'étude et des thèmes à aborder. Ensuite, nous avons laissé libre cours à l'interlocuteur pour répondre aux questions, tout en suivant le guide d'entretien. Cependant, des actions d'ajustement ont été entreprises par la reformulation de certaines questions.

5.4. Techniques de traitement et d'analyse des données

Selon Mucchielli (1998), l'analyse de contenu se veut une méthode capable d'effectuer l'exploitation totale et objective des données informationnelles. Pour mener à bien l'analyse du contenu, nous avons eu recours au logiciel Nvivo 12.

² Royer I. et Zarlowski P., (1999), « Le design de la recherche », p. 139-168, in in Thiétart, Raymond-Alain (sous la direction de), Méthodes de Recherche en Management, Dunod.

6. Resultats et Discussion

La présentation des résultats se fera selon les thèmes abordés au cours des interviews, en analysant les verbatim.

6.1. Les caractéristiques technologiques de l'innovation

6.1.1. L'avantage relatif

Tous les répondants confirment que le Social CRM a certains avantages par rapport au CRM traditionnel. Parmi ces avantages, nous trouvons :

- Le ciblage de la clientèle

L'une des raisons qui ont poussé les PME de tourisme à adopter le Social CRM est le meilleur ciblage de la clientèle.

« *Les médias sociaux représentent un outil efficace pour la prospection des nouveaux clients mais aussi bien de les fidéliser, de recenser leurs besoins afin de personnaliser nos offres* ». Le responsable Marketing au sein de l'hôtel C.

- Le gain du temps / la rapidité d'action

Un autre avantage perçu du Social CRM est relatif au gain de temps. Ce gain se manifeste essentiellement au niveau de la réactivité de l'entreprise en cas de problème.

- Une communication à large échelle

Un pourcentage de 80 % des répondants, affirment que les médias sociaux permettent une communication à large échelle.

« *Les médias sociaux nous ont donné la possibilité de dépasser les limites géographiques et d'atteindre des clients des différentes villes Marocaines, et des clients étrangers* ». Responsable de développement des affaires au sein de l'agence B.

« *En communiquant sur les médias sociaux, nous avons touché un public sur une large zone géographique tant au Maroc que dans le monde entier* ». Coordinatrice commerciale au sein de l'hôtel B.

- L'image de marque

Aussi bien, tous les répondants affirment que les médias sociaux sont très utiles pour améliorer l'image et la notoriété de la marque, cependant cela nécessite beaucoup d'effort et d'engagement.

- Réduction des coûts

Pour la majorité les répondants, la réduction des coûts ne semble pas être une motivation pour l'adoption du Social CRM. Même si la plupart des médias sociaux sont accessibles gratuitement, les entreprises payent les frais de la promotion du contenu pour développer leur visibilité et atteindre le maximum d'audience.

- Le respect de l'environnement

Un avantage évoqué par le Responsable de développement des affaires de l'agence du voyage (A), est le respect de l'environnement. Ainsi, selon lui,

l'adoption des médias sociaux est perçue comme un élément permettant de minimiser l'utilisation des papiers.

« Avec les médias sociaux nous avons changé nos méthodes classiques qui ne respectent pas vraiment l'environnement comme la distribution des flyers qui finissent par terre dans les rues. Aujourd'hui, avec un seul clic nous pouvons distribuer plus de 500 flyers à l'aide de WhatsApp ou Facebook, sans perdre d'énergie ni gaspiller du papier ».

Cependant, cet aspect n'a été évoqué que par cet acteur, son poids ne semble donc pas être très important au niveau de l'avantage relatif du Social CRM.

6.1.2. La compatibilité

La compatibilité perçue du Social CRM influence positivement son adoption. Cette compatibilité est mesurée à travers trois dimensions à savoir la compatibilité avec les valeurs de l'entreprise, ses besoins et ses expériences.

- Compatibilité avec les valeurs

Toutes les réponses affirment cette compatibilité sans exception :

« Bien sûr. Quel est l'objectif de l'entreprise ? C'est la satisfaction du client, répondre à ses besoins, lui donner un produit qui répond à ses exigences, lui fournir le service souhaité, être honnête avec lui. Tout ceci est aujourd'hui permis grâce aux médias sociaux. Donc forcément l'adoption du Social CRM est compatible avec les valeurs de notre agence ». Responsable Marketing au sein de l'hôtel D.

La compatibilité avec les valeurs de l'entreprise, en tant que facteur d'adoption du Social CRM, est de fait vérifié et confirmé par tous les répondants.

- Les besoins

Tous les interviewés affirment que le Social CRM est compatible avec les besoins de l'entreprise, ce qui a favorisé son adoption :

« Oui bien sûr si on l'a adopté c'est qu'il est compatible avec nos besoins. Surtout en termes d'image de marque et de satisfaction des exigences des clients. En effet, grâce aux médias, nous avons créé des relations plus personnalisées avec nos clients, ce qui nous aide au mieux les satisfaire ».

- Les innovations passées

Les réponses affirment que le Social CRM ne ressemble pas à d'autres innovations adoptées au passé, mais cela n'a pas pour autant empêcher son adoption.

« Non, non au contraire étant donné que c'est nouveau... On ne doit pas être découragé et on doit adopter les nouveautés qui vont nous apporter plus de valeur ajoutée ».

« Si c'est une innovation c'est que c'est quelque chose de nouveau et donc par définition elle ne ressemble pas à autre chose ».

6.1.3. La complexité

La complexité fait référence à l'hypothèse qui stipule que le Social CRM est perçu comme difficile à comprendre et à utiliser ce qui défavorise son adoption. En effet la complexité perçue est différente d'une personne à une autre selon l'expérience et le degré de sa compétence. La majorité des répondants s'accordent à dire que les médias sociaux sont faciles à utiliser et à manipuler à titre personnel, mais ne sont pas autant facile à utiliser pour le business. En réponse à la question : « Considérez-vous le Social CRM comme étant difficile à utiliser ? », certains disent :

« En effet ce n'est pas l'utilisation en elle-même qui est difficile, mais c'est la création du contenu pour le partager qui nécessite de la créativité et de la patience, et représente pour nous une tâche de plus ».

Cette réponse est partagée par plusieurs commerciaux surtout au niveau des hôtels, qui se plaignent de la charge de travail causé par l'adoption des médias sociaux, en plus de leurs tâches quotidiennes d'avant l'adoption. Les entreprises adoptent le Social CRM sans recourir au recrutement de personnes qualifiées pour s'en charger de la mise en place de cette stratégie de Social CRM. Aussi bien, les répondants affirment que certains médias sociaux sont plus faciles à utiliser, comme le cas de *facebook* et d'*Instagram*, contrairement au *Twitter* par exemple. Ceci est confirmé par (Denis Pommeray 2016) qui considère Facebook comme le réseau incontournable pour le plan marketing digital. Son audience ne faiblit pas et les marques ont toute leur place dans l'animation de ce réseau.

6.1.4 La testabilité

Concernant la dimension relative à la « testabilité » qui, rappelons-le, correspond à la possibilité offerte à l'entreprise de tester les médias sociaux avant de la mettre en place, et qui pourrait l'encourager à l'adopter. Nous remarquons à travers l'analyse qualitative que 50% des répondants confirment qu'en premier temps, ils ont choisi de se focaliser sur un seul canal social en guise de test, avant de mettre en place une stratégie plus intégrée et aux multiples canaux.

6.1.5. L'observabilité

A la question : « Selon vous, est ce que les résultats des médias sociaux sont visibles et observables ? Expliquez ; », les répondants confirment que les résultats des médias sociaux sont visibles et le résultat le plus important est l'augmentation de volume des ventes.

6.2. Les caractéristiques organisationnelles

6.2.1. La taille de l'organisation

Selon notre analyse, le type d'activité n'influence pas l'adoption du Social CRM. Les hôtels comme les agences de voyage adoptent énergétiquement le Social CRM.

6.2.2. La connaissance des employés en informatique

Le degré de connaissances et de compétences des cadres semble avoir favorisé l'adoption de Social CRM par l'ensemble des entreprises étudiées : « *Avec un personnel conscient de l'importance des médias sociaux et possédant des niveaux de compétences et connaissances élevés notamment en matière d'informatique, ça va forcément aider l'entreprise à adopter le Social CRM.* » Responsable des ventes.

Cependant, nous avons remarqué que les entreprises ne recrutent pas des personnes chargées uniquement pour le monitoring des médias sociaux et pour la mise en place de la stratégie Social CRM. Les entreprises se contentent de leurs ressources compétentes pour prendre le relais sur les médias sociaux.

En effet, (Jay Baer et Amber Naslund, 2011), dans leur ouvrage *The Now Revolution*, s'accordent sur le fait que les stratégies déployées pour intégrer les médias sociaux doivent se refléter à l'intérieur de l'organisation, au sein d'une culture forte, partagée et évolutive, où chaque membre devant être considéré comme un porte-parole potentiel.

6.2.3. Le support du Top management

Une autre variable a émergé durant l'analyse du contenu, et qui ne faisait pas partie de notre modèle conceptuel initial : L'appui et le support du Top management.

En effet, 80% des répondants confirment que la décision d'adoption du social CRM est prise par la direction générale ou le top management. Dans le cas des agences de voyages, les dirigeants ont joué un rôle très important dans l'adoption du Social CRM. Ils ont été les initiateurs et les preneurs de décision, ainsi pour les $\frac{3}{4}$ des agences, ils étaient eux-mêmes chargé de la gestion des différents médias sociaux. Donc, il nous a apparu nécessaire d'ajouter à notre modèle initial, la variable « Appui et support du Top management » comme facteur influençant l'adoption du Social CRM.

6.3. Les caractéristiques de l'environnement

6.3.1. La pression des concurrents

L'analyse du contenu a révélé que la pression exercée par les concurrents n'a pas le même effet sur le comportement d'adoption des différentes entreprises. En effet, dans le cas de l'agence de voyage (C), le projet Social CRM a été mis en place dès le début de son activité en 2010.

Cette entreprise a été pionnière dans ce domaine, et sa décision d'adoption n'a pas été prise sous l'influence de la concurrence. Cependant, pour les autres entreprises, le souci de la concurrence est présent, et le fait de devancer la concurrence et de se démarquer des principaux concurrents était cité comme source de motivation pour l'adoption du Social CRM.

6.3.2. La pression mimétique

Les répondants en unanimité déclarent ne pas avoir adopté le Social CRM en copiant des autres organisations concurrentes. Généralement, les acteurs d'une même industrie partagent une problématique commune et une même compréhension des pratiques appropriées (Greenwood, Suddaby, et Hinings 2002). Donc, cela s'explique par l'appartenance de toutes les entreprises au même secteur qui est le tourisme. Elles ont adopté le Social CRM comme une solution pour satisfaire les clients et promouvoir leurs services.

Conclusion

La gestion de la relation client bouleversée par le développement des médias sociaux, a donné naissance à un nouveau paradigme, le « Social CRM ». En effet, l'adoption du Social CRM est une opportunité pour les entreprises pour améliorer leur performance commerciale. Pour (Baird et Parasnis 2011), la présence des organisations sur les médias sociaux et les initiatives qu'elles prennent, leur permettent de mieux comprendre leurs clients, d'accroître leurs revenus et de personnaliser leurs services.

Notre recherche avait pour objectif de découvrir l'ampleur de l'adoption des médias sociaux comme outil de la gestion de la relation client, et de répondre à notre question de recherche, « *Quels sont les facteurs déterminants influençant l'adoption et l'utilisation du « Social CRM » par les PME de tourisme au Maroc ?* »

Comme base théorique à notre modèle initial de recherche, nous avons choisi le modèle TOE de Tornatzky et Mitchell Fleischer (1990), et la théorie d'adoption des innovations de Rogers (1983).

Vu la complexité et la nouveauté du sujet, nous avons choisi de mener une étude exploratoire, auprès de 10 PME de tourisme sur la ville de Tanger, pour contextualiser et affiner notre modèle. Cette recherche s'inscrit donc dans un paradigme compréhensif et descriptif.

L'analyse qualitative a été effectuée à l'aide du logiciel NVivo12. Cet outil nous a permis d'analyser le contenu des données issues essentiellement des entretiens réalisés auprès de 10 entreprises de tourisme de la région de Tanger.

Pour les caractéristiques technologiques, les résultats de l'étude confirment que l'avantage relatif est un facteur déterminant de l'adoption du

Social CRM. Ceci est conforme aux études antérieures qui ont démontré aussi que l'avantage perçu a un effet positif sur l'adoption et l'utilisation du Social CRM (Hasani, Bojei, et Dehghantanha 2017b; Ahani, Rahim, et Nilashi 2017b; Marolt et al. 2020). Aussi bien les hypothèses qui stipulent que la compatibilité avec les pratiques et les valeurs de l'entreprise, la testabilité, la facilité d'utilisation des médias sociaux ainsi que l'observabilité des résultats, sont des facteurs influençant l'adoption du social CRM, sont confirmés.

Deux hypothèses ont été réfutées. En effet, l'hypothèse stipulant que la pression mimétique influence positivement l'adoption du social CRM, est non supportée. Car les répondants en unanimité déclarent ne pas avoir adopté le Social CRM en copiant des autres organisations concurrentes. Une autre hypothèse réfutée est le type d'activité de l'organisation qui n'influence pas l'adoption du Social CRM. Les propos retenus de l'étude montrent que l'adoption du Social CRM est belle et bien présente quel que soit le type d'activité de l'entreprise.

Cependant, l'étude exploratoire a fait émerger d'autres variables, nous citons en particulier l'engagement des dirigeants, vu le rôle central qu'ils jouent dans la prise de toutes les décisions. Donc, il nous a paru nécessaire d'ajouter à notre modèle initial, la variable « Appui et support du Top management » comme facteur influençant l'adoption du Social CRM.

En perspective de cette recherche, nous envisageons dans l'étape suivante, la réalisation d'une étude quantitative confirmatoire, qui sera réalisée au niveau national, pour tester notre modèle de recherche aménagé et généraliser les conclusions préliminaires de cette étude exploratoire.

References:

1. Ahani, Ali, Nor Zairah Ab. Rahim, et Mehrbakhsh Nilashi. 2017a. « Forecasting Social CRM Adoption in SMEs: A Combined SEM-Neural Network Method ». *Computers in Human Behavior* 75 (octobre): 560-78. <https://doi.org/10.1016/j.chb.2017.05.032>.
2. ———. 2017b. « Forecasting Social CRM Adoption in SMEs: A Combined SEM-Neural Network Method ». *Computers in Human Behavior* 75 (octobre): 560-78. <https://doi.org/10.1016/j.chb.2017.05.032>.
3. Askool, Sanaa, et Keiichi Nakata. 2011. « A conceptual model for acceptance of social CRM systems based on a scoping study ». *AI and Society* 26 (3): 205-20. <https://doi.org/10.1007/s00146-010-0311-5>.
4. Baird, Carolyn Heller, et Gautam Parasnis. 2011. « From social media to social customer relationship management ». *Strategy & Leadership* 39 (5): 30-37. <https://doi.org/10.1108/10878571111161507>.

5. Boisvert, Hugues, et Lucie Bégin. 2002. « Bonifier la proposition de valeur grâce à Internet ». *Gestion* 27 (2): 32. <https://doi.org/10.3917/riges.272.0032>.
6. Capon, Noel, John U. Farley, Donald R. Lehmann, et James M. Hulbert. 1992. « Profiles of Product Innovators Among Large U.S. Manufacturers ». *Management Science* 38 (2): 157-69. <https://doi.org/10.1287/mnsc.38.2.157>.
7. Cappuccio, Sergio, Sagar Kulkarni, Muhammad Sohail, Mustafa Haider, et Xiaobing Wang. 2012. « Social CRM for SMEs: Current Tools and Strategy ». In *Contemporary Research on E-business Technology and Strategy*, édité par Vasil Khachidze, Tim Wang, Sohail Siddiqui, Vincent Liu, Sergio Cappuccio, et Alicia Lim, 332:422-35. Berlin, Heidelberg: Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-34447-3_38.
8. Chafik, Khalid, et Boutaina Benjelloun. 2014. « Facteurs déterminants d'une intégration réussie d'un projet CRM au sein des organisations : Cas des entreprises des services au Maroc. » *AIM*.
9. Charoensukmongkol, Peerayuth, et Pakamon Sasatanun. 2017. « Social Media Use for CRM and Business Performance Satisfaction: The Moderating Roles of Social Skills and Social Media Sales Intensity ». *Asia Pacific Management Review* 22 (1): 25-34. <https://doi.org/10.1016/j.apmr.2016.10.005>.
10. Denis Pommeray. 2016. *Le plan marketing-communication digitale : préparer, déployer et piloter son plan web marketing*. Donud.
11. ElAbbassi, Ahmed, et Khalid Chafik. 2014. « The Decision to Invest in Information Systems: Case of Adopting ERP in the Moroccan Public Largest Companies ». *International Journal of Computer Applications* 88 (15): 49-54. <https://doi.org/10.5120/15432-4050>.
12. Gauthier, Benoît. 2003. *Recherche sociale: de la problématique à la collecte des données*. PUQ.
13. Glaser, B.G., et A.L. Strauss. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Observations (Chicago, Ill.). Aldine. <https://books.google.co.ma/books?id=oUxEAQAAIAAJ>.
14. Greenberg, Paul. 2010. *CRM at the Speed of Light : Social CRM 2.0 Strategies, Tools, and Techniques for Engaging Your Customers*. Fourth edition. New York: McGraw-Hill Osborne.
15. Greenwood, Royston, Roy Suddaby, et C R Hinings. 2002. « THEORIZING CHANGE: THE ROLE OF PROFESSIONAL ASSOCIATIONS IN THE TRANSFORMATION OF INSTITUTIONALIZED FIELDS », 24.
16. Handfield, Robert B., et Mark D. Pagell. 1995. « An Analysis of the Diffusion of Flexible Manufacturing Systems ». *International Journal*

- of Production Economics* 39 (3): 243-53.
[https://doi.org/10.1016/0925-5273\(95\)00026-K](https://doi.org/10.1016/0925-5273(95)00026-K).
17. Harrigan, Paul, et Musfiq Mannan Choudhury. 2012. « Technology acceptance model and the social crm: a model for customer engagement ». *Academy of Marketing*, 1-9.
 18. Harrigan, Paul, Geoff Soutar, Musfiq Mannan Choudhury, et Michelle Lowe. 2014. « Modelling CRM in the social media age ». *Australasian Marketing Journal (AMJ)*, 1-11.
<https://doi.org/10.1016/j.ausmj.2014.11.001>.
 19. Hasani, Tahereh, Jamil Bojei, et Ali Dehghantanha. 2017a. « Investigating the Antecedents to the Adoption of SCRM Technologies by Start-up Companies ». *Telematics and Informatics* 34 (5): 655-75. <https://doi.org/10.1016/j.tele.2016.12.004>.
 20. ———. 2017b. « Investigating the Antecedents to the Adoption of SCRM Technologies by Start-up Companies ». *Telematics and Informatics* 34 (5): 655-75. <https://doi.org/10.1016/j.tele.2016.12.004>.
 21. Jay Baer, et Amber Naslund. s. d. *The Now Revolution: 7 Shifts to Make Your Business Faster, Smarter and More Social*. Gildan Media, LLC.
 22. Kimberly, J. R., et M. J. Evanisko. 1981. « Organizational Innovation: The Influence of Individual, Organizational, and Contextual Factors on Hospital Adoption of Technological and Administrative Innovations. » *Academy of Management Journal* 24 (4): 689-713.
<https://doi.org/10.2307/256170>.
 23. Kitchell, S. 1995. « Corporate Culture, Environmental Adaptation, and Innovation Adoption: A Qualitative/Quantitative Approach ». *Journal of the Academy of Marketing Science* 23 (3): 195-205.
<https://doi.org/10.1177/0092070395233004>.
 24. Kuan, Kevin K.Y., et Patrick Y.K. Chau. 2001. « A Perception-Based Model for EDI Adoption in Small Businesses Using a Technology–Organization–Environment Framework ». *Information & Management* 38 (8): 507-21. [https://doi.org/10.1016/S0378-7206\(01\)00073-8](https://doi.org/10.1016/S0378-7206(01)00073-8).
 25. Leary, Brent. 2008. « Electronic Social Crm: Customer Relationship Management In The Age Of The Socially-Empowered Customer. »
 26. Lévy-Bencheton, Léon. 2012. *L'infotechnocratie: le déni de complexité dans l'informatique*. Paris: Hermès Science publications-Lavoisier.
 27. Malthouse, Edward C., Michael Haenlein, Bernd Skiera, Egbert Wege, et Michael Zhang. 2013. « Managing customer relationships in the social media era: Introducing the social CRM house ». *Journal of*

- Interactive Marketing* 27 (4): 270-80.
<https://doi.org/10.1016/j.intmar.2013.09.008>.
28. Mansell, Robin, et Uta Wehn. 1998. *Knowledge Societies: Information Technology for Sustainable Development*. United Nations Publications.
 29. Marolt, Marjeta, Hans-Dieter Zimmermann, Anja Žnidaršič, et Andreja Pucihar. 2020. « Exploring Social Customer Relationship Management Adoption in Micro, Small and Medium-Sized Enterprises ». *Journal of Theoretical and Applied Electronic Commerce Research* 15 (2): 38-58. <https://doi.org/10.4067/S0718-18762020000200104>.
 30. Miller, Danny, et Peter H. Friesen. 1983. « Strategy-Making and Environment: The Third Link ». *Strategic Management Journal* 4 (3): 221-35. <https://doi.org/10.1002/smj.4250040304>.
 31. Mousavi, Seyedreza, et Haluk Demirkan. 2013. « The Key to Social Media Implementation: Bridging Customer Relationship Management to Social Media ». In *2013 46th Hawaii International Conference on System Sciences*, 718-27. Wailea, HI, USA: IEEE. <https://doi.org/10.1109/HICSS.2013.531>.
 32. Mucchielli Roger. 1998. *L'analyse de contenu des documents et des communications*. 10ème édition. Librairie Eyrolles. <https://www.eyrolles.com/Loisirs/Livre/l-analyse-de-contenu-9782710112792/>.
 33. Oliveira, Tiago, et Maria Rosario Oliveira Martins. 2008. « A COMPARISON OF WEB SITE ADOPTION IN SMALL AND LARGE PORTUGUESE FIRMS ». In *Proceedings of the International Conference on e-Business*, 370-77. Porto, Portugal: SciTePress - Science and and Technology Publications. <https://doi.org/10.5220/0001907603700377>.
 34. Pan, Ming-Ju, et Woan-Yuh Jang. 2008. « Determinants of the Adoption of Enterprise Resource Planning within the Technology-Organization-Environment Framework: Taiwan's Communications Industry ». *Journal of Computer Information Systems* 48 (3): 94-102. <https://doi.org/10.1080/08874417.2008.11646025>.
 35. Rogers, Everett M. 1983. *Diffusion of innovations*. 3rd ed. New York : London: Free Press ; Collier Macmillan.
 36. Sigala, Marianna. 2011. « eCRM 2.0 applications and trends: The use and perceptions of Greek tourism firms of social networks and intelligence ». *Computers in Human Behavior* 27 (2): 655-61. <https://doi.org/10.1016/j.chb.2010.03.007>.

37. Sila, Ismail, et Dawn Dobni. 2012. « Patterns of B2B E-commerce Usage in SMEs ». *Industrial Management & Data Systems* 112 (8): 1255-71. <https://doi.org/10.1108/02635571211264654>.
38. Swanson, E. Burton. 1994. « Information Systems Innovation Among Organizations ». *Management Science* 40 (9): 1069-92. <https://doi.org/10.1287/mnsc.40.9.1069>.
39. Teixeira, Manuela. 2009. « L'émergence de réseaux sociaux sur le Web comme nouveaux outils de marketing ». Thesis, University of Ottawa (Canada). <http://dx.doi.org/10.20381/ruor-19267>.
40. Tornatzky, Louis G., et Mitchell Fleischer. 1990. « Processes of Technological Innovation (Issues in Organization and Management Series) », 1.
41. Trainor, Kevin J., James(Mick) Andzulis, Adam Rapp, et Raj Agnihotri. 2014. « Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM ». *Journal of Business Research* 67 (6): 1201-8. <https://doi.org/10.1016/j.jbusres.2013.05.002>.
42. Venkatesh, Viswanath, Michael Morris, Gordon Davis, et Fred Davis. 2003. « User Acceptance of Information Technology: Toward a Unified View ». *Management Information Systems Quarterly* 27 (3). <https://aisel.aisnet.org/misq/vol27/iss3/5>.
43. Woodcock, N., A. Green, et M. Starkey. 2011. « Social CRM as a business strategy. » *Journal of Database Marketing & Customer Strategy Management* 18 (1): 50-64. <https://doi.org/10.1057/dbm.2011.7>.



ESJ Social Sciences

Gestion Therapeutique Des Entorses Et Fractures "Nikary" Chez Le Peuple Senoufo De La Region Du Poro (Nord De La Côte D'ivoire)

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[Doi:10.19044/esj.2021.v17n1p295](https://doi.org/10.19044/esj.2021.v17n1p295)

Submitted: 03 December 2020

Accepted: 11 January 2021

Published: 31 January 2021

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Cite As:

Donakpo S. (2021). *Gestion Therapeutique Des Entorses Et Fractures "Nikary" Chez Le Peuple Senoufo De La Region Du Poro (Nord De La Côte D'ivoire)*. European Scientific Journal, ESJ, 17(1), 295.

<https://doi.org/10.19044/esj.2021.v17n1p295>

Resume

La médecine traditionnelle est menacée et tend à être négligée à cause de l'introduction de la médecine moderne dans la société africaine. A cette menace, s'ajoutent les imposteurs qui ont infiltrés le domaine. Et pourtant, la médecine traditionnelle n'a pas encore fini de faire ces preuves. C'est ce que nous découvrons avec le traitement des entorses et fractures. Ainsi, cette étude socio-anthropologique qualitative s'est-elle assigné de réaliser un suivi rapproché des activités des « nankarigabélés » traumatologues traditionnels du peuple Sénoufo au nord de la Côte d'Ivoire. Elle vise à évaluer l'importance qualitative, l'efficacité et les insuffisances des mécanismes utilisés par celle-ci dans le traitement des entorses et fractures. La méthode d'étude est basée sur une approche qualitative ayant consisté en l'administration d'un guide d'entretiens semi-dirigés et l'observation directe. Elle s'est déroulée du 06 juillet au 25 septembre 2020 dans la Direction Régionale de la Santé de Korhogo précisément dans 8 villages où habitent un sous-groupe des Sénoufos, les forgerons « fodonnon » et qui sont réputées dans la prise en charge thérapeutique des victimes d'entorses ou fractures. L'enquête a mobilisé 12 tradipraticiens et 66 personnes guéris d'entorses ou fractures (dont la période poste guérison varie de 6 mois à 3 ans) par ces 12 guérisseurs. Les techniques d'analyse des données ont été l'analyse thématique et l'analyse de contenu. Les résultats de l'enquête n'ont pas révélé de véritables cas de complication posttraumatique. Les personnes guéries ou leurs parents par les

« Nankarigabélés », témoignent plutôt l'importance et la qualité du travail accompli par ceux-ci. En plus, 9 guérisseurs traditionnelles sur 12 enquêtés tiennent des registres de patients et 7 parmi eux collaborent avec la médecine moderne pour la prise en charge des cas d'entorses et fractures dans leur localité.

Mots clés : Gestion thérapeutique, entorses et fracture, les fodonons Sénoufo de Korhogo

Therapeutic Management of Sprains and Fractures "Nikary" in the Senoufo People of Poro Region (Northern Côte d'Ivoire)

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Abstract

Traditional medicine is under threat and tends to be neglected due to the introduction of modern medicine into African society. Added to this threat are the impostors who have infiltrated the domain. And yet, traditional medicine has not yet finished proving this. This is what we are finding out with the treatment of sprains and fractures. Thus, this qualitative socio-anthropological study set out to carry out a close follow-up of the activities of the traditional trauma "nankarigabélés" of the Senoufo people in the north of Côte d'Ivoire. It aims to assess the qualitative importance, efficiency and inadequacies of the mechanisms used by it in the treatment of sprains and fractures. The study method is based on a qualitative approach consisting of the administration of a guide to semi-structured interviews and direct observation. It took place from July 6 to September 25, 2020 in the Regional Directorate of Health of Korhogo precisely in 8 villages where a sub-group of Sénoufos live, the blacksmiths "fodonons" and who are renowned in the therapeutic care of victims of sprains or fractures. The survey mobilized 12 traditional healers and 66 people healed of sprains or fractures (whose post-healing period varies from 6 months to 3 years) by these 12 healers. The techniques for data analysis have been thematic analysis and content analysis. The results of the investigation did not reveal any true cases of post-traumatic complications. People cured or their parents by the "Nankarigabélés", rather testify to the importance and the quality of the work accomplished by them. In addition, 9 traditional healers out of 12 surveyed keep patient registers and

7 among them collaborate with modern medicine for the management of cases of sprains and fractures in their locality.

Keywords: Therapeutic management, sprains and fractures, Korhogo's Senoufo fodonnons

Introduction

Dans le monde, à travers les siècles, les traditions humaines ont su développer la connaissance et l'utilisation des plantes médicinales. Certaines de ces pratiques médicinales paraissent étranges et relèvent de la magie, d'autres au contraire semblent plus fondées, plus efficaces. Toutefois, l'objectif de toutes ces pratiques est de vaincre la souffrance et d'améliorer la santé des hommes (Kouamé, 2018, p10 ; Gueye, 2019, p21). L'ensemble de ces pratiques, approches, connaissances et croyances sanitaires intégrant des médicaments à base de plantes, d'animaux et/ou de minéraux, des traitements spirituels, des techniques manuelles et exercices, appliqués seuls ou en association afin de maintenir le bien-être, traiter, diagnostiquer ou prévenir la maladie, est défini par l'OMS comme étant la médecine traditionnelle ou médecine complémentaire¹ (OMS, 2013, p15).

En côte d'ivoire, pays situé en Afrique de l'ouest, la médecine traditionnelle connaît depuis quelques années un regain d'intérêt et occupe une place importante dans la politique sanitaire. Environ 80% de la population surtout en milieu rural a souvent recours à elle comme alternative aux problèmes d'accessibilité aux soins et aux médicaments de la médecine moderne. Cette médecine fait partie du patrimoine socioculturel, elle est accessible par son coût et ses modalités de paiement (PNPMT, 2014, p8).

Dans la région des savanes, au Nord de la Côte d'Ivoire, le peuple senoufo est reconnu pour ses pratiques culturelles. Ce peuple a une manière à lui de faire certains soins. La ville de Korhogo est une ville qui est basée beaucoup sur la tradition dans la guérison des maladies. Bien que le monde connaisse un développement avancé de la médecine, le peuple senoufo préfère soigner certains maux de manière traditionnelle. C'est le cas des entorses et fractures traitées par les « NIKARO » ou « Nankaribélé » un certain type d'initiés du peuple fodonnon un sous-groupe Sénoufo. En effet, l'une des caractéristiques fondamentales du peuple Sénoufo, est l'ensemble de ses croyances, ajouté aux valeurs de la culture du travail et du respect des anciens. Ce fondement est promu au sein des institutions initiatiques connues sous les noms de « Poro » et de « Tchologo » (I. Binaté, 2016, p.99). Ainsi, chez le peuple sénoufo, la médecine traditionnelle garde une place importante à côté de la médecine moderne. Elle est étroitement liée à l'univers socioculturel et

¹ <http://www.who.int/medicines/areas/traditional/definitions/en/>

profondément enracinée dans les habitudes du Sénoufo en général et particulièrement chez les fodonons. Cette médecine traditionnelle en traumatologie, se rapproche globalement de la médecine moderne dans son aspect médical puisse qu'elle livre des soins et des traitements après avoir posé des diagnostics et donner des conseils à ses patients (Bassi, 2007, p2).

Dans le souci de mieux appréhender l'apport de la médecine traditionnelle au bien être de ce peuple, la présente étude se propose pour objectifs de recherche, d'analyser la gestion thérapeutique des entorses et fractures « Nikary » par les « Nikaro » dans la société Sénoufo de Korhogo. de façon spécifique, montrer la particularité de ces traumatologues traditionnels, décrire l'itinéraire thérapeutique des malades et les mécanismes de gestion de la maladie. D'où les questions ; Comment certains initiés Fodonons (sous-groupe Sénoufos) se spécialisent-ils dans les soins des entorses et fractures ? Quel est l'itinéraire thérapeutique emprunté par les sujets affectés ? Quels sont les mécanismes mise en place pour gérer cette maladie ?

I – Méthodes et matériels

Cette étude portant sur la gestion thérapeutique des fractures et entorses chez le peuple sénoufo de Korhogo, a eu lieu dans un champ géographique et porte sur un champ sociologique. Elle a fait aussi usage d'outils de collecte des données et des méthodes pour leur analyse. Tous ces éléments se présentent comme suit :

I – 1 Champ géographique

Cette étude s'est réalisée dans la Direction Régionale de la Santé de Korhogo dans la Région du Poro en Côte d'Ivoire. Le choix de cette région sanitaire est la conséquence d'une combinaison de plusieurs variables et critères. Il s'agit notamment des variables démographiques, l'incidence des accidents de motos occasionnant de nombreuses fractures et entorses chez les victimes, et la dimension cosmopolite de la zone. La collecte des données s'est effectuée dans un quartier (KOKO) de la ville de Korhogo et dans 8 villages reconnus pour leurs pratiques de la traumatologie traditionnelle. Il s'agit des villages de Katiofi, Lataha, Waraniéné, Natiokobadara, Ossiéné et Mongaha dans le département de Korhogo, Pédiakaha dans le département de Dikodogou et Nannongoun dans le département de Sinématiali qui sont des localités les plus réputées dans la prise en charge thérapeutique des victimes d'entorses et de fractures.

I – 2 Champ sociologique

La population qui fait l'objet de cette étude est constituée principalement des praticiens fodonons de la traumatologie traditionnelle en fractures et entorses, de parents de malades trouvés sur place et des personnes

guéries par ces guérisseurs. En effet, les traumatologues traditionnels « Nikaro » ou « Nankarigué » ou « Nankarigabélé » en langue sénoufo, sont des initiés fodonons, un sous-groupe en minorité par rapport aux autres (23) sous-groupes (Leclerc 2018 P3) du peuple sénoufo installé dans le nord de la Côte d'Ivoire. Du point de vue localisation sanitaire, ce peuple fait partir de la région sanitaire de Korhogo et les enquêtés se répartissent comme suit :

Tableau N° 1 : Répartition des traumatologues traditionnels enquêtés par localité

Noms des traumatologues traditionnels	Villages	Distance de Korhogo (chef-lieu)
1. SILUÉ DJAKARIDJA 2. YEO MAMADOU	Katiofi	2 Km
3. SILUE SIELE	Lataha	10 Km
4. KPARATCHOGO	Waraniéné	2 Km
5. YEO DOMEHE	Nonnangoun	30 Km
6. YEO FALLERY	Koko	Ville de Korhogo
7. TUO WOLOGO	Pédiakaha	50 Km
8. SILUE DOSSIGUE	Petit-Paris	Ville de Korhogo
9. SEKONGO TORNA 10. KONE NAVAGA	Natiokobadara	Ville de Korhogo
11. SORO SIELE	Ossiéné	Ville de Korhogo
12. YEO OUOLOGO	Mongaha	Ville de Korhogo

Source : Données de l'étude présente faite par Dr Silué

I – 3 Méthode et outils utilisés

La méthodologie de cette étude s'est basée essentiellement sur une approche socio-anthropologique qualitative. Le recours aux techniques de recherche qualitatives participatives permet d'avoir des informations profondes et substantielles sur les représentations, les comportements et les motivations des populations (Neubauer, 2010, p1). Deux principales techniques ont été mobilisées pour cette étude. Il s'agit des entretiens semi directifs et de l'observation directe non participante. Dans le premier cas, l'outil de collecte utilisé est le guide d'entretien. Cet outil a en effet la particularité de susciter le débat, d'approfondir les échanges par des questions de relance, d'approfondissement, de clarification qui n'étaient pas prévues au départ, mais qui naissent des réponses des répondants. Quant à la seconde technique, l'outil utilisé pour rendre compte de l'observation directe a été le Smartphone qui a servi d'appareil photo et de caméra (Anne, 2013, p3). Dans nos investigations, les techniques de choix raisonné et de boule de neige ont été retenues pour l'échantillonnage. Pour la première, l'étude a mobilisé (12) praticiens de la traumatologie traditionnelle dans la région sanitaire de Korhogo. Pour la technique de boule de neige, 66 personnes interrogées dont un parent, ont été guéries d'au moins d'une fracture ou d'une entorse. Ces 66 personnes ont une période poste guérison comprise entre 6 mois et 3 ans. Au

total, l'étude a mobilisé 78 personnes et s'est déroulée du 06 juillet au 25 Septembre 2020 dans la région sanitaire du Poro.

I – 4 Méthodes d'analyse des données

La saisie et le traitement des données ont été possible grâce au logiciel Microsoft. Pour leur analyse, nous avons fait recours à deux types d'analyse. Il s'agit de l'analyse thématique et l'analyse de contenu.

En ce qui concerne l'analyse thématique, elle est le type d'analyse qui convient quand la collecte des données a été faite à l'aide d'un guide d'entretien comme c'est le cas de présente étude. En effet dans ce cas, les intitulés des guides deviennent en même temps les thèmes de l'analyse. Cependant, compte tenu de la nature de l'étude, c'est à-dire une recherche non pas fondamentale, mais appliquée, de l'importance de la thématique de cette étude pour la compréhension des attitudes et des logiques culturelles de ces populations, nous avons combiné l'analyse thématique avec l'analyse de contenu (Weber, 1966 ; Mucchielli, 2006). Dans le cas présent, l'analyse de contenu a pour but d'identifier le système de signes, de signification et d'actions qui sous-tendent les perceptions les interprétations et les comportements dans le domaine de la santé. En d'autres termes, chaque thème de l'étude a fait l'objet d'une analyse de contenu dont la spécificité est de faire une analyse fouillée qui ne laisse aucune information de côté. C'est donc dans le but de compléter l'analyse thématique que nous avons associé l'analyse de contenu.

II – Resultats

II – 1 Importance des traumatologues fodonnon dans la prise en charge des entorses et fractures

Les « Nankarigabélés » ou Nankariguès » constituent la catégorie nosologique traditionnelle des traumatismes. Ils se distinguent de par leur spécialisation (dans le traitement des fractures et entorses) des autres praticiens de la médecine traditionnelle en pays sénoufo. La totalité des 12 praticiens enquêtés sont des hommes de l'ethnie fodonnon (qui dansent le Boloï appelée communément danse panthère). Ils ne sont pas nombreux cependant ils sont reconnus de par leurs activités de traumatologue. En milieu rural et souvent urbain, ils constituent le premier recours des populations au sein de la vaste zone composée des départements de Korhogo, Dikodougou et Sinématiali.

L'importance de ces praticiens traumatologues du peuple Sénoufo est perçue à travers leur nombre limité au sein des guérisseurs traditionnels. Selon les propos de monsieur Ténéna enquêté à Katiofi dans la zone de Morviné sous-préfecture de Karakoro :

« les « Nankarigabélés » ne sont pas assez dans notre zone cependant ils sont très nécessaires et indispensables. Et je pense que c'est pour cette rareté qu'ils sont importants. Je suis quitté à Kolokaha, un village situé à 25 km d'ici pour venir soigner mon fils qui s'est déplacé le bras en tombant à moto » (entretien du 7 juillet 2020). Pour un autre enquêté guéri de fracture « les Nankariguès » sont importants car ils ont une grande connaissance des remèdes en fractures des os et en entorses. Depuis que je suis arrivé ils reçoivent 5 à 10 cas par jour » (entretien d'un jeune de 21 ans le 20 août 2020 à Lataha).

Selon ces verbatim, l'importance de ces traumatologues fodonons est liée à leurs sollicitations, leur spécialité et à leur nombre restreint dans les différentes catégories nosologiques traditionnelles. Cependant, qu'en est-il de leur sollicitation ? et quelle est l'origine de leurs connaissances ?

Pour ce qui est de leur sollicitation par les accidentés de fractures ou entorses, 9 sur 12 praticiens enquêtés ont présenté un cahier où ils enregistrent les personnes reçues. Les autres (8) ne sachant ni écrire ni lire, ils nous ont fait une estimation des malades reçus par mois ou par an. Les statistiques consignées dans le tableau suivant, révèlent le nombre de personnes les sollicitant :

Tableau N° 2 : Sollicitation annuelle des traumatologues traditionnels enquêtés par les populations.

Nom du traumatologue	Villages	Malades reçus par an
1. Silué Djakaridja	Katiofi	164
2. Yéo Mamadou	Katiofi	76
3. Silué Siélé	Lataha	120
4. Kparatchogo	Waraniéné	168
5. Yéo Domêhê	Nonnangoun	210
6. Yeo Fallery	Koko	300
7. Tuo Wologo	Koko	120
8. Silué Dossigue	Petie-Paris	20
9. Sekongo Torna	Natio	360
10. Koné Navaga	Natio	36
11. Soro Siélé	Ossiéné	300
12. Yéo Ouologo	Mongaha	480
Total		2354
Moyenne des malades reçus par guérisseur par an		196

Source : Données de l'étude présente réalisée par Dr Silué

Ces traumatologues traditionnels reçoivent en moyenne plus de 196 malades par ans soit 16 personnes par mois.

En ce qui concerne l'origine de leurs connaissances, la totalité des traumatologues traditionnels auditionnés, indique qu'il faut être initié. Selon l'enquête Wologo, « *Pour guérir une entorse et une fracture, les fodonnon utilisent des plantes soigneusement sélectionnées qui leur sont montrées pendant leur initiation. Cette initiation se fait à partir de l'âge de vingt ans (20ans) et s'étend sur une durée de sept à huit ans (7 à 8 ans)* » (entretien du 9 septembre 2020).

En effet, selon 9 des enquêtés, la transmission du don de traumatologue traditionnel peut se transmettre de père à fils ou d'oncle à neveu suivant un ordre divin. 3 ont acquis leurs connaissances par simple initiation auprès d'un maître traumatologue fodonnon (autre que la famille) qui réside à Pédiakaha dans le département de Dikodougou. L'initiation au ~~paravent~~ prenait 3 mois mais de nos jours elle ne dure que 3 semaines. Elle a lieu dans une forêt où l'on retrouve toutes les plantes nécessaires pour la thérapie des entorses ou fractures et même d'autres maladies. Toutefois les conditions pour être traumatologue traditionnel, il faut être d'une certaine lignée du sous-groupe fodonnon et être initié. Au niveau de la région sanitaire du Poro, des personnes d'autres groupes peuvent être traumatologues mais les plus reconnues sont les fodonnon. L'initiation pour connaître le rôle des plantes et acquérir les paroles secrètes accompagnant l'usage des plantes. Elle ouvre l'accès à tous les bois sacrés où se retrouvent la plupart des plantes thérapeutiques comme l'indiquent les propos de Siélé enquêté à Lataha :

« Le métier de soigner les fractures vient de chez les fodonnon. D'autres Sénoufos peuvent le faire mais c'est rare. Il se fait par initiation pour pouvoir connaître le rôle des plantes et les prières ou paroles sacrées des soins. Aussi, la pénétration de certaines forêts sacrées ne fait pas l'objet de tout le monde, C'est pour cela qu'il faut être initié. » (Entretien du 20 Septembre 2020).

Aussi, les visites chez les traumatologues traditionnels ont-elles permises d'observer comment ils procédaient aux examens et diagnostics des malades. Neuf (9) d'entre eux utilisent presque une technique commune consistant en un interrogatoire bref du patient lui-même s'il est en mesure de répondre. Quand ils ne pouvaient répondre, ils interrogeaient le parent qui l'accompagne. Chacun de ces traumatologues cherchaient toujours les circonstances étiologiques du traumatisme. Pour commencer, ils plaçaient devant soi le malade et tout en continuant l'interrogatoire, ils inspectaient en faisant une palpation à la recherche d'une déformation ou d'un point douloureux. Les trois (3) autres enquêtés ont indiqué consulter sous inspiration de fétiches comme le révèlent les propos de l'un d'entre eux âgé de 61 ans.

« ... avant de commercer le blessé doit apporter un poulet en offrande pour le fétiche révélateur de l'état du malade. Après ça le fétiche donnera son accord avant de soigner le blessé, soit il accepte ou non. Si le fétiche refuse, c'est bien parce que le blessé pourra perdre la vie ou l'un de ceux qui l'accompagne » (entretien du 22 septembre 2020 à Ossiéné).

L'un des aspects montrant l'originalité des traumatologues traditionnels reste les techniques et matériels thérapeutiques utilisés pour les soins. Les 12 traumatologues traditionnels visités utilisent 4 ustensiles, le beurre de karité et l'eau chaude prioritairement comme l'indique la figure suivante :



Figure 1: Espace et ustensiles utilisés par tous les " Nankaribélés" (source Photo de Dr Silué)

La calabasse appelée « tiali » est le premier ustensile utilisé par tous ces traumatologues. Elle sert à contenir l'eau ou tout liquide devant servir à préparer les médicaments. Selon l'un des enquêtés, la calabasse a un usage thérapeutique car elle permet de conserver les liquides dans un état naturel et

est un indicateur détectant les éventuelles menaces spirituelles. Le deuxième instrument utilisé en commun est la petite céramique « pèlè » qui sert à contenir les médicaments à utiliser immédiatement pour des soins. Quant au troisième ustensile qui est la grande céramique « pèhè », elle est utilisée pour contenir des liquides médicamenteux pour les bains des malades. Le canari appelé « Codjolo » est le dernier outil utilisé uniformément par ces traumatologues. Il sert de marmite pour la préparation des médicaments devant passer par le feu. Les moyens communément utilisés sont l'eau chaude et le beurre de Karité. Les « *Nikaros* ou *Nankaribélés* » utilisent l'eau chaude comme décoagulant et elle lutte contre les infections. Le beurre de karité, aux énormes vertus, adoucit immédiatement, apaise et surtout, protège tous les types de peaux. Il est un cicatrisant, un hydratant, un assouplissant et un protecteur de la peau. Hormis ces éléments montrant l'authenticité des traumatologues fodonnon, l'on note quelques difficultés.

II – 2 Les difficultés des traumatologues fodonnon dans la prise en charge des entorses et fractures

Malgré l'existence des forêts sacrées dans chaque village, plusieurs des plantes utilisées pour la thérapie des fractures et entorses, sont souvent en voie de disparition. Un enquêteur du quartier de Koko révèle à ce sujet : « *les difficultés que nous rencontrons dans l'exercice du métier est que les plantes deviennent de plus en plus rares. Les forêts sacrées dans les villages nous aident mais on ne trouve pas tous il faut aller loin avant d'avoir surtout en saison sèche...* » (Entretien du 15 juillet 2020).

En effet, l'existence du Poro dans chaque village Sénoufo est un facteur favorable à la conservation de la biodiversité. Ces bois sacrés constituent des réserves de plantes utiles à la médecine traditionnelle en générale et particulièrement à la traumatologie traditionnelle fodonnon. Cependant, sous les effets des sécheresses, des feux de bourses et des exploitations abusives accentuées par le changement climatique, les « *Nankaribélés* » ont des difficultés à s'approvisionner en plantes thérapeutiques. Ils sont obligés de parcourir de longues distances pour s'en procurer ou de limiter leur métier. Pour une question de résilience face à la disparition de ces plantes, les fodonnon eux-mêmes créent des jardins de plantes médicinales ou instituent des interdictions d'exploitation aux non-initiés, sur l'usage des plantes de certaines forêts sacrées en vue d'assurer leur survie. Mais la longue saison et la divagation des animaux dans la région rend ces efforts vains.

Les autres difficultés majeures rencontrées par les « *Nankaribélés* » sont le manque d'hébergement et l'absence de collaboration. La plupart des traumatologues visités ne dispose pas de locaux pour héberger les cas graves. Trois (3) des enquêteurs ont une cabane comme chambre d'hébergement.

Certains (5) n'ont que des paillotes pour accueillir les malades et les autres (4) ne disposent que de leurs domiciles. Ils évoquent tous le manque de moyen comme cause. Par ailleurs, certains ne travaillent pas en collaboration avec d'autres traumatologues traditionnels. Ils préfèrent être seul et souvent la compagnie de leurs enfants ou leurs neveux qu'ils exploitent comme aides. Ceux-ci se chargent de la préparation des médicaments dans un premier temps puis la connaissance de certaines plantes mais jamais les paroles ou prières sacrées accompagnant l'usage des remèdes.

II – 3 Efficacité du mécanisme des soins des traumatologues traditionnels

L'observation directe et les entretiens des personnes guéries par les « Nankaribélés » ont permis de relever leur renommé au sein de leur communauté grâce leur dispositif de soins, leur expérience professionnelle et la qualité de leurs soins.

En ce qui concerne leur renommée dans la communauté rurale sénoufo, certains enquêtés guéris estiment qu'ils sont connus hors des frontières de la région sanitaire du Poro. A cet effet un jeune de 37 ans enquêté à Mongaha révèle : « *J'étais dans la zone de Yamoussoukro quand j'ai fait un accident de moto. Nos voisins ont informé mes parents de l'existence des guérisseurs fodonnons qui s'occupent bien des malades et guérissent mieux les fractures que l'hôpital* » (Entretien du 18 juillet 2020 à Mongaha).

Pour un autre enquêté de la chefferie de village de Waraniéné, les « Nankaribélés sont les spécialistes des os dans la zone. Car depuis notre enfance on nous toujours parlé d'eux lorsqu'il y avait cas de cassure d'os. Ils reçoivent tous le monde sans demander forcément de l'argent » (entretien du 21 Juillet 2020 à Waraniéné). Les entretiens des 12 praticiens sur la provenance de leurs patients, ont révélé que les malades venaient de diverses localités. Cependant, les patients provenant de la localité résidente de chaque traumatologue, soient des villages voisins, étaient les plus nombreux. Selon l'un d'entre eux « *Plus on soigne bien pendant longtemps plus on est connu* » (Entretien d'un praticien de 61 ans le 15 juillet 2020 à Natiokobadara). Les « Nankaribélés » échangent avec leurs patients en langue ce qui facilite la communication lors du déroulement des examens et diagnostic. En plus plusieurs parmi eux font des consultations spirituelles pour détecter les causes mystiques. Ainsi, selon la qualité des prestations rendues dans le temps, deviennent-ils davantage connus.

Quant à l'expérience professionnelle acquise par les praticiens de la traumatologie traditionnelle, elle variait de 20 à 46 ans d'expérience. Plusieurs ont commencé le métier à l'âge de 15 ans et ils sont devenus autonome à 30 ans. Le plus jeune des 12 praticiens a 49 ans. Ce haut niveau d'expérience qui montre la maîtrise de la pratique contraste avec leurs méthodes thérapeutiques

qui sont restées primitives et empiriques, sans aucune amélioration ou changement.

Par ailleurs, ces traumatologues traditionnelles n'avaient aucun souci d'une complication. Dans leur totalité, ils exprimaient toujours satisfaction de leur traitement. Sur les 66 guéris enquêtés, 64 ont témoigné n'avoir pas eu de complication post-traumatique. 2 autres ont témoigné être guéris après de petits soins complémentaires modernes néanmoins ils attribuent leurs guérisons aux traumatologues traditionnels.

II – 4 Limites des pratiques des traumatologues traditionnels

Les limites des pratiques des traumatologues traditionnelles s'observent au niveau du déroulement des examens des malades, des soins, du suivi des malades et du dénigrement de la médecine moderne par certains praticiens. En plus, il y a une insuffisance voire une absence de collaboration. Il ressort de nos investigations que lors du déroulement des examens, certains aspects échappaient à la majorité des traumatologues fodonnon. Il s'agit entre autres de l'inobservation des antécédents chez les malades ainsi que de certaines données qui échappaient aux « *Nankaribélés* ». En effet, vu le nombre le plus souvent important de consultants, ils se limitaient à leur examen physique. Ils ne se contentaient que de l'examen bref de la partie traumatisée. L'un des (2) enquêtés ayant subi des soins complémentaires dans un hôpital raconte :

« J'avais eu une fracture de l'os supérieur du coude et le guérisseur « Nankaribélés » l'avait prise pour une luxation de coude. Il a commencé des réductions brutales qui avaient été responsable de déplacement secondaire et de lésions vasculonerveuses secondaires selon mon médecin traiteur de l'hôpital mais il avait dit que ce n'était pas grave » (Entretien d'un ex-patient de 46 ans le 17 juillet 2020).

De ce verbatim, des erreurs de diagnostics peuvent parfois apparaître, sans toutefois compromettre le pronostic fonctionnel de l'articulation ou du membre. Seulement, les difficultés de mettre en place certains os fracturés ou des insuffisances de rééducation sont à noter, si bien qu'après guérison certains malades se retrouvaient avec une déformation du membre traité.

Pour ce qui est du suivi des malades, aucun des traumatologues fodonnon ne proposait une méthode de suivi ses malades. Ils se contentaient de donner des totems. Ceci engendrait de fois des complications. En plus ils n'informaient pas leurs patients sur les risques que peuvent causer des disputes.

En ce qui concerne le dénigrement de la médecine moderne, pendant le déroulement de leurs examens et traitements, 5 des « Nankaribélés » essayaient toujours de dévaloriser d'une façon implicite ou explicite le médecin et la médecine moderne. Ils tentaient de montrer que la médecine moderne n'était pas toujours utile en matière de fractures et entorses. En plus ils diffusaient auprès des populations des informations fausses telle que la médecine moderne est source de nombreuses complications et que le traitement chirurgical condamnait le pronostic du membre. Ils soutenaient aussi que les médecins traitaient chirurgicalement pour des raisons pécuniaires surtout dans le secteur privé. De ces faits, les « Nakaribélés » ne collaborent pas réellement avec la médecine moderne.

III - Discussion : Une médecine rudimentaire mais sollicitée

La médecine traditionnelle en générale et particulièrement médecine traditionnelle en traumatologie orthopédie, est sollicitée quotidiennement par plusieurs centaines de malades qui demandent des soins. En Côte d'Ivoire, précisément chez le peuple sénoufo, cette médecine traditionnelle en traumatologie est pratiquée par les guérisseurs fodonons. Ces traumatologues traditionnels appelés « Nankaribélé », répondent à la demande des consultants et font des diagnostics et offrent des soins à leurs patients. L'étude présente a consisté en l'analyse du rapport médical entre les malades et ces traumatologues traditionnels. Les principaux résultats se sont articulés autour de quatre points que sont l'importance de ces traumatologues, leurs difficultés, leurs efficacités et leurs insuffisances.

En ce qui concerne l'importance que les populations rurales accordent à ces traumatologues traditionnels, l'analyse révèle que les « Nankaribélés » jouissent d'une considération accrue au sein de leur communauté. Contrairement au grand nombre de praticiens généralistes de la médecine traditionnelle, les traumatologues fodonons sont en minorité face à une demande souvent élevée. Cette minorité s'explique par la complexité de leur métier portant sur l'ossature humaine. Ces guérisseurs dont la majorité ne traite que les entorses et fractures, sont perçus par les populations rurales comme étant les détenteurs d'un pouvoir divin non universel. Ils sont appelé mécanicien des os ou spécialiste des fractures « Nikagari ». Cette spécialité fait d'eux une classe de renom qui est beaucoup sollicitée par les personnes victimes d'accident. Ces résultats sont en accord avec ceux de quelques études menées sur la traumatologie traditionnelle au Mali et au Maroc. Celle menée au Mali en 2004 révélait l'importance des traumatologues traditionnels en pays « Dogon » par leur grand nombre (Diakité et al 2004, p14) tandis que celle faite à Marrakech au Maroc démontre par la spécialisation des « Jebbars » leur importance (Bassi, 2007, p30). D'autres travaux plus récents conduits au Togo en 2015, ont porté généralement sur les raisons de la sollicitation des

traumatologues traditionnels. Selon l'étude les patients choisissent de faire recours aux traumatologues traditionnels pour des raisons de coût du traitement comme nous l'avions signalé ci-haut. Pour les enquêtés, le traitement est deux fois moins cher que dans les hôpitaux (Joseph, 2015, p3). S'agissant de l'efficacité des mécanismes de soins de ces traumatologues traditionnels, nous notons une assurance et une satisfaction des praticiens eux-mêmes. Une assurance qui s'explique par la qualité des plantes utilisées comme remèdes et la détention des connaissances physiques et spirituelles de leur métier. Les outils ou moyens (beurre de karité, vases d'argiles et plantes cicatrisantes) utilisés, quoique rudimentaires, participent à l'efficacité des soins livrés. Nous notons à cet effet l'usage des plantes en tisane, en poudre et même en décoction comme soins de premier secours. Les « Nankarigabélés » par ces soins parviennent toujours à arrêter les hémorragies même internes et à désinfecter des plaies purulentes. Ainsi, de par l'observation directe et les entretiens semi-dirigés des praticiens et de leurs patients aucun cas de complication post-traumatique ne s'était-il pas présenté.

Conclusion

L'introduction de la médecine moderne dans la société africaine, a causé des menaces et une négligence pour la médecine traditionnelle. A cette menace, s'est t'ajouté les imposteurs infiltrant le domaine. Cependant, la médecine traditionnelle a encore des preuves à faire. C'est ce que nous découvrons avec cette étude dont l'objectif a été de réaliser un suivi rapproché des activités des « Nankarigabélés » traumatologues traditionnels du peuple sénoufo situé au nord de la Côte d'Ivoire. Pour y parvenir, une approche socio-anthropologique qualitative a été utilisée. Elle a mobilisé 78 personnes dont 12 traumatologues traditionnels.

Les principaux résultats révèlent que les traumatologues traditionnels jouissent d'une renommée au sein de leurs communautés. Ils font des diagnostics et livrent des soins de taille si bien qu'il y a moins de cas de complication. Les « Nankarigabélés » ont acquis à travers le temps une renommée dans la communauté sénoufo qui s'étend souvent au-delà de leur périmètre d'action. En effet, malgré les conditions difficiles d'exercice de leur métier, ils offrent des prestations qualitatives dans le traitement des fractures et entorses en milieu rural. Toutefois, des insuffisances ont été relevés, notamment dans la prise en charge et le suivi des patients qui fréquentent ces traumatologues traditionnels, si bien des complications ont été observées chez des patients après leur guérison. Une collaboration entre médecins spécialisés en traumatisme des os et traumatologues traditionnels pourraient contribuer à améliorer la prestation de ces derniers.

References:

1. Anne, R. (2013). *Observation directe et enquête de terrain : lexicque*. Sociologie M1. P3
2. Bassi, L. (2007). *Traitement traditionnel en traumatologie orthopédie : aspect médical*. (Thèse de doctorat) ; université Cadi Ayyad faculté de médecine et de pharmacie Marrakech.
3. Diakité, C, Mounkoro, P.P, Dougnon, A., Baiguini, G., Bonciani, M., & Giani, S. (2004). *Étude de la traumatologie traditionnelle en pays Dogon (Mali)*. Mali Médical 2004, T XIX N° 3&4.
4. Gueye, F. (2019). *Médecine traditionnelle du Sénégal exemples de quelques plantes médicinales de la pharmacopée sénégalaise traditionnelle*. (Thèse de doctorat). (Université d'Aix-Marseille). Faculté de Pharmacie
5. Joseph, K. (2015). *Guérison traditionnelle de la fracture, puissance africaine*. Publié le 17/02/2015 par joenew.
6. Kouamé, A. (2018). *Système de gestion de la médecine traditionnelle dans une plateforme web social et sémantique : une approche basée sur une ontologie visuelle*.
7. Leclerc, J. (2018). « Côte d'Ivoire » dans *L'aménagement linguistique dans le monde*. www.axl.cefan.ulaval.ca > *afrique* > *cotiv* ; Consulté le 9/11/2020.
8. Mucchielli, R. (2006). *L'analyse de contenu des documents et des communications*. (9e édition). Issy-les-Moulineaux: esF
9. Neubauer, C. (2010). *La recherche participative : Exemples de programmes publics*. Fondation Sciences Citoyennes. P1-5
10. Nicole, S. (1984). *Une société matrilineaire : les Senufo Fodonon*. pp. 36-51
11. OMS (2013). *Stratégie de l'OMS pour la médecine traditionnelle pour 2014-2023*. OMS <https://apps.who.int/iris/handle/10665/95009>, Consulté le 5 Octobre 2020, 72 P
12. Weber, J-P. (1966). *L'analyse thématique : hier, aujourd'hui, demain*. Volume 2, numéro 1. Analyse thématique et analyse propositionnelle ... (erudit.org) . Consulté le 09/12/2020.



ESJ Social Sciences

Theoretical Review of the Impact of Fiscal Deficits on Economic Growth in Nigeria

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[Doi:10.19044/esj.2021.v17n1p310](https://doi.org/10.19044/esj.2021.v17n1p310)

Submitted: 05 June 2020
Accepted: 04 January 2021
Published: 31 January 2021

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Cite As:

Musa K.B. (2021). *Theoretical Review of the Impact of Fiscal Deficits on Economic Growth in Nigeria*. European Scientific Journal, ESJ, 17(1), 310.

<https://doi.org/10.19044/esj.2021.v17n1p310>

Abstract

The growth and persistence of fiscal deficits in both the industrialized and developing countries has brought the issue of fiscal deficits into sharp focus. Over the last decade, the growth impact of fiscal deficits has generated large volume of both theoretical and empirical literature. Despite the lofty place of fiscal policy in the management of the economy, the Nigerian economy is yet to come on the path of sound growth and development. The behaviour of fiscal deficits in Nigeria has followed unsteady pattern, assessing the significance of the policy deficits. The actualization of sustainable economic growth is more imperative such that the country is working towards achieving the sustainable development goals. The paper adopted a descriptive method to show the trend of fiscal elements in Nigeria with the aim of determining the relationship between the variables specified. The paper concludes that fiscal operation is ineffective in providing the needed macroeconomic environment for sustainable growth. This paper further suggests that powerful pro-stability stakeholders strong enough to challenge government fiscal recklessness will need to emerge for sustainable and progressive development to be attained at all levels.

Keywords: Fiscal deficits, Economic growth, Government spending, budget deficits

1. Introduction

Fiscal policy simply refers to actions taken by government with a view to controlling government expenditure and income in order to achieve some predetermined macro-economic objectives. These objectives include, but are not limited to reduction in unemployment level, price stability, rapid economic development, and a healthy balance of payments position (Abdurrauf, 2015). In developing countries, fiscal policy is regarded as a tool for moving backward economies to the path of sustained economic growth and development. The fiscal system is generally viewed as one with a package of instruments for translating development policy objectives into practice. One of such package of instruments is fiscal deficits.

Furthermore, it involves the use of government spending, taxation, and borrowing to influence the pattern of economic activities and also the level and growth of aggregate demand, output, and employment. Fiscal policy entails government's management of the economy through the manipulation of its income and spending to achieve certain desired macroeconomic objectives (goals) amongst which is economic growth (Medee & Nembee, 2011). Olawunmi and Tajudeen (2007) opine that fiscal policy has conventionally been associated with the use of taxation and public expenditure to influence the level of economic activities. They further say that the implementation of fiscal policy is essentially routed through government's budget. Fiscal policy is used mostly to achieve macroeconomic policy and to reconcile the changes which government modifies in taxation, expenditure, and programmes or to regulate the full employment price and total demand to be used through instruments such as government expenditures, taxation, and debt management (Hottz-Eakin, Lovely & Tosin, 2009). As noted by Anyanwu (1993), the objective of fiscal policy is to promote economic conditions conducive to business growth while ensuring that any such government actions are consistent with economic stability. From the foregoing, it is clear that if fiscal policy is used with circumspection and synchronized with other measures, it will likely smoothen out business cycles and lead to economic growth and stability.

In principle, fiscal dominance occurs when fiscal policy is set exogenously to monetary policy in an environment where there is a limit to the amount of government debt that can be held by the public. Hence if the inter-temporal budget constraint must be satisfied, fiscal deficits would have to be magnetized sooner or later. In fact when the size of the financial system is small relative to the size of the fiscal deficits, a central bank may have no choice but to magnetize the deficits. Thus, in countries with shallow financial systems, monetary policy is the reverse side of the coin of fiscal policy and can only play an accommodative role. In such low income countries, government securities markets are underdeveloped and central banks do not

hold sufficient amounts of tangible securities. Also, the central bank's lack of suitable and adequate instruments of monetary control constitutes one of the factors that induce fiscal dominance.... Where fiscal dominance applies, the country's economic policy is only as good as its fiscal policy and institutionalized central bank independence may not necessarily bring about an independent monetary policy (Oyejide, 2003).

Fiscal Deficits in Nigeria (1980 – 2019)

In Nigeria, fiscal expenditure is made possible by unprecedented earnings from oil sales which most often than not is alternated by periods of oil glut that leads to significant declines in government revenues. The custom of fiscal deficits in Nigeria is that it is skewed heavily in favour of recurrent expenditure (60 percent recurrent expenditure and 40 percent capital expenditure) which does not necessarily drive economic development. Since one of the critical instruments of fiscal policy is fiscal deficits, hence, stabilization of prices, growth of per capita income, and employment requires that fiscal deficit itself must grow or expand at a low constant rate. Fiscal deficits have been growing at a rate that is alarmingly not constant. As can be observed in Table 1, the growth rate of fiscal deficits rose from 97.55 percent in 1981 to 171.54 percent in 1986 and rose to 3104.94 percent in 1996 respectively. Fiscal deficit growth rate was negative (- 115.60 percent) in 1997, but increased steadily to 2567.78 percent in 1998 and declined to 2.07 percent in 2016. It also rose to 109.42 in 2017. In 2018 and 2019, there was a decline of 33.53 and 25.95, respectively. Between 1998 and 2019, the deficit growth rate has been rising and falling. Thus, this indicates that fiscal deficit has not been growing at a constant rate.

Table 1. Fiscal deficit growth rate in Nigeria from 1980-2020

Year	Fiscal Deficit (N' Billion)	Growth Rate of Fiscal Deficit (%)
1980	-1975.2	-
1981	-3902.1	97.55
1982	-6104.1	56.43
1983	-3364.5	-44.88
1984	-2660.4	-20.92
1985	-3039.7	14.25
1986	-8254.3	171.54
1987	-5889.7	-28.64
1988	-12160.9	106.47
1989	-15134.7	24.45
1990	-22116.1	46.12
1991	-35755.	2 61.67
1992	-39532.5	10.56
1993	-107735.3	172.52
1994	-70270.6	-34.77

1995	1000.0	-101.42
1996	32049.4	3104.94
1997	-5000.0	-115.60
1998	-133389.3	2567.78
1999	-285104.7	113.73
2000	-103777.3	-63.60
2001	-221048.9	113.0
2002	-301401.6	36.35
2003	-202724.7	-32.73
2004	-172601.3	-14.85
2005	-161406.3	-6.48
2006	-101397.5	-37.17
2007	-117.2	-99.88
2008	-47.3	-59.64
2009	-810.0	1612.47
2010	-110.5	-86.35
2011	-115.8	4.79
2012	-975.6	742.48
2013	-115.3	-88.18
2014	-1064.6	823.33
2015	-1109.0	4.17
2016	-1085.8	-2.09
2017	-2,273.9	109.42
2018	-3,421.0	33.53
2019	-4,620.0	25.95

Source: Authors' computation based on CBN Statistical Bulletin 2019

2. Objectives of the Study

The central purpose of this study is to theoretically investigate the effect of deficit financing on Gross Domestic Product (proxy for economic growth) in Nigeria over the period of 1981 to 2019. Thus, the specific purpose includes;

1. To examine the effect of Fiscal deficits on Nigerian economic growth.
2. The study stands to enlighten policy makers on the ways of finding the best policy to use deficit financing matter.
3. The study will help investors to realize the actual state of the economy.
4. Researchers will find it rewarding as it will add to the rich collection of work in available literatures due to the timeliness of the write up.
5. The study helps to reveal the stand of the economy in the face of deficit deficits.

3. Theoretical Foundation

Fiscal deficit is considered as the major phenomenon in the economic world of today. Quite a lot of empirical and conceptual literatures with

conflicting results have continued to surface on how fiscal operations can affect macroeconomic activities both in the short-run and long-run.

3.1 Keynesian Theory

This theory is also referred to as Income Expenditure Approach and Conventional Approach. According to Keynesian approach, fiscal deficit positively affects growth. There would be an increase in government outlays due to addition in money supply which explains how addition in money supply comes about. There is relative short fall of demand in accordance with money supply. The lending rate will decrease as a result of increased money supply. Investment will increase especially in private sector due to incentive of reduced lending rate. Keynesian multiplier will work and investment will increase. As investment increases, the output capacity will be enhanced. Keynesian theory also provides the room for crowding out private investment. If fiscal deficit is financed through debt instrument, then there will be increase in lending rate and private investment will be crowded out due to limited availability of finance (Saleh, 2003). By putting increase in money supply and crowding out effect together, the positive effect of fiscal deficit on growth gets obscured. The Keynesians further posit that fiscal deficits could have a negative impact on the external sector, reflected through trade deficit, but only if the domestic economy is unable to absorb the additional liquidity through an expansion in output. Hence, if the supply of output does not expand in response to the deficit, the surplus spending would only add to the level of imports, thereby resulting in a trade deficit and subsequent decrease in the exchange rate: “the twin-deficits” hypothesis (Monacelli & Perotti, 2006; Neaime, 2008; Okpanachi & Abimiku, 2007).

3.2 Monetarist Theory

According to monetarists, government deficits, financed by domestic debt, only involves transferring funds to public sector from the private sector with no effect on output. The private sector is more efficient than the government sector. Thus, such a transfer could have a negative effect on output. The monetarists argue that monetary financing affects the economy by increasing aggregate demand (Mitchell, 2002; Okpanachi & Abimiku, 2007). Debt financing of fiscal deficit raises the interest rate and leads to decrease in investment which as a result decreases economic growth (Chakraborty & Chakraborty, 2006).

3.3 Neo-classical Theory

According to this theory, fiscal deficits raise aggregate consumption in the economy which brings a reduction in national savings, and a higher real interest rate will generate incomplete sentence (in a closed economy). This, in

turn, negatively affects investment and overall economic activity. Increase in fiscal deficit causes increase in capital flows which leads to appreciation of exchange rate in an open economy. In both cases, crowding out investment (how?) and reduction in net exports are the results of increased fiscal deficit. The crowding out investment and existence of external debt has adverse consequences for future output.

3.4 Endogenous Growth Theory

The endogenous growth theory proposes that economic growth is an endogenous outcome of the system. Since growth is endogenous, government policies can influence its magnitude and the government plays a vital role in economic development. Capital formation in physical assets of a country, human capital formation and public investment in areas such as infrastructure, and science and technology wields a positive impact on output. Similarly, government policies about law and order situation and the economized taxation system encourage growth in an endogenous manner. Thus, unlike other theories, the fiscal policy can affect long run growth performance if growth is considered as an endogenous variable (Saleh, 2003). Hence, this theory can be placed in the context of fiscal deficit.

3.5 Sargent and Wallace Hypothesis

According to this hypothesis, fiscal deficit affects output growth through two channels. First, fiscal deficit affects money growth through its financing. When funds are generated by increasing money supply, the surplus money may not be absorbed by the economy due to shortage of aggregate supply. The increased demand may push the general price level which may result in inflation. Second, inflation generated from increased money growth may affect output growth negatively by rising cost of production and a decrease in aggregate supply (Lozano, 2008).

3.6 Golden Rule of Public Finance (GRPF)

The rule states that government adopts fiscal deficit if the deficit is used for productive and profitable investment projects. The rule can generate less balanced growth in the long run. In the short run, its results are dependent on the initial level of public debt. GPRF states that funds used for productive projects may generate growth in both periods so deficit budget is acceptable. Adoption of GPRF for an economy depends on the original level of public debt. As for short run results, country's debt situation may be considered due to external debt (Ismihan & Özkan, 2012).

3.7 The Tax and Spend Hypothesis

According to this hypothesis, the policy of government to increase taxes for reducing deficits would result in decrease in private consumption, and politicians would encourage increasing their expenditure while deficit would remain same in long run. On the other side, if deficit is financed by tax cut, there would be pressure on government spending but it would increase private consumption without changing the budget deficit and national savings. This would be more desirable as compared to tax increase. The deficit has to run if government expenditure does not decrease because there would be addition in the interest payments (Chang & Ho, 2002). In a nutshell, various theories describe the transmission mechanism of fiscal deficit for affecting the economy. According to these theories, fiscal deficit may have positive, negative or neutral effects on economic activities.

4. Appraising Keynesian Proposition and Classical Proposition Along Empirical Research

4.1 Keynesian Proposition

Relevant works in the literature related to the Keynesian propositions includes the following contributions: Onyemaechi (2014) examines the impact of fiscal deficits components on economic growth in Nigeria from 1980 to 2010 using a baseline, log and lag models of regression analysis. The result shows that the effect of fiscal policy component (government expenditure) on economic growth at a certain level appeared to be statistically insignificant. However, public sector expenditures on administration, social, and community services produce positive effects on growth. Similarly, Agu et al. (2014) evaluated the relationship between fiscal policy components and economic growth in Nigeria from 1961 to 2010 using OLS in multiple regression frameworks. The study establishes the existence of a positive and significant correlation between economic growth and the components of fiscal policy. Though investment spending appeared very insignificant compared to recurrent expenditure, hitherto, aggregate government spending tends to increase with tax revenue, with spending increasing faster than the tax revenue. Likewise, empirical results from Mansouri (2008) in a study that examined the effect of fiscal policy in Egypt, Tunisia, and Morocco based on error correction model and log-linear regression model argue that public investment exerts a crowding-in effect on economic growth. Further evidence shows a significant relationship between productive expenditure on investment and economic growth in all the three countries. Thus, such kind of public spending exercises a positive impact on growth. In order to adjust the public sector budget, fiscal adjustment should be concentrated on reducing wasteful expenditure which appeared as an obstacle to economic growth in the study countries. In addition, Fatas and Mihov (2001) evaluate the effects of

fiscal policy on macroeconomic growth in developed countries by utilising a quarterly data from 1960Q1 to 1996Q4. The study adopts a VAR technique. Findings reveal that increase in public consumption is accompanied by a corresponding increase in consumption, employment and output, while the increase in government investment does not affect public spending significantly. This, however, supports the argument that fiscal policy exerts a positive influence on the real output growth within the review period.

Equally, Maku (2015) evaluates the effects of fiscal deficits on economic growth in Nigeria from 1970 to 2011 using Engle-Granger cointegration test and OLS estimation model. The study submitted that a fiscal deficit is generally believed to be associated with growth. Alternatively, it is believed that appropriate fiscal measures in a particular circumstance can be used to encourage growth. The result from the estimation shows that fiscal deficits rather than monetary produces a higher influence on the nation's economic growth and development. In a similar analysis, using cointegration technique and a Vector Error Correction Model (VECM), Byiabani and Mohseni (2014) examine the effects of fiscal deficits and economic growth in Iran over a period of two decades. The study argued that there exists a positive and significant long-run relationship between economic growth and fiscal deficits components, including government investment and private investment, labour force, and human capital stock. In another development, Yadav et al. (2010) investigate the impact of fiscal deficits in India using a Structural VAR (SVAR) on quarterly data from 1997Q1 to 2009Q2.

Finding reveals that the effects of fiscal shocks to government expenditure on private consumption produce a positive impact, while shock on the tax to private consumption yield negative results on the nation's growth. Furthermore, Jemec et al. (2011) examine how fiscal shocks affect macroeconomic dynamics in Slovenia using a SVAR technique adopted from Blanchard and Perroti (2002) on quarterly data from 1995Q1 to 2010Q4. The study maintained that government fiscal deficits increase output growth, investment, and private consumption only in the short-run. On the other hand, tax shocks are found to decrease output growth, investment, and private consumption. In the long-run, the effects of both spending and tax would become insignificant, respectively. The results indicate that fiscal policies have weak impact multipliers. In other word, changes in government spending and taxes do not have longrun effects on macroeconomic variables. Alex and Ebieri (2014) examine the impact of fiscal deficits on economic growth in Nigeria from 1986 to 2010 by employing an Autoregressive Distributed Model (ARDL) and log-linear model of the multivariate regression model.

The study empirically established that about 69% of the total variation in the real GDP is explained by fiscal policy variables. Total government expenditure as a fiscal policy variable has more positive and significant impact

on GDP than non-oil tax and total debt. Hence, there is an evidence of long-run equilibrium relationship between fiscal policy and economic growth in Nigeria. Likewise, empirical results from Nathan (2012) in a study that examines the impact of fiscal policy in Nigeria from 1970 to 2010 using error correction model and two-band recursive least square technique reveals a significant causal relationship between GDP and fiscal policy variables. Hence, fiscal operations have a positive influence on output growth in the Nigerian economy. Furthermore, Cyril (2016) examines the influence of fiscal policy on real output growth in developing countries from 1986 to 2013 using an OLS estimation technique. Finding reveals that fiscal policy components, particularly public spending on economic services, have enormous returns to economic growth and stability. The results further propose that these expenditures crowd-in private investment. Therefore, there is an evidence of a positive relationship between public spending on economic services and economic growth. In other words, an increase in budgetary allocation to economic services will lead to a speedy improvement in economic stability. Moreover, Imoisi (2013) examine the implication of fiscal policy measures on the Nigerian economy from 1970 to 2009 using the OLS of multiple regression models. The study maintained that fiscal policy is a strong determinant of economic growth, particularly when aggregate public sector expenditure is properly directed towards the provision of adequate basic infrastructural facilities to encourage private sector participation and stabilise investment activities in the economy. In a similar submission, Ogbole et al. (2011) evaluate the causal link between fiscal policy and economic growth in Nigeria from 1970 to 2006 using a granger causality test and Johansen cointegration technique. The study supported that fiscal policy operation, though insignificant, has a positive impact on the macroeconomic stability. The study further reveals the existence of a causal relationship between fiscal policy components and GDP with a unidirectional causality running from aggregate expenditure to GDP. In addition, Appah (2010) investigates the relationship between fiscal policy and economic growth in Nigeria from 1991 to 2005 using OLS multiple regression analysis. The result indicates a significant positive relationship between fiscal policy components and Gross Domestic Product (GDP), and no relationship exists between the specific explanatory variables contributing to GDP except the aggregate government spending. On the average, 99% of the total variations in GDP are explained by fiscal components in the model.

Moreover, Mathew (2011) examines the effect of fiscal policy on economic growth in South Africa using a quarterly data from 1990Q1 to 2008Q4 by adopting a SVAR model of Blanchard and Perroti (2002). The result supports the arguments that the effect of fiscal policy on real output tends to be uncertain, though persistent and significant through shocks on

public consumption expenditure, public investment expenditure, tax revenue, and budget deficits. Though the effect is positive for shocks from tax revenues and budget deficit, it is negative from public sector consumption and investment expenditures. Similarly, Zhattau (2013) conceptually assess the role of fiscal policy in influencing output growth in Nigeria by using a descriptive analysis. The study supports the arguments that fiscal policy plays a vital role in ensuring economic growth and stability. Therefore, an appropriate system of tax implementation will increase the revenue generating capacity of a country thereby accelerating economic growth. The study further submits that the efficiency of the tax system is not just an issue of appropriate tax laws, but it is also the efficiency and integrity of the tax administrators. Likewise, Musa, Asare and Gulumbe (2013) analyse the effects of fiscal and monetary policy interaction on output growth in Nigeria from 1970 to 2010 using VAR methodology. The result shows a positive relationship between fiscal policy components and output growth. Thus, this implies that public revenue as a fiscal policy variable has a significant influence on the economic growth and also leads to an increase in price. This is because the spending decision of the public sector is significantly determined by the aggregate government revenue. Similarly, Arestis (2009) examines the effects of a new consensus in macroeconomics in relation to fiscal and monetary policy in developed countries by utilising a general equilibrium model. The study debated that fiscal policy operations has a significant impact on the economic growth, and it also serves as an effective instrument for regulating the level of aggregate demand in an economy. Moreover, evidence was revealed by Abdurrauf (2015) in a study that evaluated the impact of fiscal policy on economic development in Nigeria from 1981 to 2013 by employing pair wise correlation test. VECM and Johansen cointegration test shows that aggregate public expenditure and government investment have a positive and significant effects on economic development, whereas tax revenue produces a negative effects both in the short-run and long-run. In addition, empirical findings from Babalola and Aminu (2015) in a study that examines the relationship between fiscal policy and economic growth in Nigeria using VECM and Engle-Granger cointegration test indicates a long-run relationship between government expenditure and economic growth as revealed by the cointegration result.

Consequently, this means that productive government spending has a positive and significant impact on economic growth during the study coverage period 1977 to 2009. This result is similar and consistent with the study findings revealed by Austin and Ogbole (2014) in Nigeria from 1970 to 2010 using a granger causality technique. Furthermore, Osinowo (2015) examines the effect of fiscal policy on sectoral output in Nigeria from 1970 to 2013 by employing ARDL and Error Correction Model (ECM). The study debated that different fiscal policy variables, to a considerable extent, have a significant

influence on the output growth. Generally, the study holds the view that aggregate government spending has a positive relationship with sectoral output, i.e., economic growth. Therefore, inflation serves as a major brake on output growth among the various sectors of the economy within the sample period. In the same vein, Gemmell and Au (2012) evaluated the relationship between fiscal policy and output growth in OECD countries from 1995 to 2009 using a pooled regression model. The study found that, among other things, increase in government spending as a fiscal policy variable has a positive effect on output growth while increased tax rates produce a negative effect in all the review countries. In addition, Kilindo (1997), Tanzi and Howell (1997), Easterly and Rebelo (1993), Baxter and King (1993), and Engen and Skinner (1992) postulated that fiscal policy and its various components play a fundamental role in influencing the long-run growth performance of an economy.

4.2 Classical Proposition Literature

Classical proposition includes the following contributions: Baunsgaard (2003) examines the role of an appropriate fiscal policy rule in macroeconomic growth in Nigeria from 1970 to 2001 using a simulation analysis. The study debated that fiscal operation exerts negative influences on output growth since both revenue and expenditure were highly volatile. In other words, a major challenge for the economy is the macroeconomic volatility both in terms of expenditure and revenue driven largely by external terms of trade shocks, weak fiscal discipline, and the nation's heavy dependence on oil export earnings. Furthermore, empirical support from Ilizetzi et al. (2011) contribute to the literature by examining the effect of fiscal multipliers on 44 countries (20 developed and 24 developing) using a quarterly data set from 1960Q1 to 2007Q4. The study employed a SVAR technique originally developed by Blanchard and Perotti (2002). Hence, the finding shows that the response of economic growth due to increase in public expenditure is larger among industrialised countries than in developing countries. In addition, the framework of fiscal policy differs among developing countries not only in its execution but in its effects and relationship with other policies. This is because the increase in government expenditure is far more short-lived compared to highly-persistent public expenditure shocks in developed countries. A similar result is obtained by Ravn and Spange (2012) in Denmark using a SVAR model as developed by Blanchard and Perotti (2002) from 1983 to 2011. In another related development, Abata, Kehinde and Bolarinwa (2012) evaluate the influence of both monetary and fiscal policy variables on economic growth using a theoretical exploration. The study submitted that the role of fiscal policy in achieving sustainable economic growth has remained a mirage. In spite of a considerable increase in

the public sector spending over the years, the growth rate remains very low. Further evidence reveals that the effect of monetary policy on economic growth is much stronger than that of fiscal policy within the review period. This finding is consistent with the results obtained by Ajisafe and Folorunso (2002) and Adefeso and Mobolaji (2010). Blake (2013) measures the impact of fiscal multipliers on Jamaican government by adopting a SVAR technique from Blanchard and Perotti (2002). The study employed quarterly data from 1993Q2 to 2012Q2, and the results indicate that the effects of fiscal policy (expansionary) on GDP are weak and not persistent. Fiscal policy produces insignificant effects on growth, especially in the long run, because the fiscal multiplier is statistically insignificant on impact and zero over the long run. In addition, Perotti (2002) examines the effects of fiscal policy in five (5) OECD countries using a quarterly data from 1960Q1 to 2001Q4 by utilising Structural VAR (SVAR) technique. The study holds the view that, in the last 20 years, the effects of fiscal policy on growth and its various components appeared significantly very weak in OECD countries, hence, providing less support for a long-run relationship between fiscal policy and economic growth. Furthermore, Akanni and Osinowo (2013) examine the effect of fiscal instability on output growth in Nigeria from 1970 to 2010 using CUSUM of square diagnostic test and the Hodrick-Prescott (HP)-filtered fiscal framework with correlation technique. The result shows that fiscal policy component (aggregate government expenditure) has a negative and insignificant effect on economic growth.

Connecting the discussion in this paragraph to fiscal deficits from a disaggregated level, capital expenditure is also found to be negative while recurrent is positive. Nevertheless, labour force and trade openness have a significant countercyclical effect on the economy over the review period. In the same vein, Nelson and Singh (1998) investigate the relation between fiscal policy, economic freedom, and output growth in LDCs from 1970 to 1989 using a neoclassical growth model. The study concluded that the large government expenditure is detrimental to a nation's growth, but economic freedom shows a positive and significant effect on economic growth. Evidence of government policy and economic freedom variables obviously submits that many heroes of dictatorship wrongly attribute the poor economic performance to democracy when in reality it is public sector policies that may be responsible for poor growth in such respective countries. Similarly, Enache (2009) investigates the relationship between fiscal policy and economic growth in Romania using forecasted time series data from 1992 to 2013 by using a reduced-form neoclassical growth model to develop a regression analysis for the estimation. The results established a weak evidence for the positive impact of fiscal policy on economic growth, and a decrease of distortionary government revenues accompanied by a reduction in

unproductive government spending will increase real output growth in the long run. In addition to these, empirical evidence is supported by Havi and Enu (2014). The paper examines the effect of fiscal and monetary policy in the economy of Ghana from 1980 to 2012 using an OLS estimation technique. Results show that fiscal policy is insignificant compared to monetary policy in achieving sound and sustainable macroeconomic growth.

5. Review of Fiscal Deficit in Nigeria

From the fabrics of the two divergent opinions, the Nigerian economy is a battle ground or peaceful ground depending on one's disposition. Despite these discernable views, government expenditures can breed economic growth in Nigeria. This position was earlier supported by some eminent scholars like Baro (1990), Chenery and Syrquin (1975), Landu (1983), Diamond (1990), Longe (1984), Odusola (1996), and Ekpo (1995). Baro (1990) was among the first to formally endogenize government spending in a growth-model and to analyze the relationship between size of government and the rate of growth and saving. He concluded that an increase in the resources devoted to non-productive government services is associated with low capital. From an allocating perspective, an increase in government consumption leads to capital formation or private consumption. Some development economists of the Structuralist School prove that some categories of government expenditures are necessary to overcome constraints to economic growth (Chenery & Syrquin, 1975). In the seminal work of Landau (1983), the share of government consumption to GDP reduces economic growth. This is consistent with the pro-market view that the growth in government constrains the overall economic growth. Diamond (1990) notes that in Nigeria, less attention has been given to examining the productiveness of the various components of public spending. Longe (1984) examines the growth and structure of government expenditures in Nigeria with a view of ascertaining if the pattern fits with the results of other countries. Thus, his study revealed that government expenditure has shown many considerable structural shifts over the review period and that the ratio of government expenditure to GNP has been rising and corresponds with the rising share hypothesis. Odusola (1996) adopts a simultaneous equation model to capture the interrelationship between government expenditure and economic growth in Nigeria.

The role of government sector in economic management is performed through the formulation and implementation of economic policy generally and fiscal policy in particular. It is designed to achieve the objective of price stability, growth, balance of payments equilibrium, full employment, mobilization of resources, and investment. These objectives have influenced government's economic policy design and development efforts in Nigeria since independence. Different opinions have indeed continued to emerge on

how fiscal policy can affect economic activities. The genesis of these controversies has been traced to the theoretical exposition of the different schools of thought, namely: the Classical, the Keynesian, and the Neo-classical schools of thought. To the Classical school of thought, fiscal deficits incessantly financed by debt crowds-out private investment and by extension lower the level of economic growth.

According to Tchokote (2001), the classical economists believe that debt issued by the public has no effect on the private sector savings. To them, a deficit financed by increasing the supply of securities, *ceteris paribus* reduces its price and raises real interest rates and this crowds out private investment. In sum, excessive deficit can lead to poor economic performance. Omitogun and Ayinla (2007) noted that the Keynesian school of thought postulates a positive relationship between deficit financing and investment and consequently on economic growth. This school of thought sees fiscal policy as a tool for overcoming fluctuations in the economy. Argumentatively, Tchokote (2001) noted that this school regards deficit financing as an important tool to achieve a level of aggregate demand that is consistent with full employment. When debt is used to finance government expenditures, consumers' income will be increased. Given that resources are not fully utilized, crowding-out of private investment by high interest rates would not occur. The point of the Keynesian school of thought on the possible effects of fiscal deficits on economic activities has been challenged by the Neo-classical school of thought on the premise that the former school ignores the significance of how fiscal deficits are financed based on the effect of this policy variable on macroeconomic performance. The Neoclassical school postulates that the manner in which deficits are financed is capable of influencing the level of consumption and investment and by extension affect economic growth.

For Nigeria scenario, the result of government role in economic activities and the achievements in economic performance have been mixed. The economy experienced growth in real output in some years and declines in others. However, the overall picture is low scoring for the country's development efforts. The economic crisis from the 1980s and early 1990s brought out vividly the distinction between growth and development. The objectives fiscal policies in Nigeria are wide-ranging. These include increase in Gross Domestic Product growth rate, reduction in the rates of inflation and unemployment, improvement in the balance of payments, accumulation of financial savings and external reserves as well as stability in Naira exchange rate. More so, policy as well as instruments applied to attain these objectives have until recently been far from adequate undue reliance which has been placed on fiscal policy rather than monetary policy in Nigeria (Darrat, 1984). Fiscal policy is considered an important variable which may determine

changes in national income in developing countries like Nigeria. In order to stimulate the economic growth by means of fiscal policy, the country has more instruments. According to Ebimobowei (2010), these include the financing of direct investments of which the private sector would not provide adequate quantities; the efficient supply of certain public services which are necessary to ensure the basic conditions to display the economic activity and long term investments; and the financing of public activities so as to minimize the distortions to come up with the decisions to spend and invest properly in the private sector.

The fiscal policy of Nigeria has been extremely pro-cyclical with expenditures racking out of control on the upswing of the oil price cycle. This has contributed to the observed deficit bias in the conduct of fiscal policy. One option is to put in place a fiscal policy rule. A fiscal policy rule makes sense in Nigeria, given the complete absence of a tradition of fiscal discipline. Since a fiscal rule commits government to a certain level of conduct in fiscal and budgetary management, it will help to build government credibility in fiscal management and, overtime, promote strong fiscal discipline across all tiers of government. A rule, based on oil prices, will also help address the issue of the vulnerability of all tiers of government to oil price swings and reduce the pro-cyclicality in the budget. This will allow savings to build up financial assets in periods with high oil prices that can be used to finance the desired expenditure programmes when oil prices are low (Kwakwa, 2003). Phillips (1997) critically analyses the Nigerian fiscal policy between 1960 and 1997 with a view of suggesting workable ways for the effective implementation of Vision 2010. He observes that budget deficits have been an abiding feature in Nigeria for decades. He notes that except for the period 1971 to 1974, and 1979, there has been an overall deficit in the federal Government budgets each year since 1960 to date. He asserted that the chronic budget deficits and their financing, largely by borrowing, have resulted in excessive money supply, worsened inflationary pressures, and complicated macroeconomic instability, resulting in negative impact on external balance, investment, employment, and growth. He, however, contends that fiscal policy will be an effective tool for moving Nigeria towards the desired state in 2010 only if it is substantially cured of the chronic budget deficit syndrome it has suffered for decades.

As noted by Babangida (1993), the lack of fiscal discipline is the bane of our economy. In spite of realized revenues being above budgetary estimates, extra budgetary expenditure has been rising so fast and resulting in a bigger deficit. To say the least, this is a sobering revelation and there is need to ensure that the deficit is not only minimized but eventually eliminated. The practice of financing the fiscal deficit through the banking system, especially the Central Bank's Ways and Means facility, results in rapid growth of domestic liquidity. This in turn exerts immense pressures on prices, interest rates, and

exchange rate of the Naira. As an illustration, between 1988 and 1991, an average of 77 percent of the overall deficit was financed by the CBN. In 1992, the deficit had been largely financed by the CBN. As a direct consequence, the monetary and credit aggregates have been exceeding prescribed targets in recent years. Folorunsho and Abiola (2000) examine the long-run determinants of inflation in Nigeria between 1970 and 1998, using the econometric methods of co-integration and error correction mechanism. They found that inflation in Nigeria could be caused by the level of income, money supply, and public sector balance. The results also indicate that in the long run, exchange rate, money supply, income, and fiscal balance determine the inflation spiral in Nigeria. The study concludes that a reduction in fiscal deficits, an increase in domestic production, and a stable exchange rate should be pursued as means of controlling inflation in Nigeria.

There has been a strong deficit bias and pro cyclically in fiscal policy, which has been largely driven by oil prices in 1991-1992 and 2000-2002. More so, revenue and expenditure have increased sharply. This has typically followed the scaling back of expenditures as oil prices substantially decline, though at times with a lag. According to Baunsgard (2003), experience in Nigeria illustrates the difficulties of implementing fiscal policy in an environment with highly volatile revenue flows. The resultant effect of such boom-burst fiscal policies includes spread of oil-price volatility to the stable provision of government services. This has added to the failure over the years of public spending, facilitating the diversification and growth of the economy. There is no doubt that the failure of government fiscal policies, rather than the failure of monetary policies, is the main reason why most of the past developmental programmes undertaken by the government have come to naught (Ezeoha & Uche, 2010).

6. Methodology

O'Leary (2004) describes methodology as the framework which is associated with a particular set of paradigmatic assumptions that will be used to conduct the research. Allan and Randy (2005) insist that when conducting a research, methodology should meet the following two criteria: Firstly, the methodology should be the most appropriate to achieve the objectives of the research. Secondly, it should be made possible to replicate the methodology used in other researches of the same nature. Descriptive analysis of secondary data generated from Central Bank of Nigeria and IMF has been intensively used to accomplish the objectives of this write-up.

Fiscal Deficits and Economic Stabilization in Nigeria

Economic stabilization in Nigeria through fiscal deficit will be appraised with the aid of tables. These tables will indicate average fiscal deficit

growth rate, per capita income, unemployment rate, inflation rate, and balance of payments. The following tables will be used to analyze the effect of fiscal deficit on economic stabilization in Nigeria. Economic stability is said to exist when the real gross domestic product (RGDP) (total GDP deflated for inflation) increases persistently over time. From Table 2 below, it is observed that there was persistent growth in RGDP in three successive periods, and these periods also witnessed growth in fiscal deficit. Consequently, it can be said that fiscal deficits triggered the growth of RGDP. However, these growth periods coincides with the era of oil boom. Therefore, the growth in RGDP could be attributed to increased earnings from crude oil exportation. While in 2017-2019, there was a drastic decline which must have been as a result of sharp decline in oil revenue.

Table 2. Deficit expenditure growth rate and RGDP growth rate

Years	Deficit Expenditure(N' Billion)	Growth Rate of Deficit	RGDP (in millions \$)	Growth Rate of RGDP
1980 – 1985	-3441.01	–	44.917	
1986 – 1991	-16555.15	381.11	25.077	-44.17
1992 – 1997	-31581.5	90.76	27.088	8.01
1998 – 2003	-207907.75	558.32	47.528	75.45
2004 – 2009	-236574.13	13.78	148.253	211.92
2010 – 2016	-904907.72	282.5	458.706	209.40
2017-2019	3,588.3	74.78	458.286	-0.09

Source: Authors' computation based on World Development Indicators (2020)

Comparative analysis of the growth rate of deficit expenditure and per capita income growth rate within seven (7) years average is used in Table 3 below. Deficit spending grew by 381.11 percent between the period of 1980 - 1985 and 1986 - 1991. The growth rate decline to 90.76 percent between 1986-1991 and 1992 -1997 periods. Later, it skyrocketed to 558.32 percent between 1992 - 1997 and 1998 - 2003 era. The growth rate also declined between the period 1998 - 2003 and 2004 - 2009 to 13.78 percent. It has grown by 282.5 percent between the period 2004 - 2009 and 2010 - 2016. On the other hand, per capita income has been on the upward trend within the period under review, significantly rising by 623.85 percent between 1992 and 1997, declining by 447.69 percent to 176.16 percent between 1998 and 2003. However, the upward trend has been noticeable from 2004 - 2016 while there was drop in 2017-2019. Evidence from literature shows that if deficit expenditure is embarked upon, it is expected to have a positive effect on development indicators, and per capita income is one of them. Consequently, Nigeria's per capita income (PCI) has been growing and fluctuating within the period under review.

Table 3. Deficit expenditure growth rate and per capita income (PCI) growth rate

Years	Deficit Expenditure(N' Billion)	Growth Rate of Deficit	PCI	Growth Rate of PCI
1980 – 1985	-3441.01	–	740.95	–
1986 – 1991	-16555.15	381.11	2086.1	181.54
1992 – 1997	-31581.5	90.76	15100.39	623.85
1998 – 2003	-207907.75	558.32	41702.03	176.16
2004 – 2009	-236574.13	13.78	131626.6	215.63
2010 – 2016	-904907.72	282.5	462890.46	251.67
2017-2019	3,588.3	74.78	1,104,577.833	58.09

Source: Authors' computation based on CBN's Statistical Bulletin (2020)

From Table 4 below, within the six (6) year period of 1986 and 1991, there was a marginal decline in unemployment indicator from 10.75 percent witnessed in the preceding six year period of 1980 - 1985. However, unemployment rate has been growing since then. The inference is that deficit expenditure has not been having the desired effect on employment generation in Nigeria. Deficit spending should stimulate national output growth which will result in employment creation (reduction in unemployment). Despite the persistent growth rate of fiscal deficit, the evil of unemployment has not been tackled by deficit spending. This may be as a result of the fact that deficit spending has been skewed in favour of recurrent expenditure to the detriment of capital expenditure. As long as capital fiscal deficit is not greater than recurrent fiscal deficit, the capacity of the economy to create employment that tackles the threat of unemployment will be significantly mitigated.

Table 4. Deficit expenditure growth rate and unemployment rate

Years	Deficit Expenditure(N' Billion)	Growth Rate of Deficit	Unemployment Rate (%)
1980 – 1985	-3441.01	-	10.75
1986 – 1991	-16555.15	381.11	10.31
1992 – 1997	-31581.5	90.76	10.76
1998 – 2003	-207907.75	558.32	15.0
2004 – 2009	-236574.13	13.78	15.43
2010 – 2016	-904907.72	282.5	16.36
2017-2019	3,588.3	74.78	20.9

Source: Authors' computation based on CBN's Statistical Bulletin (2020)

An analysis of Table 5 below shows that a growing economy needs periodic inflation, i.e., increase in the general price level of goods and services, including wages. However, for this inflation to be the desired type, it needs to be a-single digit inflation. The effect of deficit expenditure on the general price level of goods and services has been mixed during the period under review. For example, the average rate of inflation was 17.8 percent between 1980 - 1985, and it further grew to 19.21 percent in the 1986 - 1991 periods. The

upward trend continued with inflation reaching an average rate of 44.8 percent in the next period (1992 - 1997). However, there was a significant drop from 44.8 percent to 11.55 percent in the 1998 - 2003 era. This grew insignificantly by 0.06 percent to 11.61 percent in the period 2004 - 2009, and it was averaged at 13.89 percent between the period 2010 - 2016. Also, the inflation drop by 1.68 percent in 2017-2019. It can be concluded that despite the fact that deficit spending has been growing during the period of this study, it had a mixed effect on the rate of inflation in Nigeria within the period under review. The instability noticed in the rate of inflation could be attributed to increased earnings from oil revenue coupled with unmitigated growth in money supply. When these (increasing oil revenue and growth in money supply) are not accompanied by growth in output, demand will grow faster than supply and the consequence will be inflation with its inherent negative effects.

Table 5. Deficit expenditure growth rate and the rate of Inflation

Years	Deficit Expenditure (N' Billion)	Growth Rate of Deficit	Inflation Rate (%)
1980 – 1985	-3441.01		17.8
1986 – 1991	-16555.15	381.11	19.21
1992 – 1997	-31581.5	90.76	44.8
1998 – 2003	-207907.75	558.32	11.55
2004 – 2009	-236574.13	13.78	11.61
2010 – 2016	-904907.72	282.5	13.89
2017-2019	3,588.3	74.78	12.21

Source: Authors' computation based on CBN's Statistical Bulletin (2020)

Conclusion and Policy Implications

This write-up is a theoretical analysis of the impact of fiscal policy variables on economic growth in Nigeria. The achievement of economic growth through fiscal policy in Nigeria has remained an illusion. Obviously, the achievement of sustainable economic growth through fiscal policy in Nigeria has remained a mirage. Despite the substantial increases in government expenditure over the years, the rate of economic growth has been very low and sluggish. The poor performance of fiscal policy has been ostensibly blamed on the problems of policy inconsistencies, high level of corruption, wasteful spending, poor policy implementation, and lack of feedback mechanism for implemented policies (Omitogun & Ayinla, 2007). This study opens the effect of fiscal policy on economic growth in Nigeria. Therefore, this study recommends monetary policy for the purpose of economic growth and stabilization. Based on the secondary data presented in the paper, Table 1 shows that Nigerian government has always relied on deficit spending to stabilize her economy which has been validated.

As seen in Table 1, for the 40 year period of 1980 to 2019, only two years recorded surpluses: 1995 and 1996 respectively. Having had 38 years of

deficit expenditure, how has the country fared in the attainment of the objectives of fiscal deficit, which is economic growth? From the tables above, two out of the four development indicators used in this work have conformed a priori expectation. From this stand point, deficit spending in Nigeria has stimulated growth of real GDP and per capita income in Nigeria. Furthermore, unemployment and inflation have not completely conformed. These situations call for serious attention of Nigerian government, given the fact that these variables are of great importance for economic strength. The reason for the twist in unemployment could be as a result of the fact that fiscal deficit has been geared toward recurrent expenditure to the detriment of capital expenditure which has the capacity to stimulate employment.

Policy Prescription

Government should control excessive domestic credit expansion in the economy to avoid the adverse effects of fiscal deficit. To control fluctuations in money supply, price level and rate of interest, government should avoid short run devaluation and stabilize external value of currency. Government should utilize its resources properly to control deficit in meeting its expenses. Therefore, such policies should be designed that can encourage people to pay taxes and give incentives to those who avoid paying taxes. Government should decrease lenders' interest rate so that small domestic investors can invest to create employment opportunities along with increase in government revenue. In order to avoid deficit budget, the parliamentarians should reduce their personal and unproductive expenditures. The study recommends that if fiscal deficits are the essential tool of correcting short term fluctuations in the economy, then these deficits should be invested in productive and profitable projects. More especially, deficit should be invested in infrastructure to get sustainable economic growth. In Pakistan, elimination of corruption will reduce fiscal deficit and improve performance of economy.

Fiscal policy should give priority attention to capital and public investments by making them of higher proportion in gross government expenditure, thereby creating more jobs and enhancing the quality of public spending and the attainment of sustainable growth and development.

Emphasis should be on the development of basic infrastructure (e.g., transportation, energy and communication). Human capital development should be a priority. Government fiscal policy should refocus and redirect government expenditure towards production of goods and services so as to enhance GDP growth.

Government economic policies should also focus on diversification of the economy to enhance the performance of the non-oil sector, so as to create more jobs in this sector. The government should avoid unnecessary borrowings and ensure that existing debts are properly serviced as at when

due. The government should ensure that policy inconsistency is minimized and policy reversals are properly checked for both short and long run effects on the economy. Government should fight the problem of corruption because without a reduction of the level of corruption in the country, fiscal policy components will not achieve the required level of economic growth in Nigeria. There is need for an improvement in government expenditure on health, education, and economic services, as components of productive expenditure, to boost economic growth.

References:

1. Abata, M. A., Kehinde, J. S. & Bolarinwa, S. A. (2012). Fiscal/Monetary policy and economic growth in Nigeria: A theoretical exploration. *International Journal of Academic Research in Economic and Management Science*, 1(5), 75-88.
2. Abdullah, H. A. (2000). The Relationship between Government Expenditure and Economic Growth in Saudi Arabia. *Journal of Administrative Science*. 12(2):173 – 191.
3. Abdurrauf, I. B. (2015). Fiscal policy and economic development in Nigeria. *Nigeria Journal of Economics and Sustainable Development*, 6(7), 150-159.
4. Adefeso, H. A. & Mobolaji, H. I. (2010). The fiscal policy and economic growth in Nigeria: further empirical evidence. *Pakistan journal of social sciences*, 7(2), 137-142. <https://doi.org/10.3923/pjssci.2010.137.142>
5. Ajisafe, R.A. & Folorunsho, B.A. (2002). The Relative Effectiveness of Fiscal and Monetary Policy in Macroeconomic Management in Nigeria. *The African Economic and Business Review*, 3(1). Spring
6. Akanni, K. A. & Osinowo, O. H. (2013). Effect of fiscal instability on economic growth in Nigeria. *Advances in Economics and Business*, 1(2), 124-133.
7. Agu, S. U., Idike, A. N., OkworIfeoma, M. I. & Ugwunta, D. (2014). Fiscal policy operation and economic growth in Nigeria: emphasis on various components of public expenditure. *Singaporean Journal of Business Economics and Management Studies*, 2(12), 1-12.
8. Allan, AJ. & Randy, LJ. (2005). *Writing the Winning Thesis or Dissertation. A Step-by-Step Guide*, Corwin Press, California.
9. Appah, E. (2010). The relationship between fiscal policy and economic growth in Nigeria. *International Journal of Economic Development, Research and Investment*, 1(2-3), 37-47.
10. Arestis, P. (2009). New consensus macroeconomics: a critical appraisal. Working paper series, paper no. 564. The Levy economics

- institute of Bard College, University of Cambridge.
https://doi.org/10.1007/978-0-230-29166-9_6
11. Babalola, S. J. & Aminu, U. (2015). Fiscal policy and economic growth relationship in Nigeria. *International Journal of Business and Social Science*, 2(17), 244-257.
 12. Babalola, S. J. & Aminu, U. (2015). Fiscal policy and economic growth relationship in Nigeria. *International Journal of Business and Social Science*, 2(17), 244-257.
 13. Baunsgard, T. (2003). Fiscal Policy in Nigeria: Any Role for Rules. *International Monetary Fund Working Paper*.
 14. Baxter, M. & King, R. G. (1993). Fiscal policy in general equilibrium. *American Economic review*, 83(3), 315-334
 15. Byiabani, J. & Mohseni, R. (2014). Fiscal policy and economic growth: a case study of Iran. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 4(1), 48-57.
 16. Bogdanov, B. (2010). Cyclicity of Fiscal Policy over Business Cycle: An Empirical Study on Developed and Developing Countries. Agency for Economic Analysis and Forecasting, Working paper Series
 17. Chakraborty, P. & Chakraborty, L. S. (2006). Is fiscal policy contra cyclical in India: An empirical analysis, MPRA Paper No. 7604. Retrieved February 11, 2010, from http://mpra.ub.uni-muenchen.de/7604/1/MPRA_paper_7604.pdf.
 18. Chang, T. & Ho, YH. (2002). A Note on testing tax-and-spend, spend-and-tax or Fiscal Synchronization: The Case of China, *Journal of Economic Development*, 27(1)
 19. Cyril, U.M. (2016). The effect of fiscal policy on economic growth in Nigeria. *Journal of Finance and Accounting*, 4(3), 140-145. <https://doi.org/10.11648/j.jfa.20160403.16>
 20. Darrat, A.F. (1984). The Dominant Influence on Fiscal Actions in Developing Countries. *Eastern Economic Journal*. X(3): 271-284.
 21. Enache, C. (2009). Fiscal policy and economic growth in Romania. *Annales Universitatis Apulensis Series Oeconomica*, 11(1), 502-512.
 22. Engen, E.M. & Skinner, J. (1992). Fiscal policy and economic growth. NBER, Working Paper no. 4223. African Economic Research Consortium, Nairobi, Kenya. <https://doi.org/10.3386/w4223>
 23. Ezeoha, A. & Uche, C. (2010). Rethinking Monetary and Fiscal Policies in Nigeria.
 24. Fatás, A. & Mihov, I. (2001). The effects of fiscal policy on consumption and employment: theory and evidence. European Summer Symposium on International Macroeconomics, Tarragona mimeo, INSEAD.

25. Folorunso, B.A. & Abiola, A.G. (2000). The Long – run Determinants of inflation in Nigeria (1970 - 1998). *The Nigerian Journal of Economic and Social Studies*, 42(1): 37 - 52.
26. Gemmell, N. & Au, J. (2012). Government size, fiscal policy and the level and growth of output: a review of recent evidence. The Working Papers in Public Finance, working paper no.10/. Published by the Victoria Business School, University of Wellington, New Zealand. <https://doi.org/10.2139/ssrn.2199225>
27. Havi, E.D.K. & Enu, P. (2014). The effect of fiscal policy and monetary policy on Ghana's economic growth: which policy is more potent? *International Journal of Empirical Finance*, 3(2), 61-75.
28. Imoisi, A. I. (2013). An appraisal of fiscal policy measures and its implication for growth of the Nigerian economy. *Journal of Advances in Management and Applied Economics*, 3(4), 193-204.
29. Ismihan, M. & Özkan, F.G. (2012). The Golden Rule of Public Finance: A Panacea Ekonomitek, 1(2) May / Mayıs.
30. Ilzetzi, E., Mendoza, E. G., Vég, C. A. (2011). How big (small?) are fiscal multipliers? International Monetary Fund, Working Paper no. WP/11/52, IMF Research Department.
31. Jemec, N., Kastelec, A.S. & Delakorda, A. (2011). How do fiscal shocks affect the macroeconomic dynamics in the Slovenian economy? *Izdajabankaslovenije, zbirkoprikazi inanalizepripravljaja in urejaanalitskoraziskovalni center banke slovenije* Uporaba in objavapodatkov in delovbesedila je dovoljena z navedbovira, Številka 2, Letnik XVII. German.
32. Kilindo, A.A.L. (1997). Fiscal operation, money supply and inflation in Tanzania. African Economic Research consortium, AERC research paper sixty-five, Nairobi, Kenya.
33. Kwakwa, V. (2003). A Framework for Assessing Fiscal Sustainability: Application to Nigeria, Third Annual Monetary Policy Conference Proceedings on Issues in Fiscal Management: Implications for Monetary Policy in Nigeria, 11-12 December 2003. Lagos, Central Bank of Nigeria Publications.
34. Lozano, I. (2008). Budget Deficit, Money Growth and Inflation: Evidence from the Colombian Case, *Borradores de Economia*, 537, 1-26.
35. Maku, O.E. (2015). Fiscal policy and economic growth: a study on Nigerian economic perspective. *Journal of Economics and Sustainable Development*, 6(15), 86-92.
36. Mansouri, B. (2008). Fiscal policy and economic growth: Egypt, Morocco and Tunisia Compared. UNECA Conference on

- Macroeconomic Policy, Productive Capacity and Economic Growth in Africa, Addis Ababa, Ethiopia.
37. Matthew, K. O. (2011). Fiscal policy and economic growth in South Africa. *Journal of Economic Studies*, 38(5), 604-618. <https://doi.org/10.1108/014435811111161841>
 38. Mitchell, D. (2002). The correct way to measure the revenue impact of changes in tax rates, manuscript available at <http://www.heritage.org/Research/Taxes/BG1544.cfm>.
 39. Monacelli, T. & Perotti, R. (2006). Fiscal Policy, the Trade Balance, and the Real Exchange Rate. *The Economic Journal*, 437 – 461
 40. Musa, Y., Asare, B.K. & Gulumbe, S.U. (2013). Effect of monetary-fiscal policies interaction on price and output growth in Nigeria. *CBN Journal of Applied Statistics*, 4(1), 23-55.
 41. Nathan, PA. (2012). The impact of fiscal policy on the Nigerian economy. *Journal of International Review of Social Sciences and Humanities*, 4(1), 142-150.
 42. Neaime, S. (2008). Twin Deficits in Lebanon: A Time Series Analysis, IFE Lecture and Working Paper Series No 2Beirut Institute of Financial Economics, American University of Beirut.
 43. Nelson, M.A. & Singh, R.D. (1998). Democracy, economic freedom, fiscal policy, and growth in LDCS: a fresh look. *Economic Development and Cultural Change*, 46(4), 677-696. <https://doi.org/10.1086/452369>
 44. Ogbole, F.O., Amadi, S.N. & Essi, I.D. (2011). Fiscal policy: its impact on economic stabilisation in Nigeria. *Journal of Economics and International Finance*, 3(6), 407-417.
 45. Okpanachi, U. M., & Abimiku, C. A. (2007). Fiscal deficit and macroeconomic Performance: A survey of theory and empirical evidence. In P. Ogiji (Ed.), *the Nigerian economy: Challenges and directions for growth in the next 25 years* (pp. 3-34).
 46. O’Leary, Z. (2004). *The essential guide to doing research*”. Sage.
 - Walliman, N. S. & Walliman N. (2011) “*Research methods: the basics*” Taylor and Francis.
 47. Omitogun, O. & Ayinla, T.A. (2007). Fiscal Policy and Nigerian Economic Growth. *Journal of Research in National Development*. 5 (2) December.
 48. Onyemaechi, J. O. (2014). Impacts of fiscal policy components on economic growth in Nigeria: an empirical trend analysis. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 4(1), 24-31.

49. Osinowo, O.H. (2015). Effect of fiscal policy on sectoral output growth in Nigeria. *Journal of Advances in Economics and Business*, 3(6), 195-203.
50. Perotti, R. (2002). Estimating the effects of fiscal policy in OECD countries. International seminar on macroeconomics, working paper series, working paper no. 168, European Central Bank.
51. Philips, A.O. (1997). Nigerian Fiscal Policy, 1998 -2010. Nigerian Institute of Social Economic Research (NISER), Monograph Series No. 17, Ibadan
52. Ravn, S. H. & Spange, M. (2012). The effects of fiscal policy in a small open economy with a fixed exchange rate: the case of Denmark. Working Paper series of Denmark's National Bank, Copenhagen Denmark.
53. Saleh, A. S. (2003). The Budget Deficit and Economic Performance: A Survey, Working Paper 03-12, Department of Economics, University of Wollongong.
54. Sargent, T. & Wallace, N. (1981). Some Unpleasant monetarist arithmetic, *Federal Reserve Bank of Minneapolis Quarterly Review* 5: 117.
55. Stadler, M. (2003). Innovation and Growth: The Role of Labor Force Qualification, *Wirtschaftswissenschaftliche Fakultät der Eberhard Karls Universität Tübingen*.
56. Tanzi, V. & Howell, H. Z. (1997). Fiscal policy and long-run growth. *International Monetary Fund Staff Papers*, 44(2), 179-209. <https://doi.org/10.2307/3867542>
57. Tchokote, J. (2001). Macroeconomics of Fiscal Deficits in Cameroon. Being a Ph.D. Thesis Proposal presented to the Department of Economics. Ibadan: University of Ibadan
58. Yadav, S., Upadhyaya, V. & Sharma, S. (2010). Impact of fiscal policy shocks on the Indian economy. MPRA Paper No. 34071, Munich Personal RePEc Archive.
59. Zhattau, V. S. (2013). Fiscal policy as an engine of economic growth in Nigeria. *AFRREV IJAH, an International Journal of Arts and Humanities*, 2(2), 282-298.



Moderating Effect of Organizational Capability on the Relationship Between Business Intelligence Capability and Performance Among Public Listed Firms in Kenya

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[Doi:10.19044/esj.2021.v17n1p335](https://doi.org/10.19044/esj.2021.v17n1p335)

Submitted: 23 November 2020

Accepted: 08 January 2021

Published: 31 January 2021

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Cite As:

Buhasho E., Wausi A. & Njihia J. (2021). *Moderating Effect of Organizational Capability on the Relationship Between Business Intelligence Capability and Performance Among Public Listed Firms in Kenya*. European Scientific Journal, ESJ, 17(1), 335.

<https://doi.org/10.19044/esj.2021.v17n1p335>

Abstract

Business Intelligence remains a primary focus in many organisations and it naturally attracts significant investment. Existing literature is nebulous and fragmented on the real impact and how well the insights induced by this technology have been transformed into successful business learning. Consequently, this paper focuses on determining the influence of organizational capabilities on the relationship between Business Intelligence capability and firm performance. The study employed interdisciplinary theories to realize the research objective, namely Information Systems Capability theory and Organizational Learning theory. In addition, the study was conducted using mixed methods research methodology and a cross-sectional approach. The study used structural equations modeling technique (Partial Least Squares approach- SEM-PLS) to analyse quantitative data and validate the developed research model. Thematic analysis aided by Atlas.ti version 8 software was applied to analyse qualitative data. Findings of quantitative and qualitative strands of the study were triangulated at the data

analysis stage based on convergence model. Results revealed that organizational capability has a positive and significant moderating impact. The findings provide fresh enlightenment into current Business Intelligence literature and opportunities for future research with implications for management, policy makers, and academia.

Keywords: Business intelligence, firm performance, organizational capability

1. Introduction

Business Intelligence (BI) is a rapidly growing innovation occasioned by prevalent business environment globally, i.e., it is evolving, dynamic, and is characterized by huge amounts of data originating from social networks and mobile communications, in addition to traditional databases. BI focuses on remodeling raw data into utilizable, useful, and actionable (knowledge) facts. Additional knowledge contributes to an organization's success by facilitating better decisions, hence, impacting performance (LaValle et al., 2011). Investment by Michigan State University in BI generated annual savings of \$34,434 and 55% return by eliminating manual data analysis, therewith allowing staff to concentrate on critical activities (Durcevic, 2018). A survey of more than 400 experts in Information and Communication Technology (ICT) collected from 93 countries suggested that BI is a core investment in companies (Arefin et al., 2015). Global BI investment was anticipated to be valued at \$22.8 billion by the end of 2020 (Moore, 2017).

ICT expenditure in Kenya reflects an upward trajectory, for instance, from \$2.28 billion in 2016 to \$3.45 billion in 2017 (Kenya National Bureau of Statistics, 2018). In comparison, however, corporate institutions' performance, especially publicly listed companies, has declined in the recent past (Kinuthia, 2018). Recent profit warnings by the listed companies have resulted in a major decline in share prices, consequently, shrinking investment value of shareholders. Publicly listed firms play a crucial role in economic development. Hence, solid performance in these firms is extremely important. Data is regarded as a resource and can be exploited through the use of BI systems to enhance profitability and competitiveness (Williams, 2016), thereby reshaping the declining trend of these firms. In addition, due to shorter product life cycles, changes in social norms and demographic patterns, these firms operate in a constantly changing operating environment (Audzeyeva & Hudson, 2016). The ability to detect and respond to such variations should therefore be developed by exploiting BI capabilities. The impact of BI is realized through improved decision-making based on facts, business process improvement, innovation, and environmental changes (LaValle et al., 2011; Brynjolfsson et al., 2011; Audzeyeva & Hudson, 2016). Moreover, Watson

and Wixom (2007) concluded that with correct capabilities, BI can assist an organization to forecast a shift in product demand or spot an increase in the market share of a competitor's product and react rapidly by introducing a competing product.

Empirical results on BI impact is fragmented (Audzeyeva & Hudson, 2016) and lack an overall framework incorporating moderating variables (Trieu, 2017), in spite of ongoing substantial investment in BI solutions. The positive impact of BI on firm performance has indeed been reported (Brynjolfsson et al., 2011; Fink et al., 2017). Investment by Michigan State University in BI generated annual savings of \$0.34 million and investment return of 55% (Durcevic, 2018). However, other studies, for example, Chae et al. (2014), have underscored the negative impact of IT on performance. Similarly, Carr's (2003) study highlighted the non-significant effect of IT investment. A survey conducted by Henshen (2008) on BI impact reported a 19% success rate on business performance.

Empirical studies carried out by other researchers on the role of organizational capabilities revealed various shortcomings. For example, Melville et al. (2011) posit that IT performance value research is confronted with a variety of constructs and corresponding factors, and there is no consensus on approaches to modeling these constructs. Mithas et al. (2011) conducted research on how information capability impact performance. The study confirmed the impact of BI in developing organizational capabilities and this by extension influences performance through customer, process, and management capabilities. The findings indicate that the link between BI and performance is moderated by organizational capability. However, further research by Yogev et al. (2013) on how BI generates value has shown that value is achieved by enhancing both operational and strategic business processes. Xu and Kim (2014) argued that the impact on performance is driven by the development of dynamic capabilities that facilitate sense and response strategies to environmental changes. Aydiner et al. (2019) has recently echoed the need to take further steps to open the black box linking IS capabilities and performance by using appropriate mediating/moderating variables. Božič and Dimovski (2019) concluded that the process of converting BI's insights into viable business learning remains vague and calls for further studies to investigate this complex phenomenon. Hence, the objective of this study was to examine the moderating effect of organizational capabilities based on the relationship between BI capability and firm performance.

2. Literature Review

2.1 Theories Underpinning the Study

The study views BI impact through two lenses; Information Systems (IS) capability theory and Organizational Learning Theory. IS capability

theory provides a mechanism through which an organization can continually obtain value by adopting technology (Peppard & Ward, 2004). This enables an organization to convert data into knowledge that has business value; consequently, it enhances its long run ability to adjust to changes (William, 2016). Hence, the theory advances the premise of BI capability adopted in the current study. OLT Theory leverages on the progress of learning arising from the firm's past mistakes over a period of time. For learning to succeed, organizational leaders must make a concerted effort to change tact in response to changing circumstances, connect action to an outcome, and measure the outcome (Larsen & Eargle, 2015). Notable contributors to this theory are Argrys and Schon (1978) and Fiol and Lyles (1985). Gupta and George (2016) stressed that businesses, with high inclination towards learning, have stocks of knowledge that can be used to build huge data capability. Therefore, organizational learning is a valuable theoretical lens for understanding the impact of BI (Fink et al., 2017).

2.2 *BI Capability*

BI capability concept emanates from IT capabilities (Kulkarni et al., 2017), which scholars have studied extensively in the information systems (IS) literature, for example, Bharadwaj (2000). According to Bharadwaj (2000), IT capability is an organizational capability used to organize and deploy IT-based resources together with other available resources to yield a competitive advantage. Thus, beyond technology, firms rely on other resources to build unique capabilities that are difficult to imitate (Olszak, 2014). In reference to IS capability theory, BI capability is associated with vital functionalities that assist firms to generate and leverage value through BI tools continuously (Peppard & Ward, 2014; Olszak, 2014; Isik et al., 2013). Isik et al. (2013) enhanced this concept by investigating the role of BI capabilities from an organizational and technical point of view. They established and validated nine capabilities incorporated in this study. In addition, literature suggests that human capital is a vital resource (Stevens, 2010; Bharadwaj, 2000). Hence, human capital dimension was included under BI capability.

2.3 *Firm Performance*

Performance is a construct that has multiple dimensions. It hinges on the use of economic indicators of performance such as market share, growth in revenue, and profitability (Melville et al., 2004). It also includes non-financial indicators such as product quality and customer satisfaction (Trieu, 2017). To assess performance, Kaplan and Norton (1996) proposed Balanced Score Card (BSC) framework composed of four perspectives namely customer, internal process, organization learning, growth, and financial. This

study, however, embraced the Malcom Baldrige National Quality Award (MBNQA) framework, which explicitly tests IT-driven information flows (Mithas et al., 2011). In addition, the dimensions used met the criteria by Wade and Hulland (2004) for selecting appropriate dependent variables to be used when evaluating benefits accruing from IT that should reflect trends and competitiveness. The dimensions comprises human resource, customer-focus, financial, and organizational effectiveness to evaluate the performance impact of BI.

2.4 *Organizational Capability*

Organizational capability relates to the firm ability to utilize its competencies to effectively respond to its environment (Kangas, 1999). Competence, according to McGrath, MacMillan and Venkataraman (1995), emerges from an objective blend of specific resources that facilitates the firm to carry out a given task. Top management must therefore accumulate, classify, develop, and use the resources of the organization efficiently over time. Organizational capability was further conceptualized by Mithas et al. (2011) to encompass process management capability, customer management capability, and performance management capability. Consumer management capability enables an organization to use the voice of the customer to collect market intelligence and identify opportunities for business. Effective BI capabilities allow the organization to obtain customer information and propagate to respective stakeholders in the organization. Shared information between customer service units and IT units affects the capacity of the firm to obtain market intelligence (Ray et al., 2005) for strategic realignment. Process management capability is the capacity to create a procedure with effective scope and wealth for steering the firm's activities. McGrath et al. (1995) observed that the competitive advantage, to some extent, is related to processes at work within the organization that result in a reliable and repetitious attainment of desired output. Therefore, an individual organization undertakes sets of actions in order to realize its strategic objectives, hence, creating numerous avenues for the application of IT to streamline business operations (Melville et al., 2004). BI capability permits a quicker and more responsive redesign and configuration of processes in reaction to shifts in the business environment, which in turn enhances organizational performance.

Performance management refers to the capacity to create requisite monitoring and check systems to examine business performance. It permits firms to align strategic and operational goals with business operations to fully sustain performance via better and informed decision-making and action (Bogdana et al., 2009). It encompasses the choice of suitable measurement methods, data collection, and data analysis. An effective performance management system can make it possible for a firm to identify unfavourable

variations, ascertain sources of variation, and implement new strategies geared towards identifying a viable solution (Mithas et al., 2011).

2.5 *Business Intelligence Capability, Organizational and Firm Performance*

Prior research by Kohli and Grover (2008) posit that information management capability that is driven by IT leads to enhanced business capabilities, thereby affecting firm performance positively. Information management capability is a subset of BI capability (Kulkarni et al., 2017). Therefore, Mithas et al. (2011) propounded a model involving two stages, information management capability as primary construct and organization capabilities made of higher-order capabilities (process management, performance management and customer management capabilities) as an intermediary between performance and information capability. The results based on chronicled data set, from a conglomerate outfit, confirmed that organizational capability has an impact on the relationship between information capability and firm performance (Mithas et al., 2011). However, the findings from this research cannot be generalized to firms globally because the data set was limited to firms within the group.

Empirical research conducted by Ray et al. (2005) in North America revealed that shared information enabled by IT notably affects the capacity of the firm to obtain more customer intelligence and associated business processes with a final impact on business performance. The research setting was on a specific insurance industry with an exceptional spotlight on the customer process. Thus, the generality of the study is limited. Likewise, in their survey-based study, Elbashir et al. (2008) discovered BI conveys benefits through improved business processes (business partner relations, inside procedure proficiency, and client insight benefits). A survey study by Kim et al. (2011) in South Korea confirmed that IT capability influence process oriented dynamic capability and the subsequent impact on firm performance. It enables management to either enhance, adapt, or restructure business process better than other competing firms in terms of consolidating business activities and cost containment. However, the study did not incorporate other factors (customer and performance management capability). In line with the theoretical propositions in the IS capability theory, Mithas et al. (2011) posit that BI capabilities play a critical role in developing organizational capabilities. These capabilities in turn favourably influence customer, financial, human resources, and organizational effectiveness (measures of firm performance). This study seeks to contribute to the ongoing debate by focusing on the mediating role of organizational capability. It is hypothesized that:

H₀₁: Organizational capability has no effect on the relationship between BI capability and firm's performance.

Relationship between the variables under study is presented in Figure 1 below.

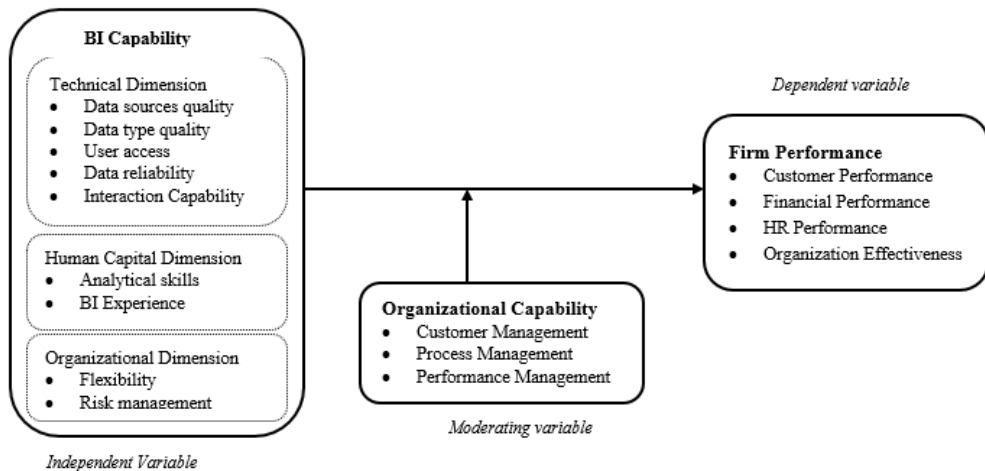


Figure 1. Conceptual Model

3. Methodology

3.1 Research Design and Population

The study adopted cross-sectional mixed method research design in which elements of qualitative and quantitative approaches were combined (Johnson et al., 2007). The rationale for adopting this design includes the ability to integrate the strength of different methods, provides an in-depth insight into phenomena that are enigmatic while using quantitative or qualitative methods, and address issues of research involving a real-life understanding of context, multi-dimensional views, and cultural influence (Johnson et al., 2007). The study's target population was public listed firms at the Nairobi Securities Exchange (NSE) as at 31st of December 2018. All 64 listed firms were contacted to participate in the study.

3.2 Data Collection and Analysis

Data were obtained via a structured questionnaire. In designing the questionnaire, a five-point Likert scale with items ranging from '1= not at all' to '5 = very large degree' were selected. Data was collected from staff in managerial positions. This is because they are regarded as key informants with knowledge about the research topic (Kim et al., 2011). Questionnaires totaling 64 were issued using drop-and-pick methods. To analyse the data, the researcher used the Structural Equation Modelling technique (SEM) for quantitative strand of the study. SEM was employed to evaluate the measurement model, to confirm the fit of the model, and to verify the convergent and discriminant validity of the constructs. SEM also enables the modeling and estimation of complicated relationship patterns and test hypotheses simultaneously in a single run (Hair et al., 2017). Specifically,

PLS-SEM was adopted to assess the hypothesis using SmartPLS version 3.0. PLS-SEM is a suitable tool to explain changes in key constructs caused by other constructs, including the ability to function with a small sample size (Hair et al., 2014). Thematic analysis technique, complemented by Atlas.ti version 8 software, was employed to analyse qualitative data.

4. Findings

4.1 Assessment of the Measurement Models

The reflective measurement model was assessed by item reliability, internal consistency reliability, discriminant validity, and convergent validity. To achieve item reliability, all indicators loadings were evaluated. Chin (1998) specified that the loading of indicators should be at least 0.60 and preferably 0.70 or greater. Hair et al. (2014) argued that indicators with outer loads between 0.40 and 0.70 should only be considered for removal from the scale if removal of the indicator leads to improved composite reliability. Consequently, any indicator with loads below 0.60 was dropped one at a time until only those with loads above 0.60 remained.

Cronbach's alpha is the standard measure for internal consistency, which presents a reliability estimate based on the inter-correlations of observed variables. Hair et al. (2017), however, recommended the use of composite reliability because Cronbach's alpha is sensitive to the number of items in the scale and often underestimates the reliability of internal consistency. The authors specified that composite reliability values of 0.60 to 0.70 is appropriate in exploratory research. Results for the composite reliability were as follows; BI capability 0.926, organizational capabilities 0.906, and financial performance 0.880. These surpassed the minimum criteria of 0.7 as shown in Table 1.

Table 1. Construct Internal Consistency Reliability

Construct	Cronbach's Alpha	Composite Reliability
BI Capability (BC)	0.914	0.926
Financial Performance (FP)	0.843	0.880
Organizational Capabilities (OC)	0.877	0.906

Convergent validity is the extent to which observed variables are highly correlated with a particular construct. To verify convergent validity, Average Variance Extracted (AVE) of each latent variable was assessed. Validity is confirmed when AVE values are greater than the acceptable threshold of 0.5 (Hair et al., 2017). The AVE values for the current study are listed in Table 2. The AVE value for all constructs ranged from 0.507 to 0.592, which is above the acceptable value of 0.5. Hence, the model has satisfactory convergent validity.

Table 2. Average Variance Extracted (AVE)

Construct	Average Variance Extracted (AVE)
BI Capability	0.513
Firm performance	0.514
Organizational capabilities	0.582

Discriminant validity is the extent to which the construct is empirically distinct from other constructs (Hair et al., 2014). However, recent studies have demonstrated that cross-load approach and the Fornell-Larcker criterion do not reliably detect discriminating validity (Henseler et al., 2015; Hair et al., 2017). Henseler et al. (2015) suggested an alternative technique to evaluate discriminant validity based on the multitrait-multimethod matrix known as the heterotrait-monotrait correlation ratio (HTMT). Discriminatory validity is established when HTMT value is below 0.90 (Garson 2016; Henseler et al., 2015). As indicated in Table 3, discriminating validity for all pairs of latent constructs was confirmed.

Table 3. Heterotrait Monotrait Ratio

	BC	OC	FP
BC			
OC	0.852		
FP	0.478	0.433	

4.3 Structural Model Evaluation

Assessment of the hypothesized relationship within the inner model commences after verification of reliability and validity measurement model (Hair et al., 2014). Hair et al. (2017) stipulated the main criteria for assessing PLS-SEM structural model and include significance of path coefficients, the level of the R² values, the f² effect size, the predictive relevance Q², and the q² effect size are presented below. However, the model was first evaluated for collinearity issues by applying variance inflation factor (VIF) mooted by Hair et al. (2017). A well-fitted model without multicollinearity should have less than 5.0 VIF coefficients (Garson, 2016). For predictor constructs, all VIF values (BI capability was 2.916 and organizational capabilities 2.904) were below 5, indicating lack of multicollinearity.

Predictive accuracy of the model is measured by R² and is computed as the squared correlation between the actual and expected values of a particular endogenous construct. The measure generates insights into the predictive power of a model. R² values of 0.75, 0.50 or 0.25 are categorized as significant, moderate or weak respectively (Hair et al., 2017; Garson, 2016). Predictive power on firm performance was 0.458. This implies that the model can explain 45.8 percent changes in firm performance. Cohen's f² metric tests the strength of the independent variable in relation to R². Based on the value

extracted, BI capability has large predictive power on complementary resources (f^2 value of 1.242). Complementary resources have medium predictive power on performance (f^2 value of 0.082).

Stone-Geisser's Q^2 is a measure used to test the predictive relevance of the inner model through a blindfolding process. Blindfolding is a sample reuse method that systematically removes data points and gives an estimate of the initial values. Chin (1998) stated that Q^2 values above 0 imply that the model has a predictive relevance to a specified endogenous variable. Values below 0 suggest a lack of predictive significance. The study yielded a firm performance value of 0.209. Thus, the model indicates a comparatively high degree of predictive relevance for endogenous variable. The q^2 effect size is a measure used to assess the relative predictive relevance to the dependent variable of a given independent (exogenous) variable. According to Hair et al. (2017), values of 0.02, 0.15, and 0.35, respectively imply that an independent variable has a small, medium or large predictive relevance on endogenous construct. The q^2 effect size for BI capability and organizational capability was 0.01 and 0.02, presented in Table 3. The findings indicate that the exclusion of organizational capability has a small effect on the predictive relevance of the current model.

Table 3. Cross-validated redundancy (Q^2) and q^2 Effect size

	SSO	SSE	$Q^2 (=1 - SSE/SSO)$	q^2 effect size
Firm performance	385	304.4	0.209	
Omission of BI Capability (BC)				0.01
Omission of Organizational capabilities (OC)				0.02

4.4 Hypothesis Testing

The two-stage method of PLS algorithm to analyse moderation effect was applied to test the hypothesis (Hair et al., 2017). The first stage consisted of examining the moderating impact of organizational capabilities (OC) on the relationship between BI capacity (BC) and firm performance (FP). The second stage was to evaluate the direct effect between OC and firm performance to collaborate with findings in the first stage. To carry out moderation analysis in SmartPLS, interaction term labelled *moderating effect 1* was added to the model as shown in Figure 2.

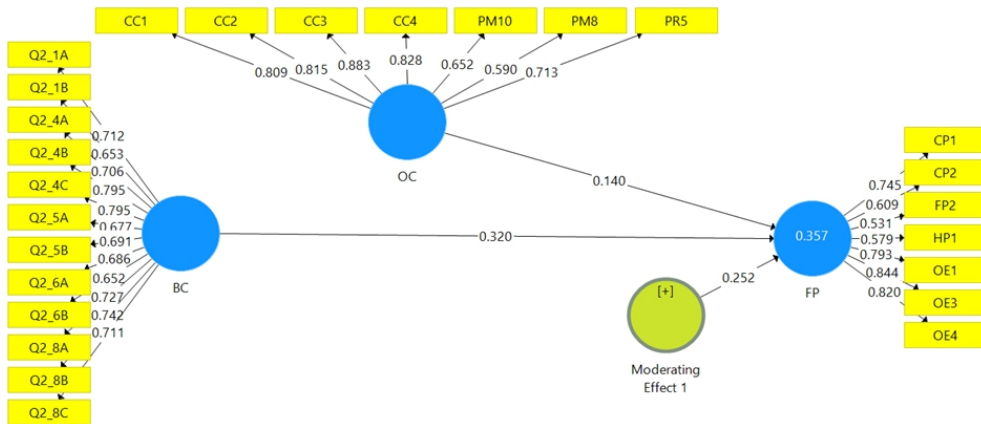


Figure 2. Moderation Effect of CR on the relationship between FP and BC

As indicated, interaction term has a positive impact of 0.252 on firm performance (FP). The results in Figure 2 show that the relation between BI capabilities (BC) on FP is 0.320. It implies that when organizational capability (OC) is increased by one standard deviation unit, the relationship between BC and FB is increased by the size of the interaction term ($0.320 + 0.252 = 0.572$). Conversely, if OC is reduced by one standard deviation unit, the relationship between BC and FB becomes 0.068 (0.320 less 0.252). The following simple slope plot depicts the two-way interaction effect.

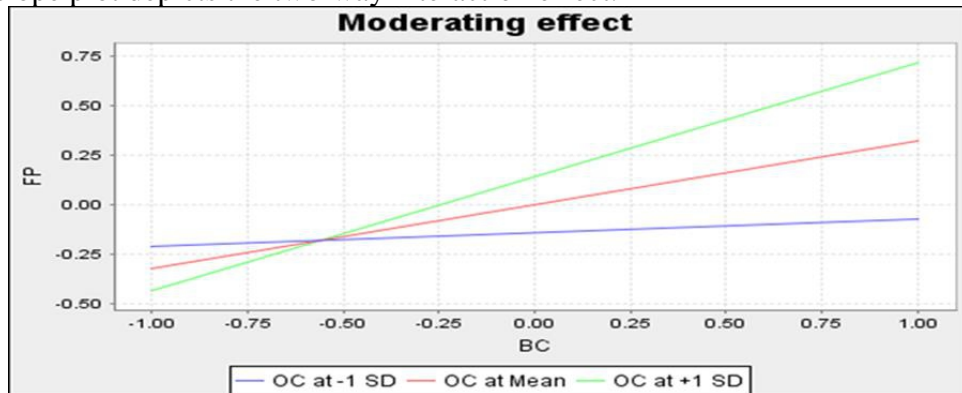


Figure 3. Simple slope plot on Moderating effect

The three lines shown in Figure 3 reflect the BC (x-axis) to FP (y-axis) relationship. The middle line reflects the relationship for a mean level effect of the moderating variable OC. The other two lines portray the association between BC and FP for average value of OC plus one standard deviation unit and mean value of OC less one standard deviation unit.

The moderation test also involved bootstrapping to test for significance and the results were as follows: $\beta = 0.252$, P -value = 0.021, t -value = 2,302, and $R^2 = 0.357$. The finding for the moderated relationship of

the effect size (f^2) is medium at 0.145. The highlighted findings empirically show that at the significance level of $P < 0.05$ and $t > 1.96$, the moderating impact of organizational capabilities is positive and statistically significant. The direct effect of organizational capability on firm performance results were as follows: $\beta = 0.445$, $t\text{-value} = 3.590$, and $P\text{-value} = 0.000$. The predictive power (R^2) results were: $R^2 = 0.198$ and $f^2 = 0.248$. Therefore, this indicates a positive and statistically significant relationship between organizational capability resources and firm performance. The f^2 effect size value of 0.23 implies that organizational capability in this relationship has a medium proportion of predictive power. Therefore, the hypothesis is rejected.

5. *Qualitative Data Analysis*

Thematic analysis technique was adopted to analyse qualitative data. All the interviews were recorded and later transcribed. The interview sessions were conducted by the researcher to ensure consistency in the interview process and feedback interpretation. Before commencing analysis, the researcher read through the transcribed data while listening to recorded interviews, providing an opportunity to correct transcription errors. The edited version was then uploaded to Atlas.ti software. Summary findings are depicted in Table 4. BI output support management of customer level agreement and forecast change in customer preferences. In addition, it is used to manage business processes and triggers process changes. Furthermore, it enhances business performance by comparing actuals to target and conduct trend analysis, thus enabling management to take corrective action to avert crisis.

Table 4. Organizational Management Capability Key Findings

Dimension	Description	Findings
Organizational capability	The variable entails customer management, process management, and performance management capabilities.	<ul style="list-style-type: none"> • Output from BI is used to manage customer expectation, predict preference, and manage service level agreements. • BI is used to monitor processes in the organization. • BI can trigger a change in the organization process. • BI is one-stop shop for all stakeholders in the organization. It is used to evaluate performance in order to flag corrective action to mitigate crisis.

6. *Discussion of Findings*

The findings empirically confirm that the impact of organizational capability is positive and statistically significant. Likewise, in their survey-based study, Elbashir et al. (2008) discovered that BI conveys benefits through improved business processes. Empirical research by Ray et al. (2005) concluded that shared information facilitated by IT has a major impact on the company's ability to gain more customer insights and related business

processes with a final impact on business performance. A study conducted by Mithas et al. (2011) concluded that BI capability plays a critical role in developing organizational capabilities. In turn, these capabilities favourably influence customer, financial, human resources, and organizational effectiveness (measures of firm performance). Moreover, the results showed that BI capability has the greatest impact on performance management, followed by process management and then customer management.

Qualitative strand of the study confirmed the role of organizational capability in enhancing performance benefits from BI. Participants demonstrated that BI is a one-stop shop for all stakeholders in the organization. It is applied in performance management by flagging out corrective action to mitigate crises. It is also used to monitor critical processes and can trigger a change to improve efficiency. BI enhances customer management capability with final impact on performance. This application enables organizations to obtain intelligent information relating to customers by enabling deeper analysis of data collected from multiple sources such as e-mail, the internet, mobile, and twitter. Customer profiles are analysed to define expectations, predict preference, and manage service level agreements.

7. *Conclusions and Contributions of the Study*

The study was structured with a specific objective of investigating the effect of organizational capabilities in mitigating some of the limitations identified in the published literature. Hence, the outcome of this study exhibited a positive moderating effect of organizational capabilities on the relationship between BI capabilities and firm performance for publicly listed companies. To further improve declining performance, firms should deliberately develop higher capabilities (customer, process and performance capability) based on the output from BI. Moreover, the study has contributed to OLT by availing empirical proof relating to the indirect role of organization learning in enhancing firm performance. For organizational capability to be effective, learning must take place. For example, in performance management, BI provides feedback on revenue by flagging variance on dashboards. In the event of adverse variance, management learns by drilling down to the root causes. Improvement plan is developed and implemented swiftly, with results tracked and submitted to stakeholders for review. Learning process begins with individuals before the acquired knowledge is entrenched within the organisation.

This study provides practical insights to the managers and leaders of publicly listed companies in Kenya by validating the moderating effect of organization capabilities. Management of listed companies will be guided by the study to ensure BI is applied in customer management to monitor changes in expectations, trends, and service level agreements. Furthermore, effective

performance management supported by BI will enable management to detect unfavourable variations, ascertain sources of variation, and implement appropriate strategies to correct the variation in business. BI capability permits a quicker and more responsive redesign and configuration of processes in reaction to shifts in business environment, which in turn enhances organizational performance. The finding of this research is also crucial for policy makers to formulate and improve the current policy frameworks for the listed companies, government, and other institutions. The study offers empirical evidence that BI capability and organizational capability are critical in enhancing firm performance. Hence, the study accentuates the need for investment in BI solutions.

8. *Study's Limitations and Suggestions for Further Research*

While this study has provided valuable insights, it also has some specific limitations. First, the findings of the study centred on cross-sectional data. BI support is of a long-term nature and cannot fully achieve its benefits over a short time span. In future research, the longitudinal research design could be used to enhance the reliability of performance data. Second, data was obtained from individual managers in various departments, e.g., ICT and finance managers. While it is anticipated that respondents will offer unbiased answers, because of variations in their role and profession, they could have contributed to differing perceptions as to how items in questionnaires were addressed. Typically, organizations use different BI systems to analyse, present, share, and create insights for decision making. It is not clear if the impact varies depending on which BI system is in use. Hence, further studies are required to evaluate the impact from the same vendor.

References:

1. Arefin, M., Hoque, M., & Bao, Y. (2015). The impact of Business Intelligence on organization's effectiveness: an empirical study. *Journal of Information Technology*, 17(3), 263-285. <https://doi:10.1108/jsit-09-2014-0067>
2. Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
3. Audzeyeva, A., & Hudson, R. (2016). How to get the most from a business intelligence application during the post implementation phase? Deep structure transformation at a UK retail bank. *European Journal of Information Systems*, 25(1), 29-46. <https://doi.org/10.1057/ejis.2014.44>
4. Aydiner, A. S., Tatoglu, E., Bayraktar, E., & Zaim, S. (2019). Information system capabilities and firm performance: Opening the black box through decision-making performance and business-process

- performance. *IJIM*, 47(1), 168-182.
<https://doi.org/10.1016/j.ijinfomgt.2018.12.015>
5. Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS quarterly*, 24(1),169-196.
<https://doi.org/10.2307/3250983>
 6. Božič, K., & Dimovski, V. (2019). Business intelligence and analytics for value creation: The role of absorptive capacity. *International Journal of Information Management*, 46(1), 93-103.
<https://doi.org/10.1016/j.ijinfomgt.2018.11.020>
 7. Bogdana, P. I., Felicia, A., & Delia, B. (2009). The role of business intelligence in business performance management. *Annals of Faculty of Economics*, 4(1), 1025-1029.
 8. Brynjolfsson, E., Hitt, L. M., & Kim, H. H. (2011). Strength in Numbers: How does Data driven Decision making affect Firm Performance. Available at SSRN 1819486. <https://doi.org/10.2139/ssrn.1819486>
 9. Carr, N. G. (2003). IT doesn't matter. *Educause Review*, 38(1), 24-38.
 10. Chae, H. C., Koh, C. E., & Prybutok, V. R. (2014). Information technology capability and firm performance: Contradictory findings and their possible causes. *Mis Quarterly*, 38(1), 305-326.
<https://doi.org/10.25300/misq/2014/38.1.14>
 11. Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling. *MIS Quartely*, 22(1), vii-xvi.
 12. Durcevic, S. (2018, September 13). *Benefits of Business Intelligence & Analytics Explained With Use-Cases*. Retrieved October 31, 2019, from Datapine.com: <https://www.datapine.com/blog/benefits-of-business-intelligence-and-business-analytics/>
 13. Elbashir, M. Z., Collier, P. A., & Davern, M. (2008). Measuring the effects of Business Intelligence systems: The relationship between business process and organizational performance. *International Journal of Accounting Information Systems*, 9(3), 135-153.
<https://doi.org/10.1016/j.accinf.2008.03.001>
 14. Fiol, M., & Lyles, M. (1985). Organizational learning. *Academy of Management Review*,10(4), 803-813.
 15. Fink, L., Yogev, N., & Even, A. (2017). Business intelligence and organizational learning: An empirical investigation of value creation processes. *Information & Management*, 54(1), 38-56. <https://doi.org/10.1016/j.im.2016.03.009>
 16. Garson, G. D. (2016). *Partial least squares: Regression and structural equation models*. Asheboro: Statistical Associates Publishers.

17. Gupta, M., & George, J. F. (2016). Toward the development of a big data analytics capability. *Information & Management*, 53(8), 1049-1064.
18. Hair Jr, J. F., Hult, G. T., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Los Angeles: SAGE Publication.
19. Hair Jr, J. F., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks, California: SAGE Publications.
20. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
21. Henshen, D. (2008, May 9). *Special Report: Business Intelligence Gets Smart*. Retrieved January 19, 2020, from InformationWeek: <https://www.informationweek.com/software/information-management/special-report-business-intelligence-gets-smart/d-d-id/1071701>
22. Işık, Ö., Jones, M. C., & Sidorova, A. (2013). Business Intelligence success: The roles of BI capabilities and decision environments. *Information & Management*, 50(1), 13-23. <https://doi.org/10.1016/j.im.2012.12.001>
23. Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of mixed methods research*, 1(2), 112-133. <https://doi.org/10.1177/1558689806298224>
24. Kaplan, R., & Norton, P. (1996). *The Balanced Score Card: Translating Strategy into action*. Boston MA: Harvard Business School Press .
25. Kangas, K. (1999). Competency & capabilities-based competition and the role of information technology: the case of trading by a Finland-based firm to Russia. *Journal of Information Technology Case and Application Research*, 1(2), 4-22.
26. Kenya National Bureau of Statistics, (2018). Economic survey. Retrieved January 20, 2019, from <https://www.knbs.or.ke/?wpdmpro=economic-survey-2018>
27. Kim, G., Shin, B., Kim, K. K., & Lee, H. G. (2011). IT capabilities, process-oriented dynamic capabilities, and firm financial performance. *Journal of the association for information systems*, 12(7), 487-517. <https://doi.org/10.17705/1jais.00270>
28. Kinuthia, K. (2018). Firms that issued profit warning in 2018. *Business Daily*. Retrieved January 11, 2019, from [companies/List--Firms-that-](#)

- have-issued-profit-warning-this-year/4003102-4879114-14d53liz/index.html
29. Kohli, R., & Grover, V. (2008). Business value of IT: An essay on expanding research directions to keep up with the times. *Journal of the association for information systems*, 9(1), 23-39. <https://doi.org/10.17705/1jais.00147>
 30. Kulkarni, U. R., Robles-Flores, J. A., & Popovič, A. (2017). Business intelligence capability: the effect of top management and the mediating roles of user participation and analytical decision making orientation. *Journal of the Association for Information*, 18(7), 516. doi:10.17705/1jais.0046
 31. Larsen, K. R., & Eargle, D. (2015). Retrieved March 13, 2019, from Theories Used in IS Research Wiki: https://is.theorizeit.org/wiki/Organizational_learning_theory
 32. LaValle, S., Lesser, E., Shockley, R., Hopkins, M. S., & Kruschwitz, N. (2011). Big data, analytics and path from insights to value. *MIT sloan management review*, 52(2), 21-32.
 33. McGrath, R. G., MacMillan, I. C., & Venkataraman, S. (1995). Defining and developing competence: A strategic process paradigm. *Strategic management journal*, 16(4), 251-275.
 34. Melville, N., Kmerner, K., & Gurbaxani, V. (2004). Review: Information Technology and Organizational Performance: An integrative model of IT business value. *MIS quarterly*, 28(2), 283-322. <https://doi.org/10.2307/25148636>
 35. Mithas, S., Ramasubbu, N., & Sambamurthy, V. (2011). How Information Management Capability Influences Firm Performance. *MIS quarterly*, 35(1), 237-256. <https://doi.org/10.2307/23043496>
 36. Moore, S. (2017, February 17). *Newsroom*. Retrieved November 12, 2018, from Gartner Web site: <https://www.gartner.com/newsroom/id/3612617>.
 37. Olszak, C. M. (2014). Towards an Understanding Business Intelligence. A dynamic capability-based framework for Business Intelligence. *Federated Conf. on IEEE* 2(1), 1103-1110. <https://doi.org/10.15439/2014f68>
 38. Peppard, J., & Ward, J. (2004). Beyond strategic information systems: towards an IS capability. *The Journal of Strategic Information Systems*, 13(2), 167-194. <https://doi.org/10.1016/j.jsis.2004.02.002>
 39. Ray, G., Muhanna, W. A., & Barney, J. B. (2005). Information Technology and the Performance of the Customer Service: A Resource-Based Analysis. *MIS Quarterly*, 4(29), 625-652. <https://doi.org/10.2307/25148703>

40. Stevens, R. H. (2010). Managing human capital: How to use knowledge management to transfer knowledge in today's multi-generational workforce. *International Business Research*, 3(3), 77. <https://doi.org/10.5539/ibr.v3n3p77>
41. Trieu, V. H. (2017). Getting value from Business Intelligence systems: A review and research agenda. *Decision Support Systems*, 93(1), 111-124. <https://doi.org/10.1016/j.dss.2016.09.019>
42. Wade, M., & Hulland, J. (2004). The resource-based view and information systems research: Review, extension, and suggestions for future research. *MIS quarterly*, 28(1), 107-142. <https://doi.org/10.2307/25148626>
43. Watson, H. J., & Wixom, B. H. (2007). The current state of business intelligence. *Computer*, 40(9), 96-99. <https://doi.org/10.1109/mc.2007.331>
44. Williams, S. (2016). *Business intelligence strategy and big data analytics: A general management perspective*. Cambridge: Morgan Kaufmann. <https://doi.org/10.1016/c2015-0-01169-8>
45. Xu, P., & Kim, J. (2014). Achieving Dynamic Capabilities with Business Intelligence. *In PACIS*, (p. 330).
46. Yogev, N., Even, A., & Fink, L. (2013). How Business Intelligence Creates Value. *International Journal of Business Intelligence Research*, 4(3), 16-31. <https://doi.org/10.4018/ijbir.2013070102>