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Generativity is a Core Value of the ESJ: A Decade of Growth

Erik Erikson (1902-1994) was one of the great psychologists of the 20th century[1]. He explored the nature of personal human identity. Originally named Erik Homberger after his adoptive father, Dr. Theodore Homberger, he re-imagined his identity and re-named himself Erik Erikson (literally Erik son of Erik). Ironically, he rejected his adoptive father's wish to become a physician, never obtained a college degree, pursued independent studies under Anna Freud, and then taught at Harvard Medical School after emigrating from Germany to the United States. Erickson visualized human psychosocial development as eight successive life-cycle challenges. Each challenge was framed as a struggle between two outcomes, one desirable and one undesirable. The first two early development challenges were 'trust' versus 'mistrust' followed by 'autonomy' versus 'shame.' Importantly, he held that we face the challenge of **generativity** versus **stagnation in middle life**. This challenge concerns the desire to give back to society and leave a mark on the world. It is about the transition from acquiring and accumulating to providing and mentoring.

Founded in 2010, the European Scientific Journal is just reaching young adulthood. Nonetheless, **generativity** is one of our core values. As a Journal, we reject stagnation and continue to evolve to meet the needs of our contributors, our reviewers, and the academic community. We seek to innovate to meet the challenges of open-access academic publishing. For us,

[1] Hopkins, J. R. (1995). Erik Homburger Erikson (1902–1994). *American Psychologist*, 50(9), 796-797. doi:http://dx.doi.org/10.1037/0003-066X.50.9.796

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generativity has a special meaning. We acknowledge an obligation to give back to the academic community, which has supported us over the past decade and made our initial growth possible. As part of our commitment to generativity, we are re-doubling our efforts in several key areas. First, we are committed to keeping our article processing fees as low as possible to make the ESJ affordable to scholars from all countries. Second, we remain committed to fair and agile peer review and are making further changes to shorten the time between submission and publication of worthy contributions. Third, we are looking actively at ways to eliminate the article processing charges for scholars coming from low GDP countries through a system of subsidies. Fourth, we are examining ways to create and strengthen partnerships with various academic institutions that will mutually benefit those institutions and the ESJ. Finally, through our commitment to publishing excellence, we reaffirm our membership in an open-access academic publishing community that actively contributes to the vitality of scholarship worldwide.

Sincerely,

Daniel B. Hier, MD

European Scientific Journal (ESJ) Natural/Life/Medical Sciences

Editor in Chief

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The Impact of Credit Rating Adjustments on Bond Spreads: Evidence from China

Sinbad Kurbonov
Bobur Nasriddinov
Kessellie Traore Mulbah
SILC Business School, Shanghai University, China

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Abstract

Given the critical role of credit ratings in signaling issuer creditworthiness and influencing investor behavior, this paper aims to elucidate how adjustments in these ratings affect bond market spreads. Utilizing a comprehensive dataset spanning from 2016 to 2022, this research focuses on the Chinese bond market. Through regression analysis and heterogeneity tests, the findings reveal that credit rating adjustments significantly influence bond spreads, with upgrades narrowing spreads and downgrades widening them. Additionally, adjustments related to external support and firm performance also affect spreads, highlighting the importance of managing credit ratings for issuers. Overall, this study offers insights for investors, issuers, regulators, and academics, providing a better understanding of the dynamics between credit rating adjustments and bond pricing in China's bond market, with implications for financial stability and economic development.

Keywords: Credit rating, bond spreads, credit rating adjustments, listing status, financial market

Introduction

In the global financial market, the bond market plays a central role due to its deep capital pool and abundant investment opportunities. It serves as a

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crucial avenue for governments and enterprises to secure long-term funding and acts as the central platform for investors to diversify risks while maintaining and increasing the value of their assets. Credit ratings, as a pivotal measure for assessing the default risk of debt instruments, offer a lens through which the bond market is perceived (Kariya et al., 2019). These ratings enable investors to gain insight into complex financial information and gauge credit risk, establishing them as one of the core factors influencing bond pricing.

For instance, corporate bonds within the S&P 500 index exhibit significant yield differentials between investment-grade (BBB- and above) and non-investment-grade (BB+ and below) categories. These disparities underscore the profound impact of credit ratings on investment return expectations. Moreover, credit rating adjustments (CRAs), whether upward or downward, can trigger swift market reactions. Statistics reveal that changes in credit ratings can lead to immediate fluctuations in bond spreads, often within the range of five to ten basis points (Gilchrist et al., 2020). These fluctuations may be even more pronounced during specific economic events or financial crises. Such adjustments not only reflect the financial health, operational performance, and market confidence of bond issuers but also underscore the bond market's remarkable sensitivity and its capacity to respond rapidly to new information.

The objective of this paper is to conduct a comprehensive analysis of the specific effects of credit rating adjustments on bond spreads. This analysis enhances the understanding of market dynamics, aids investors in predicting market movements, provides bond issuers with a scientific foundation for their decision-making, and contributes to policymakers' efforts to maintain financial stability and advance economic development. Thus, this research holds significant importance in the realm of finance and practical applications, as it explores the intricate relationship between minor shifts in credit ratings and their profound impact on bond spreads.

Literature review

Theoretical framework and models

Since the emergence of credit rating agencies, the role of credit ratings has become indispensable within the bond market. Credit ratings often serve as the primary source of investor insight regarding the caliber and market potential of bonds, whether being issued or already in circulation (Michalski & Low, 2024). Theoretical scholars have dedicated significant efforts to establishing connections between micro-level credit risk characteristics and macro-level market behaviors. Their objective is to unveil the underlying mechanisms that govern the impact of credit rating changes on bond pricing.

Various models, such as the Jarrow-Turnbull model and the structural methods in the Merton model, have been developed to explore these

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relationships (Jarrow & Turnbull, 1995; Merton, 1974). These models often operate under the assumption that market participants have equal access to all relevant credit information and consequently adjust bond prices based on this shared knowledge. However, the theory of information asymmetry introduces an alternative perspective, positing that information distribution in the market is uneven, especially in the context of CRAs, leading to pronounced biases in asset pricing (Hu et al., 2019).

At the heart of the theory of information asymmetry is the idea that credit ratings play a particularly crucial role when bond issuers have more extensive information about their financial position than bond buyers. As a result, the study by Cleary (1999) underscores the significant role of credit ratings in mitigating this uneven information distribution. Additionally, the communication of new information through rating adjustments can trigger a rapid reassessment of bond prices within the market.

Scholars have also explored the relationship between market efficiency and credit ratings, aiming to understand the immediate market response to rating adjustments and the implications of this response for bond spread fluctuations (Piccolo & Shapiro, 2022; Khorram et al., 2023). This theoretical dialogue not only clarifies how credit ratings influence bond pricing by shaping investors' risk perceptions but also highlights the role of rating adjustments as vehicles for conveying critical information.

Empirical studies and research advancements

Pioneering studies in the field of CRAs, such as those by Hand et al. (1992), lay the foundational understanding of its dynamics, finding a significant correlation between credit downgrades and declines in stock prices. Subsequent research by Beaver et al. (2006) further confirms the adverse effects of downgrades on bond prices, highlighting that market participants might react even before the official rating announcements. It reveals the intricate interplay between rating changes and the bond market.

The quest to analyze these relationships evolves with the availability of refined datasets and advanced statistical techniques. For example, Dichev and Piotroski (2001) utilize credit rating changes as informational events and apply event study methods to explore their impact on both bond and stock markets. Their findings highlight the substantial and immediate market response to rating adjustments, suggesting that the heterogeneity in these responses might be tied to factors such as the anticipation of rating changes, the prevailing market environment, and bond-specific attributes.

As research advances, scholars like Jorion and Zhang (2007), Gao et al. (2022), and deHaan et al. (2023) employ more complex panel regression techniques to investigate the influence of credit rating changes on bond prices.

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They reaffirm the significant impact of rating changes on bond spreads and emphasize the critical role of information releases' timing in the market.

Research gap and study relevance

Despite extensive research demonstrating that credit rating adjustments are crucial factors affecting bond pricing, there remains a notable deficiency in studies specifically examining the immediate and multidimensional impacts of these changes within the context of the Chinese bond market. This gap is significant given China's unique regulatory environment and the rapid development of its financial markets. Consequently, this research aims to address this gap by extending the existing academic discourse and offering practical insights that can inform investors and policymakers about the nuanced impacts of credit ratings in an emerging market setting.

Research hypotheses

Credit rating and bond pricing

Credit ratings transmit crucial information to market participants. An upgrade in credit rating signals an improvement in the issuer's creditworthiness, which attracts additional investors, leading to increased demand for the bond (Gao et al., 2022). This surge in demand likely elevates bond prices, resulting in a decrease in yields and, consequently, a narrowing of credit spreads.

Conversely, a downgrade in credit rating indicates deteriorating credit quality, elevating the perceived risks associated with the bond. Investors, in reaction, require a higher yield as compensation for assuming greater risk (Saadaoui et al., 2022). Such heightened yield expectation causes credit spreads to widen as bond prices decline.

Given the pivotal role of credit ratings in the bond market and the well-documented relationship between rating changes and investor behavior, it is plausible to hypothesize that credit ratings exert a statistically significant influence on bond credit spreads, with upgrades leading to a narrowing of spreads and downgrades causing them to widen.

Hypothesis 1: Credit rating has a statistically significant impact on bond credit spreads.

Credit rating adjustments and bond credit spreads

Credit rating adjustments play a critical role in the bond market as they provide valuable information to investors, issuers, and regulators (Cooke & Bailey, 2015). These adjustments serve as indicators of the creditworthiness and risk profile of bond issuers, allowing market participants to make informed investment decisions. Observing and analyzing credit rating

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adjustments offers insights into the dynamics of the bond market and the impact of these adjustments on bond pricing (Gilchrist et al., 2020). This is crucial for assessing the risk-return tradeoff and making investment decisions aligned with individual risk preferences.

This research considers three types of credit rating adjustments:

Overall Credit Rating Adjustment — This holistic evaluation of an issuer's creditworthiness incorporates a comprehensive assessment of the issuer's ability to meet its financial obligations. An adjustment to this rating signifies a fundamental change in the issuer's overall risk profile, affecting investor perception. Therefore, changes in the overall credit rating may have a broad and profound impact on bond credit spreads, with upgrades indicating improved creditworthiness and potentially leading to a narrowing of spreads, while downgrades may widen spreads due to heightened perceived risk.

Supporting Adjustment — This sub-indicator reflects the extent of government or shareholder willingness and ability to support the issuer. Adjustments are made based on the issuer's relationship with external entities that can provide financial support during distress. A positive adjustment may enhance market confidence and lower perceived risk, contributing to narrowing credit spreads. Conversely, a negative adjustment may raise concerns about support, leading to a widening of spreads.

Company-Level Adjustment — This focuses on issuer-specific, firm-level characteristics, such as financial performance, industry-specific factors, and business operations. Positive adjustments may signal improved financial health or enhanced competitive positions, potentially narrowing credit spreads. Conversely, negative adjustments might indicate deteriorating financial performance, leading to widened spreads.

Therefore, considering these different types of credit rating adjustments, the second hypothesis aims to explore how the Chinese bond market responds to various adjustment factors, serving as the basis for empirical analysis.

Hypothesis 2: The impact of credit rating adjustment on bond credit spreads does not vary according to the type of adjustment.

The impact of CRAs in listed and non-listed companies

The study includes the bond evaluation of both listed and non-listed firms. Allen and Alves (2016) acknowledge that listed companies are subject to more stringent disclosure requirements and regulatory oversight than non-listed companies. As a result, there is typically greater transparency and availability of information for listed companies. This increased transparency allows market participants to access and easily analyze relevant information, including credit rating adjustments. Consequently, the impact of credit rating adjustments on bond credit spreads may be more pronounced in listed

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companies, where investors have better access to information and can make more informed decisions.

Furthermore, listing on a stock exchange often enhances investor confidence and improves liquidity for a company's securities. The presence of a liquid market facilitates the efficient pricing of bonds and enables investors to buy or sell securities with relative ease (Saadaoui et al., 2022). In the context of credit rating adjustments, the increased investor confidence and liquidity associated with listed companies may amplify the market response to such adjustments. Investors in listed companies may be more sensitive to credit rating changes, leading to a more significant impact on bond credit spreads compared to non-listed companies.

Thus, the third hypothesis suggests that the impact of credit rating adjustments on bond credit spreads is more significant in listed companies compared to non-listed companies. The reasons provided include greater market transparency and information availability, increased investor confidence, and liquidity. By focusing on listed companies, this hypothesis aims to explore the specific dynamics and effects of credit rating adjustments within a well-regulated and transparent market environment.

Hypothesis 3: The impact of credit rating adjustments on bond credit spreads is significant only in listed companies.

Methods

Sample selection

The selection criteria for the sample are meticulously designed to ensure that the bonds in the dataset have a complete credit rating history and visible credit spreads, facilitating the analysis of the impact of credit rating adjustments on bond pricing. For this analysis, information on firm performance is sourced from the China Stock Market and Accounting Research (CSMAR) database, renowned for its thoroughness and reliability in providing comprehensive financial and market data for all listed companies in China. The widespread reliance on the CSMAR database in empirical research concerning Chinese firms underscores its accuracy and dependability as a primary data source, thus grounding this paper's findings in a database that assures the highest level of precision.

The study's extensive sample includes an impressive 24,370 observations spanning the years 2016 to 2022. This substantial sample size not only strengthens the statistical power of the analysis but also enables a detailed and rigorous examination of the complex relationship between credit rating adjustments and bond pricing. Additionally, the longitudinal nature of this sample provides a unique ability to observe changes in bond spreads over time, offering valuable insights into the research area within the specific context of China.

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Variables definition

In this research paper, the dependent variable under scrutiny is the bond credit spread, denoted as Spread. This variable measures the differential between the effective interest rate at the bond's issuance and the contemporaneous treasury rate for an identical maturity period. It serves as an indicator of the extra yield demanded by investors to offset the perceived risk associated with the bond.

To evaluate the credit quality of the bonds, we employ the independent variable FinalRating1. It represents the average rating assigned to a bond by leading Chinese credit rating agencies, including Brilliance, Lianhe, and Chengxin. The rating scale extends from 1 to 13, with 1 indicating the lowest rating (C) and 13 signifying the highest rating (AAA).

The second explanatory variable, Adj_tot, denotes the credit rating adjustment based on the issuer's principal credit rating. This adjustment provides a holistic assessment of the issuer's creditworthiness, incorporating a variety of factors that affect the issuer's capacity to fulfill its financial obligations. Thus, Adj_tot captures shifts in the issuer's overall risk profile, reflecting either improvements or declines in their credit status.

The third independent variable, Adj_sup, reflects the credit rating adjustment sub-indicator focused on the ability and willingness of governments or shareholders to support the issuer. It evaluates the issuer's connections with external entities capable of offering financial backing in times of distress. Adj_fir, the fourth variable, relates to the credit rating adjustment sub-indicator that considers firm-level characteristics, including financial performance, industry-specific factors, and business operations.

ListedFirm serves as the moderating variable in this study, assigning a value of 1 for listed companies and 0 for non-listed firms. This distinction allows for an exploration of potential variances in how credit rating adjustments impact the dependent variables, contingent on the firm's listing status.

Finally, a compilation of control variables is detailed in Table 1 below, providing a comprehensive framework for the analysis.

Table 1. Variable definition

Variables	Symbol	Operational Definition
Bond Spread	Spread	Difference between bond's issuance interest rate and the same maturity treasury rate.
Credit Rating Adjustment	Adj_tot	Issuer's main credit rating
Credit Rating Adjustment Sub-Indicator	Adj_sup	Rating adjustment based on the external support willingness from governments or shareholders
Credit Rating Adjustment Sub-Indicator	Adj_fir	Rating adjustment based on firm-level characteristics

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Maturity	Maturity	Log of bond's maturity length
Proceeds	Proceeds	Log of bond issue size in USD
Bond Index	BondIndex	China's total bond index on issuance date
Volatility	Volatility	Standard deviation of the bond index 60 days before issuance
Guarantee	Guarantee	Indicates if the bond is guaranteed
Callable	Call	Indicates if the bond is callable
Listed Firm	ListedFirm	Indicates if the issuer is a listed firm

Research models

The first model investigates the direct impact of credit ratings on bond spreads. This analysis is essential to understand how variations in credit ratings, denoted by the variable FinalRating1, influence the pricing of bonds in terms of their spread over the risk-free rate. The model is structured as follows:

$$Spread_t = \beta_0 + \beta_1 * FinalRating1_t + \beta_2 * X_t + \varepsilon_t$$

The second model expands the analysis to consider the impact of different types of credit rating adjustments on bond spreads. This model is vital for dissecting how specific changes to credit ratings, rather than static ratings, affect bond market behavior. The model is specified below:

$$Spread_t = \beta_0 + \beta_1 * Adj\_tot + \beta_2 * Adj\_sup + \beta_3 * Adj\_fir + \beta_4 * X_t + \varepsilon_t$$

Where:

- X_t denotes a vector of control variables;
- ε_t represents the error term, capturing unexplained variation of the bond spread.

Both models are implemented using Generalized Linear Models (GLM) to account for the non-normal distribution of the bond spread and accurately reflect the nature of the relationship between the independent and dependent variables. The selection of GLM is justified by its flexibility in handling different types of error distributions and its ability to model complex relationships within financial data.

Results

Descriptive statistics

The analysis begins with an examination of the variable Spread, which exhibits a mean value of approximately 2.885 and a standard deviation of around 1.497. The minimum and maximum values are approximately -0.04 and 6.3, respectively, indicating a wide range of bond spreads over the observed period. This suggests significant fluctuations in perceived risk or return expectations among investors.

For FinalRating1, the mean value is 12.1729, hinting that a significant proportion of bonds issued in China are rated AAA, indicating high

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creditworthiness. In terms of credit rating adjustments (Adj_tot and Adj_sup), these variables show similar distributions. However, Adj_fir, assessing adjustments based on firm-level characteristics, has a notably smaller mean value of 0.0275, indicating limited variability and suggesting that firm-specific adjustments are relatively minor on average.

The bond size, represented by Proceeds, displays a relatively narrow range, with a minimum value of 18.8262 and a maximum of about 22.3327. This indicates the size of bond issues within the dataset does not vary extensively. The feature Guarantees is present in only 5.5% of the issued bonds, showing that the majority of bonds do not have a third-party guarantee. Similarly, only 6.9% of all bonds are Callable, suggesting that the option for early redemption by the issuer is not commonly incorporated into bond agreements in this dataset. Lastly, the data reveals that nearly 80% of the bonds were issued by non-listed enterprises, highlighting a significant prevalence of bond issuance among private or non-public entities within the observed market segment.

Table 2. Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Spread	24,370	2.8854	1.4970	-.04206	6.3
FinalRating1	12,994	12.1729	1.0125	1	13
Adj_tot	12,994	1.2374	1.5285	-13	10
Adj_sup	12,994	1.2045	1.4618	-4	10
Adj_fir	12,994	.0275	.4285	-14	4
Maturity	24,370	.2676	1.1420	-2.4986	2.3026
Proceeds	24,370	20.5483	.7192	18.8262	22.3327
BondIndex	24,370	184.2168	11.0003	167.3813	201.8325
Volatility	24,370	1.1153	.6020	.2331	2.2712
Guarantee	24,370	.0551	.2282	0	1
Call	24,370	.0691	.2536	0	1
ListedFirm	24,370	.1960	.3970	0	1

Mainline regressions

Table 3 presents the results of the initial mainline regression analysis. The table's first column shows a regression analysis where Spread serves as the dependent variable and FinalRating1 as the independent variable. The second column expands the regression model to include interactions with various control variables.

The coefficient for FinalRating1 is negative in both models, recorded at -0.8920 in Model 1 and -0.7221 in Model 2, and these findings are statistically significant at the 1% level. This signifies that an improvement in the credit rating is associated with a reduction in bond spread. Therefore, these

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results confirm Hypothesis 1 of the study, supporting the assertion that higher credit ratings lead to narrower bond spreads.

Table 3. Mainline regression (1)

Variables	Spread	Spread
FinalRating1	-0.8920***	-0.7221***
	(0.0225)	(0.0216)
Maturity		0.5460***
		(0.0083)
Proceeds		-0.1889***
		(0.0158)
BondIndex		-0.0553***
		(0.0026)
Volatility		-0.2056***
		(0.0176)
Guarantee		-0.0701
		(0.0762)
Call		0.6808***
		(0.0315)
ListedFirm		-0.0557**
		(0.0262)
Constant	13.1888***	25.8548***
	(0.2851)	(0.6295)
N	16,637	16,637
Year Fixed Effect	Yes	Yes

Note: t statistics in parentheses, * p < .1, ** p < .05, *** p < .01

Table 4 showcases the outcomes of the second mainline regression analysis. The initial column details a regression with Spread as the dependent variable and Adj_tot, Adj_sup, & Adj_fir as the independent variables. The regression model is expanded in the second column to incorporate additional interactions with these control variables.

A statistically significant positive coefficient of 0.4156 for Adj_tot indicates that increases in the issuer's main credit rating adjustment lead to corresponding rises in spreads. In contrast, Adj_sup shows a notable negative coefficient of -0.3706, signifying at the 5% significance level that higher positive values of Adj_sup are associated with lower spreads, revealing an inverse relationship. Similarly, Adj_fir demonstrates a significant negative coefficient of -0.4354, suggesting that positive adjustments based on firm-level characteristics correlate with lower spreads. Given the differing impacts of these variables on Spread, Hypothesis 2, which posited a uniform effect of credit rating adjustment on bond credit spreads, is rejected.

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Table 4. Mainline regression (2)

Variables	Spread	Spread
Adj_tot	0.4114	0.4156**
	(0.2503)	(0.1867)
Adj_sup	-0.2431	-0.3706**
	(0.2503)	(0.1868)
Adj_fir	-0.4070	-0.4354**
	(0.2544)	(0.1903)
Maturity		0.6062***
		(0.0094)
Proceeds		-0.4743***
		(0.0173)
BondIndex		-0.0478***
		(0.0029)
Volatility		-0.2167***
		(0.0197)
Guarantee		0.5760***
		(0.0739)
Call		0.4681***
		(0.0339)
ListedFirm		-0.1012***
		(0.0287)
Constant	1.7923***	21.1921***
	(0.0219)	(0.7023)
N	16,637	16,637
Year Fixed Effect	Yes	Yes

Heterogeneity test

The heterogeneity test examines the moderating role of the ListedFirm binary variable on the relationship between CRAs and bond spread, impacting bond pricing. The findings in Table 5 are illuminating. All types of credit rating adjustments are statistically significant at the 1% level for non-listed firms. However, while Adj_tot remains significant at the 5% level for non-listed companies, CRAs related to the issuer's ability and willingness to receive government or shareholder support show no significance. Furthermore, CRAs based on firm-level characteristics demonstrate significance at the 10% level. Therefore, these results provide evidence supporting Hypothesis 3.

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Table 5. Heterogeneity test: listed versus non-listed

Variables	Listed Spread	Non-listed Spread
Adj_tot	3.8986***	0.1735**
	(0.0939)	(0.0758)
Adj_sup	-4.0263***	-0.1145
	(0.0880)	(0.0759)
Adj_fir	-4.1412***	-0.1521*
	(0.1368)	(0.0853)
Maturity	0.6988***	0.5898***
	(0.0228)	(0.0103)
Proceeds	-0.4333***	-0.4848***
	(0.0392)	(0.0193)
BondIndex	-0.0360***	-0.0501***
	(0.0065)	(0.0032)
Volatility	-0.3112***	-0.2048***
	(0.0406)	(0.0222)
Guarantee	0.5215**	0.5929***
	(0.2092)	(0.0784)
Call	0.1149	0.5438***
	(0.0772)	(0.0385)
Constant	18.2272***	21.8020***
	(1.4913)	(0.7835)
N	3,326	13,311
Year Fixed Effect	Yes	Yes

Discussion

This research extends the existing literature on credit ratings and bond spreads by specifically analyzing the impact of credit rating adjustments within the Chinese bond market. Consistent with the theory of information asymmetry, the results indicate that markets react more sensitively to credit rating adjustments when more comprehensive information is available, particularly in the case of listed firms. This aligns with Hu et al. (2019), who argue that uneven information distribution can lead to pronounced market reactions.

The outcomes from the first model validate the foundational theory posited by Beaver et al. (2006) and further explored by Gao et al. (2022), demonstrating that an upgrade in credit ratings typically leads to narrower bond spreads. It signals an improvement in the issuer's credit quality and reduced risk of default. The former can attract more investors leading to increased demand for the bond and driving bond prices up. Conversely, downgrades expand spreads, echoing findings from Saadaoui et al. (2022), which suggest that such downgrades can cause some investors to sell the bond, reducing demand and driving prices down.

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Furthermore, the study addresses the highlighted gap by Jorion and Zhang (2007) concerning the responsiveness of markets to different types of credit rating adjustments. The distinct impacts of adjustments based on overall creditworthiness, governmental support, and firm-specific characteristics suggest that investors differentiate between sources of risk and adjust their expectations accordingly.

Conclusion

This study increases our understanding of the dynamics between credit rating adjustments and bond pricing within the Chinese bond market. It shows the critical role of specific types of credit rating adjustments and their differentiated impacts on bond spreads, providing valuable insights for theoretical financial models and practical market applications.

Policymakers and financial analysts are advised to consider these findings when crafting regulatory and investment strategies, ensuring that they are well-suited to the evolving dynamics of Chinese and global financial markets. This study suggests that more nuanced approaches considering different CRAs can lead to more stable and predictable financial markets.

Future research should extend this analysis to other emerging markets to validate the universality of these findings and explore their applicability to different regulatory and economic environments. Investigating the long-term effects of credit rating adjustments on market stability and economic development will be particularly valuable. This continued exploration will enrich our global understanding of financial markets and help develop more resilient financial systems worldwide.

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The Significance of Innovation Orientation in Firm Performance: Technological Capabilities as A Moderating Role

Alfateh Fegada
Zoltán Veres
Department of Marketing, Faculty of business and economics,
University of Pannonia, Veszprem, 8200, Hungary

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Abstract

Entrepreneurial marketing is considered to be suitable for small businesses. However, innovation orientation as an Entrepreneurial marketing dimension is a critical instrument that small and medium-sized businesses can use to obtain a competitive advantage. Thus, the general objective of this study is to explore and describe the significant relationship between innovation orientation and firm performance in SMEs in Khartoum-Sudan utilizing technological capabilities as a moderating variable. The resource-based view provides the theoretical foundation for this study regarding the effect of innovation orientation on firm performance through technological capabilities. In this manner, our study is quantitative. Reliable with the purpose of this study. Furthermore, our study relied on the "Positivism philosophy", a deductive approach to theory development. Accordingly, overall, 255 responses were received in responding to our online questionnaire. To analyze the data firstly Principal Component Analysis, Correlation, and Rotation matrix were utilized to test the appropriateness of the study pre-model and check the validity of the questionnaire measurements. secondly, we used Path analysis to examine the significant relationships between study variables. Consequently, the findings confirm both significant and insignificant relationships between innovation orientation and firm performance. Our analysis revealed significant

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relationships between innovation orientation, technological capabilities, and firm performance indicators such as profitability, sustainability, and customer satisfaction. Moreover, we found that technological capabilities play a crucial moderating role in enhancing the effects of innovation orientation strategy on firm performance. Anyhow, these results confirmed the partial support of the study's hypotheses.

Keywords: Entrepreneurial marketing, SMEs, Sustainability, AI, Customer satisfaction

Introduction

Innovation orientation, as a dimension of entrepreneurial marketing, plays a crucial role in shaping firm performance and technological capabilities, particularly within the context of small and medium-sized enterprises (SMEs) in Khartoum. SMEs in emerging economies face unique challenges and opportunities, requiring strategic approaches that integrate innovation, marketing, and technological advancement. Understanding how innovation orientation influences entrepreneurial marketing strategies and how these, in turn, impact firm performance with technological capabilities as a moderating factor, is essential for driving sustainable growth and competitiveness.

Entrepreneurial marketing emphasizes the proactive and innovative pursuit of opportunities to create value, capture markets, and achieve sustainable competitive advantage. Innovation orientation, as part of entrepreneurial marketing, focuses on cultivating a culture of creativity, experimentation, and adaptation within SMEs. This orientation not only involves product innovation but also extends to marketing strategies, processes, and organizational structures that support innovation-driven initiatives. Recent research has underscored the interconnectedness of innovation orientation, entrepreneurial marketing, firm performance, and technological capabilities. Rauch et al. (2009) have explored how entrepreneurial marketing practices, including innovation orientation, positively influence SME performance indicators such as market share, profitability, and growth.

Moreover, the moderating role of technological capabilities adds a dynamic dimension to this relationship. Technological capabilities encompass a firm's ability to leverage and deploy technological resources, knowledge, and infrastructure effectively. These capabilities can amplify or dampen the impact of innovation-oriented entrepreneurial marketing strategies on firm performance, depending on their development and utilization within the organization. In the specific context of Khartoum SMEs, understanding how innovation orientation within entrepreneurial

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marketing frameworks contributes to enhanced firm performance, with technological capabilities shaping this relationship, is of paramount importance. By analyzing the interplay between innovation orientation, entrepreneurial marketing strategies, and technological capabilities, this research seeks to offer practical insights and strategic recommendations tailored to the unique challenges and opportunities faced by SMEs in Khartoum.

Through a combination of theoretical exploration and empirical analysis, this study aims to contribute to the advancement of knowledge in the fields of entrepreneurial marketing, innovation management, and SME performance within emerging market contexts. By bridging theory and practice, this research endeavors to provide actionable guidance for SME leaders, policymakers, and stakeholders seeking to foster innovation-driven growth and competitiveness in Khartoum's vibrant business environment.

2.0. Literature Review

2.1. Innovation Orientation and Entrepreneurial Marketing

Entrepreneurial marketing is considered to be suitable for small businesses. Furthermore, innovativeness is a critical instrument that small and medium-sized businesses can use to obtain a competitive edge (Hacioglu et al., 2012). To thrive, corporations need to be able to change and adapt. Companies operate under the awareness that eventually; rivals will enter the market with a product that fundamentally alters the nature of competition. Adaptation and change management skills are critical for survival. Can businesses, however, manage innovation? Yes, without a doubt, as Rushes and Waples stated in (2008).

Innovation orientation within the realm of entrepreneurial marketing has garnered significant attention in recent literature due to its profound impact on firm performance and competitive advantage. According to Hemmert et al. (2022), innovation orientation refers to a firm's strategic emphasis on fostering a culture of creativity, experimentation, and continuous improvement in products, processes, and marketing strategies. This orientation aligns closely with entrepreneurial marketing principles, which emphasize proactive market sensing, opportunity identification, and value creation (Hult et al., 2004).

(Trott, 2017) stated in on the economics of innovation, "... not to innovate is to die." Undoubtedly, businesses that have become industry and technological leaders have demonstrated the capacity to create innovative goods that are successful. The leading businesses have proven their ability to innovate in almost every field, from computers to pharmaceuticals to motor vehicles (see Table 1). Moreover, these same businesses are providing remarkable growth and/or return to their shareholders, according to The

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Boston Consulting Group's yearly study on the most inventive businesses in the world.

Table 1. Market leaders in 2015

Industry	Market leaders	Innovative new products and services
Cell phones	Samsung; Apple	Design and new features
Internet-related industries	Google; Facebook	New services
Pharmaceuticals	Pfizer; GlaxoSmithKline	Impotence; ulcer treatment drug
Motorcars	Toyota; BMW	Car design and associated product developments
Computers and software development	Intel; IBM and Microsoft; SAP	Computer chip technology, computer hardware improvements and software development

Source: (Trott, 2017).

Table 2. World's most innovative companies

2014 Rank	Company	Revenue growth 2012–13 % change	R&D spending 2012–13 % change
1	Apple	9.2	32.4
2	Google	19.2	17.1
3	Samsung	17.0	27.8
4	Microsoft	5.6	6.1 5
5	IBM	–4.6	–1.2
6	Amazon	21.9	43.8
7	Tesla Motors	387.2	–15.3
8	Toyota	–3.9	–6.9
9	Facebook	54.7	1.1
10	Sony	–5.7	–18.8

Source: Trott, (2008).

Innovation-oriented companies engage in creative processes and experimentation and strive for a constant flow of novel ideas that have the potential to lead to new products, services, and/or technologies that may be exploratory or maybe improvements of existing offers (Alqahtani & Uslay, 2020). An innovation orientation allows companies to turn recognized opportunities into ideas for innovation Sadiku-Dushi et al. (2019). In this study, we attempt to find out the best method that firms might follow to produce modernity for their process, services, product lines, supply channels, and packaging and how certain firms implement a new idea or a new technology to create a dynamic strategy and last to ensure competitive advantage.

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2.2. Role of Technological Capabilities as a Moderator

Customers nowadays are choice seeking, demanding, and knowledgeable, and the power balance has changed from companies to value seeking customers in today's customer-centered hypercompetitive situations. Consequently, controlling technological innovation capability for greater company performance through the fulfillment of consumer expectations is becoming increasingly important for all businesses. Only forward-thinking businesses that maximize consumer value by utilizing their technological capabilities efficiently will survive and prosper. Likewise, TCPs are part of the research approach which studies the capability concept, this approach analyzes how the capacity of a certain enterprise will promote the use of resources in the functional sector of a certain organization. On the other hand, the competitive advantage of the company therefore would depend on the capability of the company.

Technological capabilities play a pivotal role in moderating the relationship between innovation orientation and firm performance within the context of entrepreneurial marketing. Teece (2018) defines technological capabilities as a firm's ability to leverage and deploy technological resources, knowledge, and infrastructure effectively to create value and sustain competitive advantage.

Recent research Borodako, et al. (2023) has emphasized the moderating role of technological capabilities in enhancing the impact of innovation-oriented entrepreneurial marketing strategies on firm performance metrics such as product innovation success and market responsiveness. They argue that firms with strong technological capabilities can more effectively translate innovative ideas into marketable products or services, leading to superior performance outcomes. The technological capability of a company is high if more technological advances than other companies in service have traditionally been produced. The technology capabilities of a firm are founded on what the firm has done well in the past and will likely keep the firm on the effective road. In addition, strong technical capabilities will make the business look more inward rendering the company's external information less important (Ferna and Garcı, 2012). In this context the following hypothesis has been settled: *H2: We assume that TCPs can positively moderate the relationship between innovation orientation IO and firm performance FP*.

The commonly thought view of technological capability proposes that firms with strong technological capability can rapidly identify technological opportunities and the value of technological resources, obtain the resource and benefit from it, thus success in product innovation. (Wu, 2014; Zhou & Wu, 2010; Srivastava et al. 2015; Blomkvist et al. 2017). The classification of the capability depends on its purpose. Technological

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capabilities are a core element of information usage and technology as an innovation requirement in the enterprise, Technological capability is the ability to make effective use of technological knowledge in production, engineering, and innovation Srivastava et al. (2015). According to Haeussler, et al. (2012) capabilities are defined as "a firm's capacity to deploy resources, using organizational processes, to affect a desired end.

2.3. Empirical Evidence from Firms Performance in Emerging Economies

This part discusses the second concept "firm performance" which represents the dependent variable, including the concept, the definitions, and the dimensions of firm performance. The firm's internal environment is highlighted as a source of competitive advantage by the resource-based view of the firm (RBV), which also highlights the resources that businesses have built up to compete in the marketplace (Wang, 2014).

The framework of RBV states that the resources forming the bases of one's competitive advantage should be valuable, rare, imperfectly imitable, and sustainable (Madhani, 2010). Argues that it is important that the firm evaluate the contribution to competitive advantage of specific resources/activities when considering them for outsourcing with the application of RBV in the development of 24 competitive advantage, through either the cost leadership strategy or the differentiation strategy, the nature of the organization as a whole and/or the design of the firm's products and/or services are essential components. Cost leadership is typically achieved through the development of both highly effective and efficiency organization and production processes. Differentiation can be achieved through either the development of a superior organization or through the design of superior products and/or services. Moreover, the RBV suggests that organizations should deploy assets and resources both internally and externally to create competitive advantage. Logically, the firm would then perform in house only those activities for which it has demonstrated superior performance in comparison to competitors. By outsourcing those tasks that can best be performed by organizations that specialize in that work, the firm may better focus their value-creating activities on core tasks, therefore maximizing their effectiveness.

The concept of firm performance needs to be distinguished from the broader construct of organizational effectiveness. FP is an important construct in strategic management research all around the world, and it is regularly employed as a dependent variable. Despite its importance, there is little agreement on its description, dimensionality, or measurement, which limits advances in research. Successful businesses are essential for developing countries. many economists compare them to an engine in terms

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of determining their economic, social, and political development. Empirical studies focusing on SMEs in emerging economies consistently show a positive correlation between innovation orientation and firm performance (Isichei et al. 2020).

SMEs with a strong focus on innovation tend to outperform their peers in terms of market growth and profitability. However, the degree to which innovation orientation translates into tangible performance outcomes may vary depending on contextual factors such as industry dynamics, market conditions, and regulatory environments (Damanpour & Aravind, 2012).

Ayyagari et al. (2018) conducted a longitudinal study across multiple industries in emerging economies, highlighting the long-term benefits of sustained innovation orientation on SME performance metrics such as return on investment, market share, and customer satisfaction. These findings underscore the strategic importance of fostering innovation capabilities within SMEs operating in dynamic and competitive markets. Consequently, integrating innovation orientation into entrepreneurial marketing strategies is crucial for SMEs to thrive in competitive markets. The role of technological capabilities as a moderator further underscores the importance of leveraging technology for sustained innovation and business success. By fostering a culture of innovation, investing in relevant technologies, and aligning strategic orientations with market demands, SMEs can enhance their competitive positions and achieve long-term growth objectives. That lead to the following hypothesis:

H1: Innovation orientation has a significant relationship with firm performance in terms of {profitability, sustainability, and customer satisfaction}.

2.3.1. Dimensions of (FP)

A multidimensional or unidimensional comprehensive construct (model) on firm performance is possible. The list of identified determinants is shown in Figure 2., i.e., possible representations of firm performance. It is to be noted that the identified determining factors for firm performance are *profitability performance,* growth performance, market value performance, *customers satisfaction*, employees' satisfaction, *environmental performance*, environmental audit performance, corporate governance performance and social performance. As pointed out earlier, these determinants were identified, based on the reviews published earlier (Santos, & Brito, 2012).

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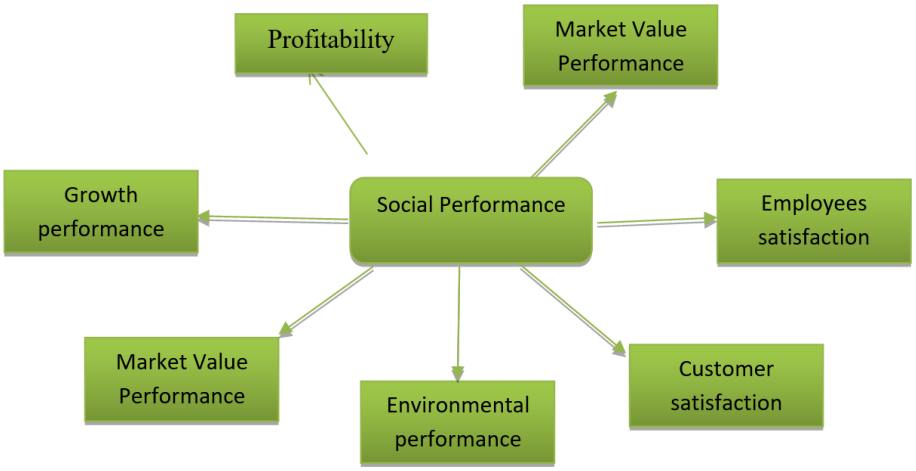
Figure 1. List of identified dimensional for firm performance



Source: Selvam, et, al. (2016).

Based on the above-mentioned dimensions, and according to the recommendations of the participants in the qualitative phase the profitability of the firm, sustainability, and customer satisfaction are selected as a core measurement of a FP to be applied in Sudanese SMEs Thus, our study comes in line with the research of De Mendonca, & Zhou, (2019) for the adoption of profitability and customer satisfaction, and with the research of Gupta & Gupta (2020) in terms of sustainability and profits.

2.3.1.1.Profitability

Profitability performance refers to a company's ability to make money. After paying all expenses directly linked to the generating of revenue, such as producing a product, and other expenses associated with the conduct of company activities, a profit is what is left of the revenue a business generates (Selvam et al., 2016). An enterprise makes profitability by selling products or services at a lower cost than its competitors, or by selling differentiated items at a premium price that covers the extra cost of differentiation. Firm profitability reflects the financial performance of SMEs. Profit will be reinvested in innovative product and service technologies, loyalty programs improved, and customer satisfaction enhanced (Kumar et al., 2009).

An enterprise makes profitability by selling products or services at a lower cost than its competitors, or by selling differentiated items at a premium price that covers the extra cost of differentiation. Therefore, the objective of the firm is to maximize the wealth of the existing shareholders. Meanwhile, there are several ways of measuring profits, from direct measures as reported on financial statements to the financial ratios normally

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used in the finance literature (e.g., return on assets, return on sales, return on investment, etc.). These latter areas are less commonly used, which is typically a function of the availability of data, but they do occasionally appear in the literature (Josh Siepel & Marcus Dejardin, 2020).

2.3.1.2.Sustainability

Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Marcuse, 1998). There are two mechanisms because firms take action towards more sustainability. First, certain external influences such as mandatory legislation may impose pressure upon a firm to kick off sustainability initiatives to prevent disadvantages or penalties. Second, firms see a potential competitive advantage in the realization of sustainability initiatives leading to a voluntary pursuit of sustainability efforts. The generation of new markets for sustainable products, or cost savings realized through reduced resource consumption within the manufacturing process are both examples of opportunities that arise in the context of the sustainability challenge, which can be used to gain a competitive advantage (Schrettle et al., 2014).

2.3.1.3.Presumed Customers satisfaction PCS

Customer satisfaction provides a leading indicator of consumer purchase intentions and loyalty. “Customer and employee satisfaction are two more factors to consider at every circumstance. Customers expect businesses to deliver goods and services that meet their needs. The customer is the central focus for business improvement. In a competitive environment, businesses must understand their customers' needs in order to eliminate mistakes and increase the perceived quality of their services. They must also add value to their offers. Customer satisfaction increases willingness to pay, and a company's value is created in the process” (Selvam et al., 2016).

The customer's or client’s emotional response, combining his/her experiences and feelings after consumption of a product or service, with the expectations and perceived value (Biesok & Wyród-Wróbel, 2011). Thus, all human needs and wants are certain things; this is one of the foundations of marketing. After fulfilling these needs customers expect to be satisfied with their purchase. According to Kura (2019) satisfaction is when the customer evaluates whether a product or service has met their needs and expectations.

2.4. The conceptual framework of the study

Figure 2 presents the conceptual framework for this study which proposes the links of innovation orientation as dimension of entrepreneurial marketing and firm performance, the theoretical approach of this study

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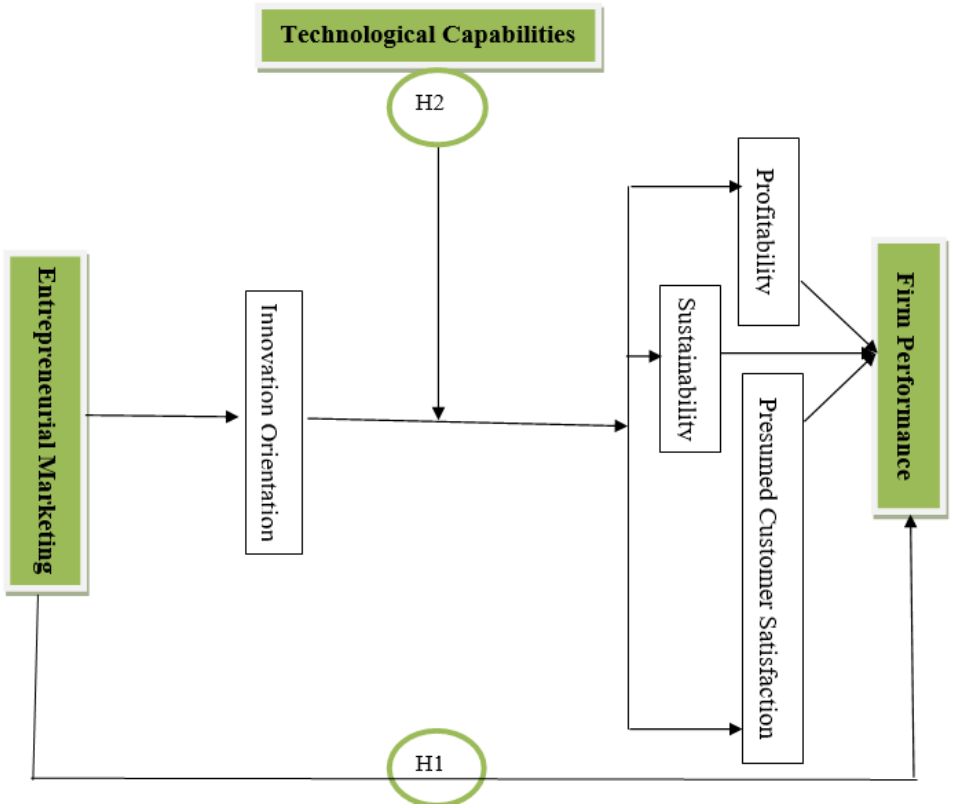
proposes that technological capabilities moderate the relationship between innovation orientation and firm performance.

Figure 2. Conceptual framework



3.0. Research Methodology

3.1. General research design

3.1.1. Quantitative approach

The objective of the quantitative phase is to examine the relationship between innovation orientation IO perceptions and firm performance FP in Sudanese SMEs. by testing technological capabilities as a moderating variable. In this manner, our study is quantitative. Reliable with the purpose of this study, the study relied on the *"Positivism philosophy"*, *deductive approach* to theory development, quantitative methodological choice, survey strategy, and cross-sectional Time horizon and using a personally administered questionnaire. A cross-sectional description survey research design will be adopted for this study. Cross-sectional is cost and time-effective because data can be gathered just once perhaps over days, weeks, or months to answer research questions (Hamad, 2019, Sekaran, 2003). In addition to that, a cross-sectional survey conducted to assess the moderating

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effect of technological capabilities on the relationship between innovation orientation and firm performance in Sudanese SMEs.

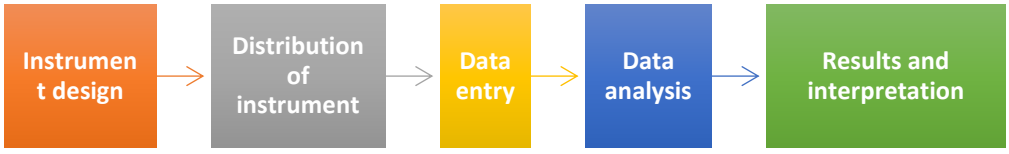
3.1.2. Population and sampling

The sample frame of this study defined SME firms in Sudan, which includes various sectors such as (Services & industrial) which were selected since they have great contributions to the Sudan economy in terms of their contributions to output employment. By saying "In an enabling environment, SMEs have a high potential for creating employment and innovation. They can also contribute to reduce poverty and to empower the poor so that they can realize their productive capacities and integration into society". The respondent approached should be the most informed and knowledgeable person about the issue of interest in that firm (Hamad 2019, Sekeran 2003). Consequently, the appropriate persons who were being asked to fill out the questionnaire were ideally managers at the top management levels, employees, and entrepreneurs.

3.1.3. Data collection instruments, process, and sample-size

Since our study population is unknown or considered to be fairly large, which makes it difficult to determine the size of the study sample, we therefore resorted to calculating it according to the Cochrane equation, On the other hand, there are computer programs for calculating sample size based on the same Cochrane equation such as www.calculator.net program. This calculator computes the minimum number of necessary samples to meet the desired statistical constraints. Thus, the Sample size for this study is: "285" This means 285 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within ±5% of the measured/surveyed value.

Figure 3 shows the process of collecting the data using an online questionnaire.



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Data Analysis
4.0 Quantitative methodology
4.1. Unengaged responses

Table 3. Unengaged responses of the survey

Total Questionnaires	**255**
Unengaged responses	**9**
Unengaged responses Rate	**3%**

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4.2. SMEs and respondent's frequencies

Based on the descriptive statistics using the frequency analysis this part clarifies the presence of respondents who participated in the survey in the light of six characteristics.

Table 4 Presents frequencies and percentages of SMEs and respondents.

Firm characteristics		Frequencies	Percentage
Age	Less than 21	48	18.8%
	21 to 30	76	29.8%
	31 to 40	74	29.0%
	More than 40	57	22.4%
Gender	Male	139	54.5%
	Female	116	45.5%
Qualifications	Primary school	21	8.2%
	Secondary school	64	25.1%
	Undergraduate	100	39.2%
	Postgraduate	70	27.5%
Position	An entrepreneur /business owner	70	27.5%
	Manager	68	26.7%
	Employee	117	45.9%
Firm size	Small firm (1 to 5 employees)	108	42.4%
	Medium firm (6 to 49 employees)	147	57.6%
Sector	Services	149	58.4%
	Industrial	106	41.6%
Total		**255**	**100%**

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4.3. Reliability of Scales Using Cronbach's (Alpha)"

The analysis of reliability using Cronbach's Alpha indicates satisfactory internal consistency for the scales utilized in the study, as recommended by Hair et al. (2019). An acceptable level of reliability is achieved when Cronbach's alpha exceeds 0.50. Specifically, the

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Entrepreneurial Marketing scale, comprising 14 items, demonstrates a Cronbach's Alpha of 0.731, indicating good reliability. The Technological Capabilities scale, which consists of 6 items, shows a slightly lower but still acceptable Cronbach's Alpha of 0.538. Similarly, the Firm Performance scale, comprising 9 items, exhibits a Cronbach's Alpha of 0.615, suggesting moderate internal consistency.

Overall, the combined scales, consisting of 28 items, yield a Cronbach's Alpha of 0.815, indicating strong reliability across the comprehensive set of measures used in the study.

Table 5. Reliability of scales using Cronbach's (Alpha)"

Variable	Number of items	Cronbach's Alfa
Entrepreneurial marketing	14	0.731
Technological capabilities	6	0.538
Firm Performance	9	0.615
Overall	**29**	**0.815**

Own editing by researcher (2024)

4.4. Path analysis

The research utilized path analysis with AMOS v26 to examine the proposed model and validate the hypotheses. Structural Equation Modeling (SEM) path analysis is a powerful statistical technique used in various fields, due to its ability to model complex relationships among multiple variables. Unlike simpler methods like regression analysis, SEM allows for the simultaneous estimation of multiple relationships, including those involving latent variables, while also correcting for measurement error in observed variables (Hair et al., 2019). The study aimed to explore the intricate relationships between innovation orientation, tech capabilities, and key organizational outcomes such as profitability, sustainability, and presumed customer satisfaction. To achieve our objective, we assumed that *H1:* Innovation orientation has a significant relationship with firm performance {*H1:1* profitability, *H1:2* sustainability, and *H1:3* customer satisfaction respectivly}. However, the assumtion was found to be a particial significane as shown in table 6 bellow.

The results presented in table 6 indicate that innovation orientation significantly influences sustainability and customer satisfaction, with a positive (β =0.116, p = 0.024) and (β =0.284, p = 0.000) respectively, supporting H1:2 and H1:3. However, innovation orientation, do not significantly influence profitability, as indicated by (β = -0.072, p = 0.205) as indicated by rejected hypotheses H1:1.

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Table 6. Path analysis

No. of hypothesis	Path analysis	Estimate	P	Results
H1:1	Innovation orientation → Profitability	-0.072	0.205	Rejected
H1:2	Innovation orientation → Sustainability	0.116	0.024	Accepted
H1:3	Innovation orientation → Customer satisfaction	0.284	0.000	Accepted

Own editing by researcher (2024)

In testing the moderation effect of technological capabilities on the relationship between innovation orientation and firm performance, interaction effects were employed. This approach allowed for a clearer examination of how technological capabilities influence the strength or direction of the relationship between innovation orientation efforts and firm performance outcomes. Thus, the following second assumtion has been setted *H2*: We assume that technological capabilities can positively moderate the relationship between innovation orientation and firm performance.

The results presented in table 7 suggest that the technological capabilities positively moderate the relationship between innovation orientation and sustainability (β =0.175, p = 0.000) similarly technological capabilities positively moderate the relationship between innovation orientation and customer satisfaction (β =0.315, p = 0.000) supporting H4:2, and H4:3. However, technological capabilities had no significant moderating effect on the relationship between innovation orientation and profitability (β = -0.07, p = 0.208), leading to rejection H4:1.

Table 7. Path analysis of moderation effect (TCPs)

No. of hypothesis	Path	Estimate	P	Results
H2:1	Int. (Innovation orientation x Technological capabilities) → Profitability	-0.07	0.208	Rejected
H2:2	Int. (Innovation orientation x Technological capabilities) → Sustainability	0.175	0.000	Accepted
H2:3	Int. (Innovation orientation x Technological capabilities) → Customer satisfaction	0.315	0.000	Accepted

Own editing by researcher (2024)

5.0. Discussions and Conclusion

5.1. Innovation orientation and firm performance:

Innovation orientation was found to have a direct positive impact on firm performance. Therefore, confirming that the results of path analysis showed that innovation orientation has positive effect on (sustainability and

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presumed customer satisfaction), accepting both hypothesis *H1:2, H1:3* nonetheless it has negative impact on (profitability) rejecting hypothesis *H1:1* where ($p>0.05$). Similarly, several studies have suggested that there can be a negative relationship between innovation orientation and short-term profitability for instance, research by Hult et al. (2004) found that firms emphasizing innovation may initially experience lower profitability due to the high costs associated with research and development (R&D) and uncertain returns on investment. On the other hand, the positive association between innovation orientation and sustainability has been documented in various studies. Prahalad & Hammond (2002) emphasized the role of innovation in driving sustainable business practices, such as the development of eco-friendly products and processes. Moreover, studies by Christmann & Taylor (2006) and Hart (1995) have highlighted how firms that prioritize innovation can achieve competitive advantages by integrating sustainability into their business strategies. Thus, the current study presents the encompasses interactions and the significant of the innovativeness of the firm and its outstanding performance, this significant links has been investigated and supported by many researchers as we mentioned above. SMEs in Khartoum as a case study have the opportunity to empowering their strategies by setting goals-based innovation orientation to sustain in the market and to fulfill their costumers needs and wants.

Additionally, the positive impact of innovation orientation on customer satisfaction is well-supported in the literature. Numerous studies have highlighted the importance of continuous innovation in meeting evolving customer needs and preferences (Danneels, 2002; Narver & Slater, 1990). For instance, firms that innovate in product design, service delivery, or customer engagement methods are often better positioned to enhance customer satisfaction and loyalty (Lichtenthaler, 2011). However, these significant findings have a strong association with the *qualitative findings* in which the participants have clarified that innovation orientation is crucial for SMEs in Sudan and is more likely to be incorporated into the EM. Nonetheless, it is beneficial for new ventures to create innovation, and it is particularly valuable to adopt EM as a strategic posture. (Bachmann et, al. 2021; Jones & Rowley 2011). Innovation orientation is also recognized as an important success factor for new ventures Seo, (2020). In conclusion, the findings of our analysis align with previous research, emphasizing the complex and multifaceted nature of the relationship between innovation orientation and various business outcomes. While innovation may initially impact profitability negatively, its positive effects on sustainability and customer satisfaction can contribute to long-term organizational success and competitiveness.

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6.2. The moderating effect of TCs on the relationship between IO and FP

The fourth main objective of this study assumes that technological capabilities moderate the relationship between entrepreneurial marketing and firm performance. However, partial acceptance results have been found for the moderating effect of technological capabilities. The moderating test of technological capabilities for the relationship between entrepreneurial marketing components, innovation orientation, customer intensity, risk management and networking with firm performance dimensions, profitability, sustainability, and presumed customer satisfaction indicates that there was a partially moderating effect of technological capabilities on this relationship. Whatever, the detailed results shows that most of the dimensions in the relationship between entrepreneurial marketing and firm performance have witnessed significant moderating role of technological capabilities. Details clarified as following:

While the majority of studies suggest a positive moderating effect of technological capabilities on the relationship between innovation orientation and profitability, but our study has negative moderating effect in this manner by rejecting hypothesis *H1:1*, where ($p>0.05$) similarly, Chesbrough (2010) discusses the concept of "innovation dilemmas," where firms with strong technological capabilities may struggle to adapt to disruptive innovations due to organizational inertia or entrenched business models. Also, Lichtenthaler and Lichtenthaler (2011) found that firms with extensive technological capabilities may face challenges in exploiting radical innovations, as they may be too focused on incremental improvements or constrained by existing processes.

On the other hand, our study has found a significant moderating role of TCPs between innovation orientation and sustainability as well as presumed customer satisfaction declaring the acceptance of two hypothesis *H2:2, H2:3.* Moreover, the prevailing view suggests a positive moderating effect of technological capabilities on the relationship between innovation orientation and outcomes such as sustainability and customer satisfaction. For instance, Lichtenthaler and Lichtenthaler (2011) indicate that firms with strong technological capabilities are better equipped to implement and leverage innovative practices to enhance sustainability performance and meet customer expectations. In addition, this result is in line with some quotations in the qualitative discussions: *{"I think technology and co-innovation can help the firm so you can come up with technology solution and its benefits you so you can grow up and evaluate and develop your firm process, and this will lead you to efficiency in the work in the outputs and so on therefore, TCPs is very beneficial" (FGDs, Female 2)}.*

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Conclusion

In conclusion, this study has explored the dynamics of innovation orientation and its impact on firm performance within the context of Sudanese SMEs. Through comprehensive data analysis and discussion, several key findings have emerged. Our analysis revealed significant relationships between the dimensions of entrepreneurial marketing IO, technological capabilities, and firm performance's indicators such as profitability, sustainability, and customer satisfaction. Notably, we found that technological capabilities play a crucial moderating role in enhancing the effects of innovation orientation strategies on firm performance, underscoring the importance of integrating technology-driven approaches into marketing initiatives for SMEs in Sudan.

Furthermore, the study highlighted the importance of contextual factors, such as the unique socio-economic landscape of Sudanese SMEs, in shaping the effectiveness of innovation orientation practices. By addressing these contextual dimensions and leveraging technological resources effectively, entrepreneurs, owners, and managers can develop tailored strategies to enhance organizational performance and gain a competitive advantage in the market. Furthermore, our analysis explained the complex relationship between the study variables and dimensions/components of entrepreneurial marketing, revealing how each component interacts with technological capabilities to influence firm performance. Specifically, we found that certain dimensions of entrepreneurial marketing, such as networking and innovation orientation, exhibit varying degrees of dependence on technological capabilities, underscoring the importance of aligning technological investments with specific marketing strategies to maximize their impact on organizational outcomes.

Moreover, our findings underline the pivotal role of technological capabilities as a moderator for enhancing the effectiveness of innovation orientation practices, serving as a cornerstone for innovation-driven growth and sustainable competitive advantage in Sudanese SMEs. Overall, this study contributes to the growing body of literature on entrepreneurial marketing and provides valuable insights for practitioners, policymakers, and academics seeking to understand and support the development of SMEs in Sudan and similar emerging market contexts.

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Authorship

1. **1st author,** Conceptualization, Data curation, Formal Analysis, Investigation, Visualization, Methodology, Writing – Original Draft, Writing – Review & Editing.
2. **2nd author**, Methodology, Writing – Original Draft, Writing – Review & Conceptualization, Supervision.

Conflict of interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome. We certify that the submission is original work and is not under review at any other publication.

We understand that the Corresponding Author is the sole contact for the Editorial process (including Editorial Manager and direct communications with the office). He is responsible for communicating with the other authors about progress, submissions of revisions and final approval of proofs.

Declaration for Human Participants: This study has been approved by University of Pannonia, and the principles of the Helsinki Declaration were followed.

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The Opportunity for Profit to College Student-Athletes-Analysis Study

Ezzeldin R. Aly, Ph.D., Professor of Sport Management
College of Education, Florida Agricultural and Mechanical University, Tallahassee, Florida, USA
Sherin Y. Elmahdy, Ph.D., Assistant Professor of Human Performance
College of Science, Tallahassee Community College, Tallahassee, Florida, USA

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Abstract

A recent study by Romero (2018) suggests that NCAA athletes should receive better compensation. College student-athletes put in much time and energy, but many do not receive adequate pay. High school athletes' chances of participating in college sports are lower without scholarships. It is time to recognize their value and provide financial support. (NCAA) is a nonprofit organization that regulates collegiate sports, and this study emphasizes the livelihood of collegiate student-athletes and the rules they must follow. Furthermore, the study compares the coach's salaries with collegiate student-athlete student-athletes to profit from their crafts. The researchers gathered data from various literature and randomly surveyed over 400 college students, used a systematic review approach, Chi-squared test, and descriptive statistics to review the evidence, and analyzed the survey data using the Statistic Package for Social Science (SPSS). In addition, the study explores the opportunity for compensating student-athletes and investigates the salaries of "celebrity" coaches and the minimal financial compensation or stipend student-athletes receive while playing for these coaches. The current study found that college and university sports leaders should not view student-athletes as mere athletes but as valuable assets that create organic growth for their college athletics and the NCAA benefits from endorsement and

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advertising deals. The result indicated that athletes should be able to earn extra money that raises their living standards above the poverty line, while college sports generate billions of dollars for universities, broadcasters, and sponsors. University coaches are signing multi-million-dollar contracts while their players are forced to live off $12,000 on average, and most of the money goes toward their tuition, room, books, board, and class needs. The study supports that the Supreme Court recently allowed colleges to provide "education-related" payments to student-athletes. The decision permits student-athletes to pursue endorsement deals based on their name, image, and likeness.

Keywords: College Athletics, Student-Athlete, Amateurism, Profitable Opportunity, Employees, Scholarships and Stipends, College Sports Revenue

Introduction

Many student-athletes are practically left to stand for themselves during and after the academic semester. Because of the high demands of being a collegiate athlete, very few athletes find the time in their schedule to work a job, attend classes and study hall, and complete homework while attending practices, meetings, and games. These factors include a significant part of traditional students' free time. This study investigated student-athletes' opportunities to profit from their obligation and commitment to their collegiate sports program. Being a student-athlete can be considered a full-time job, yet some struggle to find food and income for necessities, especially those athletes who have not obtained a full or partial scholarship. This current study hypothesized that it might be years before student-athletes' stipends and paid funds are included in the athletic department budget. This study is limited to specific collegiate sports, so figuring out how much to compensate student-athletes taking part in different college athletics programs will be challenging.

Literature Review

College Athletics

There is a high demand for professional athletes due to their salary amounts. The same need for high-quality professional athletes occurs with collegiate athletes; however, student-athletes are not considered employees or paid. According to Robert McCormick, a law professor at Michigan State University, "There were more demands put on these young men than any operative of the University. These young men are laboring under extreme, laborious conditions. Therefore, they are laborers because of the physical demands on them while they at the same time are compelled to attend school" (Cooper, 2011). The NCAA, which governs intercollegiate athletics, formerly known as the Intercollegiate Athletic Association of the United States (IAAUS), was founded in 1906 to create competition and eligibility rules for

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gridiron football and other college sports. The (NCAA) adopted its present-day name in 1910. In 1921, it conducted its first national championship event, the National College Track and Field Championship, and it steadily extended its authority over other sports and their college associations or conferences. The NCAA did not get important influences to enforce its rules until 1942. In 1952, it began regulating and organizing live televised college football coverage to protect stadium attendance (Britannica, 2016).

In 2018, of 2.9 million students, ages 16 to 24, who graduated from high school between January and October 2017, 1.9 million, or more than sixty-six% of them, were enrolled in college in October (bls.gov, 2018). This number is three percent (3%) lower than the previous year (2017), with more than sixty nine percent (69%) of high school graduates enrolling in college. Rather than being about vocational training, the college is still centered on higher education (Beach, 2012). Students attend college to gain a higher level of education to improve their knowledge base and overall livelihood. As the unemployment rate decreases, the economic environment becomes more competitive (Navarro, 2015). Because of this, higher education institutions have an even more significant responsibility to prepare students for a lifetime of success. This responsibility is even more imperative for student-athletes who still need to graduate from college and leave early to pursue their dreams of playing a professional sport. Student-affairs personnel must remain current on not only the challenges but also the needs of their students to help them adjust to the competitive workforce once they have received their college degree (Navarro, 2015). The chances of a high school student-athlete becoming a collegiate student-athlete are meager, but when it comes to being awarded an athletic scholarship, this number drops even lower. According to the NCAA, two percent of high school athletes are awarded athletic scholarships.

Student-Athlete

According to the NCAA, more than eight million high school students play a sport in the United States. Still, of this number, only sixteen percent (1,280,000) of these athletes will continue to compete on the collegiate level at an NCAA school. More than 460,000 NCAA student-athletes compete in twenty-four sports yearly (ncaa.org). This number decreased to a smaller percentage related to student-athletes who will continue their athletic careers and become professional athletes or compete on the Olympic level. As reported by usnews.com, during the 2016-2017 academic year, the College Board estimated the typical living cost for a full-time college student ranged from $11,810 to $17,620 on a sensible spending plan, with half of this budget going towards housing (Powell, 2016). Students are fortunate enough to receive “full” scholarships, which include the price of tuition, fees, room,

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board, and course-related books. Of the NCAA participants attending Division I and II schools, the NCAA supplies more than $2.9 billion in athletic grants to more than 150,000 student-athletes; Division III schools do not offer athletic scholarships (ncaa.org).

Amateurism

Amateurism is a certification the NCAA needs to take part in Division I or II sports (ncaa.org). As defined by the NCAA, an amateur does not have an agreement with an agent. An amateur also has not gained any economic advantage in his/her sport (ncaa.org). Attempting to convince the public that student-athletes should not be paid has been increasingly difficult for the NCAA because of the current economic climate and the size of endorsement deals received by the NCAA (Huma & Staurowsky, 2011). To keep a clear distinction between collegiate student-athletes, college athletics program levels, and professional athletes' levels, the NCAA tags student-athletes with the title of being an amateur to prevent any exploitation of the college athlete (NCAA et al., 2010). Former Duke University and professional basketball player Jay Bilas said the following of amateurism and the NCAA: An athlete is not exploited when fairly compensated in a business transaction outside the institution. On the contrary, one could argue persuasively that an athlete is subjugated when disallowed from realizing his or her value. In contrast, his or her reputation and skill are being used to realize a profit for others (2010). Today, college athletics compete with professional sports (Huma & Staurowsky, 2011). College athletes are making universities and the NCAA billions of dollars stemming from commercial revenues and business partnerships alone. All this is merely for playing the sport they love, for the cost of tuition and, for some, the potential of fulfilling a lifelong dream of playing on a professional team. For example, during the 2017 playoffs, according to forbes.com, the four participating football conferences received $6 million for qualifying (Smith, 2017). While this money does not directly help the participating teams, national championship games stimulate higher demand for game tickets, increasing demand for faster-moving merchandise. According to Smith, alums also tend to be more generous in their money to universities and athletic programs (Smith, 2017). The study, "The Price of Poverty in Big Time College Sport," reported that the average expense for each student-athlete to receive a "full" scholarship was approximately $3,222 per player during the 2009-2010 school year; however, the compensation for these athletes who received room and board places them at or below the federal poverty level. In 2010, the federal poverty threshold for one person was $10,830 (aspe.hhs.gov), but the most unfortunate football and basketball players during this same period lived between $3,000-$5,000 below the poverty line (Huma & Staurowsky, 2011). These players (football and

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basketball combined) living thousands of dollars below the federal poverty threshold generated revenues upwards of $25 million during this period (Huma & Staurowsky, 2011). While the players are forced to live below federal poverty levels, the narrative is vastly different for the people they are playing for—their coaches. While amateur athletes cannot receive compensation for their efforts on the field or court, their coaches sometimes sign contracts for millions of dollars. In 2010, the Duke University basketball team coaches were paid an average of $2.5 million, excluding bonuses (Huma & Staurowsky, 2011). These basketball players, listed as having the top ten highest estimated reasonable value, were worth between $ 620k and $ 1 million in 2009-2010.

Similarly, the top ten football players estimated fair market values in 2009-2010. They were rated as worth between $ 345k and $ 514k, with the top spot being held by football players from the University of Texas (UT). The football coaches from UT were paid an average of more than $3.5 million apiece before bonuses (Huma & Staurowsky, 2011). While the definition of amateurism has expanded over the years, the NCAA stays firm on policy (McDevitt, 2018). In the current 2018-2019 NCAA Division I Manual, the organization does not state what an amateur is; however, the Principle of Amateurism says that "Student-athletes shall be amateurs in an intercollegiate sport, and their contribution should be motivated primarily by education and by the physical, intellectual, and social benefits to be derived. Student involvement in inter-university athletics remains an avocation. Student-athletes should be protected from exploitation by professional and commercial initiatives." According to the NCAA, the primary difference between an amateur or college student-athlete and a professional athlete is the idea of "remuneration" or fee for service, which includes but is not limited to funds, awards, benefits (either directly or indirectly) for contribution in athletics (Huma & Staurowsky, 2011). Although the definition of "amateurism" might have seemed unclear, the NCAA's concept still is the same; student-athletes shall not be paid. As compensation for the student-athletes' efforts on the field and at their respective universities, who receive "full" scholarships stay living below the federal poverty threshold.

Profitable Opportunity

The popularity of the two sports could be why the National Collegiate Athletic Association (NCAA) has seen a jump in viewership and revenue over the years. Thanks to football and men's basketball, there has been growth in television ratings and media dollars. Coaches, athletic directors, and universities continually receive help from revenue growth, but student-athletes are disproportionately compensated. While the NCAA is a nonprofit organization, according to usatoday.com, in 2017, it reported over $1 billion

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in revenue. After a progression of more than half of the previous year's revenue, the organization said that the growth is partly due to the escalation in TV and marketing fees, revenue from championship events, and investment income. Universities employ student-athletes monitored by the NCAA, yet they do not receive a percentage of the millions of dollars they generate.

If student-athletes receive any form of compensation outside of their contract, these players will have had their college eligibility revoked for violating NCAA rules (Sanderson, Siegfried, 2015). In other instances, victories have been vacated, teams banned from bowl games, and coaches fired from universities and colleges. Celebrity football coach Nick Saban of the powerhouse program of Alabama signed an $11.125 million contract with a $4 million bonus. Also, Saban can earn an added $700,000 (Berkowitz, 2018). The growth of revenues flowing to NCAA institutions from bowl games to the "March Madness" tournament has created agitation and concern over the distribution of the money. Arian Foster, former running back for the Houston Texans and the University of Tennessee Volunteers, admitted in an interview that he received extra payments during college to eat and pay rent (Ganguli, 2013). According to Foster, the NCAA "has we hoodwinked into thinking that captivating money is wrong as a college athlete. It is wrong for us, but it is not wrong for them. Is it wrong for me to get $20 to get something to eat? with coaches, school administration, and NCAA executives making millions of dollars off the backs of student-athletes who can hardly afford to sustain a lifestyle outside of the sport they came to college to play." Williams (2014) states that 86% of college student-athletes live below the poverty line. Many of these athletes are African Americans who originated from high-poverty communities and attended college with the hopes of helping their families get out of poverty. Due to the annual income of collegiate sports, especially at larger institutions, it can be concluded that there is no shortage of funds circulating in college athletics, according to Tiell, B., & Walton, K. (2018). Generally, developing a compensation strategy involves a four-step process: (1) reviewing external compensation strategies, (2) assessing the internal alignment, (3) conducting a financial and legal assessment, and formulating the wage compensation see (figure 1).

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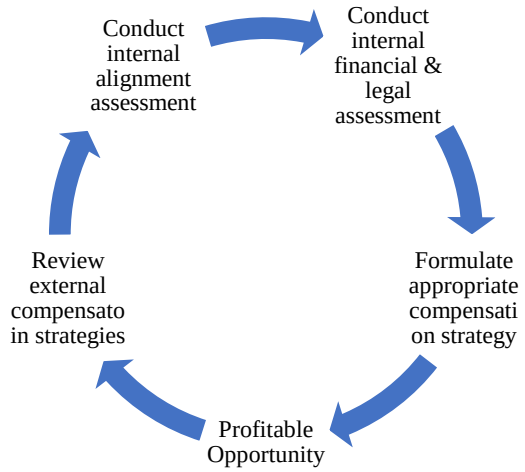
Figure 1. Steeps to designing a compensation strategy.



Step one: Review External Compensation Strategies

The initial step in designing a wage compensation strategy is reviewing the external compensation strategy for comparable positions. To make an external compensation comparison, an organization must determine the market rates for specific positions to decide the compensation amount employees will receive. The three basic strategies used to respond to the market rate are (1) meet the market, (2) above the market, and (3) below the market. Meeting the market is the compensation strategy whereby employers position themselves in the middle of the pay range (i.e., market) for the position. Employers may use resources such as the US Department of Education's Equity in Athletic Data Analysis (EADA) website, which publishes aggregate salary information of head and assistant coaches for the institutions receiving federal financial aid. Nonprofit organizations must also report the salaries of their top executive; however, there is no mandate to publish wage information for other employees, which makes it challenging to conduct a market analysis when salary information is not readily available. One means to collect salary data is to conduct survey research on sports professionals in particular sectors or to access league offices that may supply general information that may not be explicitly tied to teams but can aid in figuring out market value for positions. When deciding market value, it is also essential to consider how the organization's location may affect market value. A marketing manager in a large market with an excessive cost of living, such as Los Angeles, may receive $65,000 yearly. In contrast, the same position in another city with a small to medium market, such as Raleigh, North Carolina, may earn only $50,000 Per year. Understanding the relationship between

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market value and location is essential because it will affect the organization's ability to attract talent nationally, regionally, or locally.

Step two: Internal Alignment Assessment

The second step in finding a proper wage compensation strategy is to assess internal alignment for pay structures. Internal alignment refers to comparing pay within an organization for various levels of positions. Internal equity involves the perceived fairness within an organization for factors such as pay differentials among different jobs or comparable workloads. It is very core; compensation is predicated on paying different rates for different jobs based on the value to the organization. It is well known that a CEO will have higher compensation than an entry-level marketing coordinator; however, that does not mean the marketing coordinator is not valuable. The value of the marketing coordinator for the organization is merely different from that of the CEO, and in an internal market comparison, the coordinator ranks lower than the executive. The following three questions can be asked to figure out the right internal alignment level: (1) What positions have the highest value? (2) What positions require a prominent level of skill? (3) What position requires an important level of experience? Equity is essential to internal assessment. Employees expect to be compensated compared to employees with similar organizational experience. An entry-level sales representative understands that his or her value to the company cannot be compared to that of a CEO; however, the sales associate will still expect to be paid equitably for his or her contribution to the company in line with other employees of comparable experience and worth. When conducting the internal assessment to decide salary alignment, consideration must be given to the susceptibility of pay compression, which may skew perceptions of internal equity. Pay compression occurs when a long-term employee equals less than newly hired employees, even though the long-term employee has higher education, skill, and experience. For example, consider the professional sports franchise that uses a meet-the-market strategy to offer a social media manager a comparable market value of $60,000; pay compression will have occurred unless the candidate has a higher education, experience, and skill level.

The prudent business practice to minimize the legal risk of discrimination is to lower the salary offer for a new hire or increase the salary of the internal employees. One strategy to minimize issues involving pay equity is to devise a classification system for a pay-grade scale such as the one used for executives at ESPN. An unauthorized copy of ESPN's pay-scale system includes at least twenty-five ranks, with the bottom ranks (21-25) appointed for entry-level staff, 18-20 reserved for mid-level managers, and eleven beginning the ranking for vice presidents and seniors. The salary for each level includes a minimum contingent upon eligibility for basic bonus pay

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in each quarter. The pay-grade change is based on geographic location. For example, an E18 level employee in Bristol, Connecticut, may have a maximum salary of $67,200. In contrast, the maximum for an employee at the same level and with similar responsibilities in Montgomery, Alabama, would only be $54.521. Many public universities must use a pay-grade scale, and athletic department staff members are subject to a special compensation rate. To devise a pay scale, jobs requiring similar effort, ability, responsibility, and experience are grouped, ranked, and assigned a comparable wage amount reflective of the difference in categories above and below. The advantage of these scales is that they facilitate the belief of pay equity; there are challenges to incentivizing a prospective employee who may be lost to a competitor that is not restricted by a pay-grade system.

Step three: Financial and Legal Assessment

After reviewing external market information and evaluating internal equity, a financial and legal assessment is the third step in designing an effective wage compensation strategy. Anti-discrimination and Fair Labor Standards Act (FSLA) policies, especially new legislation for overtime exemption status, should be reviewed to ensure compliance. Sports managers and supervisors must also control the organizational budget or collaborate closely with a company's financial officer (CFO) to ensure all employee costs are considered. Limited funds may be available for compensation increases regardless of the intention to employ a particular market strategy or to achieve internal equity. For example, external market analysis by a newly formed Minor League Baseball team may have determined that an average salary of $45,000 is proper for community outreach. Still, the budget for the position is $40,000.

Step four: Formulate a Compensation Strategy

In the last step of designing a wage compensation strategy, organizations must integrate the results of the external market analysis, the internal alignment, and the financial and legal assessment. Reviewing whether the proposed strategy supports the organization's mission is essential at this final stage. If the strategy supports the organization's mission, provides quality employees, and motivates employees to perform at prominent levels, then the compensation strategy is complete.

Employees

"Are student-athletes considered employees of the University?" If student-athletes were to be considered employees of the University, they should then be able to receive far more significant benefits than tuition, room, and board (i.e., scholarships/stipends). Student-athletes may even get to the

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point where they can unionize and bargain their pay based on the value of the service(s) rendered. Analysts debate whether college athletes should be allowed to unionize and bargain cooperatively based on the worth of the services they provide to educational institutions (Policy Research, 2018). There are rules in place by the NCAA that restrict the amount of time to 20 hours per week that a student-athlete can spend taking part in any athletic-related activity. However, this rule does not include travel time, time spent in the training room, rehabilitation, personal training, or any volunteerism or fundraising activities (Policy Research, 2018). Although the NCAA has a cap on the number of hours an athlete can spend in athletic-related activities, many events mandated by their coaches will not be included in those 20 hours. Given these factors, athletes are still restricted to four hours per day in different athletic events, not including gamedays. Regardless of how long the games last, however, game days only account for 3 hours (Policy Research, 2018).

Scholarships and Stipends

Is the NCAA about education or exploitation? The NCAA has a limited number of full-ride and partial tuition scholarships that Division I schools can offer. Division I colleges can only provide eighty-five full-tuition scholarships per year (Wood, 2017) and athletic scholarships have not covered the total cost of college attendance for a long time (Solomon, 2015). The financial aid office calculates the cost of attendance and how it is regulated. The expenses factored in the cost of attendance (stipend) are direct and indirect costs. Direct costs cover tuition, other school fees, books, and room and board. Indirect costs cover personal expenses such as car notes, insurance, food, and clothing (Russo, 2015). "The NCAA's exploitative marketing comes in exchange for a grant to the industry, and it requires more time playing a sport than studying for classes" (Johnson & Student Nation, 2014). Depending on the school, a monthly stipend can be anywhere from $235 to $625.

Most athletes spend their money on car notes, car insurance, gas, and groceries, and some athletes even send cash back home to help their parents. For example, Clemson's defensive end, Clelin Ferrell, sends his monthly checks home to his mother (Glier, 2017). The money these players receive is insufficient and does not add to the student-athlete's time taking part in football. Clemson linebacker Dorian O'Daniel's list of expenses included car repairs, gas, and groceries. Coach Jim McElwain described the daily life of a football player in a tweet. The average football player spends 43.3 hours per week practicing football. A typical day for a football player includes practice at seven in the morning, class, weight training, film and other meetings with coaches, practice, and study hall time (Hutchins, 2015). These same athletes miss certain holidays with their families due to football. The main questions about stipends are still: Where will the money come from? College football

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income was less than $1.6 billion in 2003. Ten years later, college football generated $3.4 million in revenue (Gaines, 2014). The revenue for college football has skyrocketed and may continue to grow. Leeds explained, “That is why the universities have coaches in the NCAA getting paid NFL money; all television revenue, ticket and jersey sales, sports promotions, and other sources of income go to the NCAA, the schools, and the coaches” (Johnson & Student Nation, 2014). This level of revenue does not account for the top five conferences, which bring in more than $250 million annually (Alsher, 2017). According to Alsher, the Atlantic Coast Conference (ACC) made $331 million in 2016, and each school received $22.1 million. The bulk of the money the ACC earned included $212 million in TV deals, $98 million from Bowl games, and $21 million from appearances and games within NCAA tournament play (Alsher, 2017).

College Sports Revenue

The NCAA president, Mark Emmert, took home $1.8 million for salary payments. In 2015, colleges began giving their players monthly stipends known as Cost of Attendance (COA). The cost of attendance is typically the difference between what it costs to attend a school and the scholarship amount awarded to an athlete. A school can pay student-athletes anywhere from $2000 to $5000 over a 9-month academic school year. In other words, a stipend can range anywhere from $235 a month to $625 a month max. The NCAA has argued persistently that insufficient money exists to increase college football players’ stipends. However, the NCAA passed a new rule that collegiate teams can hire a 10th assistant coach, and the NCAA also expanded coaches’ salaries in January 2018. This current study has hypothesized that it may be some years from now when the student-athletes' stipend will be included in the annual athletic department budget. The researchers considered an essential discussion regarding whether there is enough money or revenue to increase players’ stipends. This discussion may open future opportunities for student-athletes to profit from sports revenue. The Mid-Eastern Athletic Conference (MEAC) may not generate as much money as the NCAA five football powerhouses but might make enough money to increase its football player’s stipend. For instance, in 2016, Florida Agricultural & Mechanical University (FAMU) earned $700,000 from the money game against the Miami Hurricanes. FAMU earns more than $800,000 annually from the Florida Classic (Culver, 2016), according to FAMU’s previous Athletic Director, Milton Overton Jr. “The average for a home game at Florida A&M University was $38,000 to $40,000 per game, while homecoming was $271,000” (Culver, 2017).

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Methodology

The researchers gathered research data from various sources, including peer-reviewed articles, research reports, books (both electronic and printed), written personal communication, and other information related to the research topic. This study aimed to explore the opportunity for compensating student-athletes and investigated the salaries of "celebrity" coaches and the minimal financial compensation or stipend student-athletes receive while playing for these coaches. The researchers surveyed to collect data about university student-athletes' opportunities to profit. The researchers used a modified survey to collect the opinions and perceptions of college student-athletes at Florida A&M University. After receiving approval from the University Institutional Review Board (IRB), the researchers randomly surveyed over 400 college students using a personal format and an online link sent to the student-athletes' email addresses via Google surveys. Most participants were graduate and undergraduate student-athletes registered in different teams and individual sports and officially on the team sports rosters. The response rate was over 68%. The survey consisted of 19 questions using different response options, such as "Yes," "No," "Do not know," "Agree," "Slightly Agree," "Neutral," "Slightly Disagree," and "Completely Disagree." The study included university student-athletes aged 19–26 from different ethnicities and backgrounds. Most of the student-athletes in this study were African American, White, Asian, and Hispanic. The researchers used a systematic review approach to review the body of evidence around the main research question on the strength of the link between related research evidence. The researchers used the Statistical Package of Social Science (SPSS) to analyze the survey data and better understand the survey outcomes, using various techniques such as finding the cumulative frequency distribution, creating a relative frequency distribution, finding the central tendency of the data, understanding the data's variability, and calculating descriptive statistics for the survey participants. The research data was gathered from peer-reviewed articles, research reports, books from both electronic and printed media, written personal communication, and other information surrounding this research topic, including the perspectives held by professionals in athletics about exploring the opportunity for compensating student-athletes. Also, this current study investigated the salaries of "celebrity" coaches, and the minimal financial compensation or stipend student-athletes receive while playing for these different celebrity coaches who have recruited those student-athletes. The researchers implemented a survey to gather data about university student-athletes' opportunities to profit. The researchers used a modified survey (see Appendix I) to collect the opinions and perceptions of college student-athletes at Florida A&M University. After the approval of the institutional review board, researchers randomly surveyed over 400 college students using a

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personal format and an online link that was sent to the students' email addresses through Google surveys. Most participants are graduate and undergraduate student-athletes registered in different teams and individual sports and officially on the team sports rosters. The college students' survey response rate was "<" sixty-eight percent (68%). The representation of student-athletes participating in the survey: most participants were student-athletes at sixty-eight percent (68%). Moreover, thirty-two percent (32%) were not student-athletes. The survey consists of nineteen questions using [yes, no, do not know, agree, slightly agree, neutral, slightly disagree, and completely disagree]. Yes, I would be less interested, and no, I would have the same interest. University student-athletes ages 19–26 also have various ethnicities and backgrounds. Most of the student-athletes in this study were African American, White, Asian, and Hispanic. A systematic review approach reviews the body of evidence around the main research question to determine the strength of the link between related research evidence. The researchers used the Statistical Package of Social Science (SPSS) to analyze the survey data to approach the final research results. The researchers used frequency, percentages, and descriptive statistics to better understand survey outcomes by considering the following steps:1) Find the cumulative frequency distribution.2) Create a relative frequency distribution; 3) Find the central tendency of the data; 4) Understand the data's variability; and 5) Calculate the descriptive statistics for the survey participants. The study aimed to explore the opportunity for compensating student-athletes and investigated the salaries of "celebrity" coaches and the minimal financial compensation or stipend student-athletes receive while playing for these coaches. The researchers gathered research data from various sources, including peer-reviewed articles, research reports, books (both electronic and printed), written personal communication, and other information related to the research topic. In summary, the researchers gathered data from various sources, surveyed over 400 college students randomly, used a systematic review approach to review the body of evidence, and analyzed the survey data using SPSS to calculate descriptive statistics for the survey participants. The study aimed to explore the opportunity for compensating student-athletes and investigated the salaries of "celebrity" coaches and the minimal financial compensation or stipend student-athletes receive while playing for these coaches.

Results

The systematic review shows that student-athletes must put in countless hours for their "job" of being amateur athletes, and the primary compensation they receive is some free education. While student-athletes who play football and men's basketball generate significant press, endorsements, and high-paying contracts for their coaches, judging a player's worth at such

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an amateur level can be challenging. Some reports have claimed that college team sports generate less revenue than other teams. If it were to become mandatory for institutions to pay college athletes, some athletic programs would be cut from those colleges, leading to fewer opportunities for student-athletes (Policy Research, 2018). The challenge comes into play when coaches for these revenue-generating sports programs receive multi-million-dollar contracts, but their players struggle to find their next meal. It becomes somewhat of an ethical issue because while these coaches are bringing home enough money to feed their families, some of the student-athletes, who are required to work a full-time job (playing their sport), attend school, pass classes, attend study hall, etc., are struggling financially from week to week. Not all of these student-athletes will go on to play on a professional level; most will not. Further, some athletes may not graduate from college while others may, but because they were focused most of the time on playing a collegiate sport, they put less energy into their schoolwork, nor can they hold a part-time job. Notably, many of the top Division I athletes come from high-poverty backgrounds for these "revenue-generating sports" (i.e., football and men's basketball). They have had to work to help take care of the household—even while in high school; however, because of NCAA rules, these student-athletes are not allowed to receive any outside reimbursement, and their athletic schedule makes working a part-time job difficult. Given the large revenue intake by universities and the enormous salaries of coaches, it is plausible that collegiate sporting programs can provide sufficient support for their student-athletes and still provide competitive contracts to athletic administrators and coaches while at the same time maintaining a profitable business. Understanding public opinion about student-athletes getting paid is essential to this research. The researchers used a survey consisting of 13 questions on college student-athletes. African-American male student-athletes dominated this survey. Survey outcome certifies that college student-athletes should be compensated, not just compensated only, with educational scholarships and are eager to support their crafts besides their actual scholarship percentages. Below are the results of the surved of a total of 400 College students. The representation of student-athletes participating in the survey: most participants were student-athletes at sixty-eight percent (68%). Moreover, thirty-two percent (32%) were not student-athletes.N= 399 students athletes and none students athletes with a response rate of sixty-eight percent (68%).

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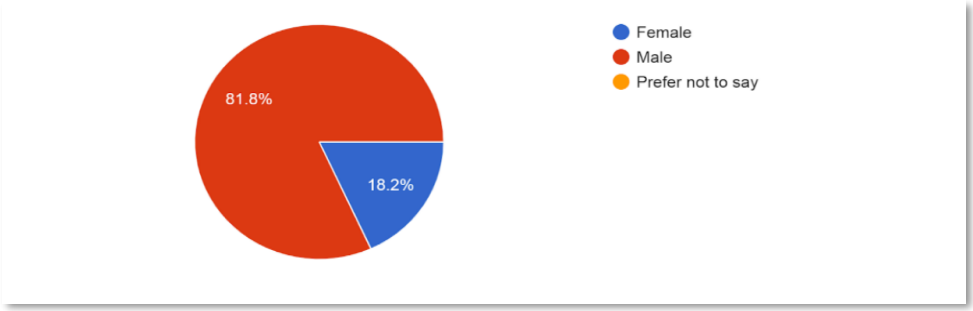
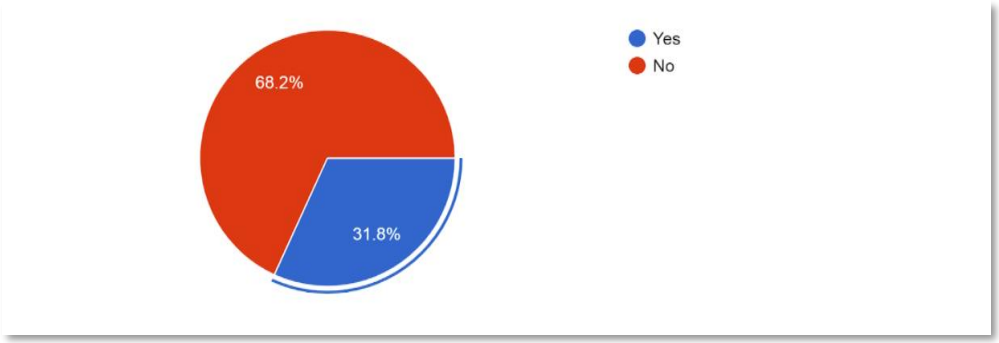
Figure 2. *Gender of Participants*



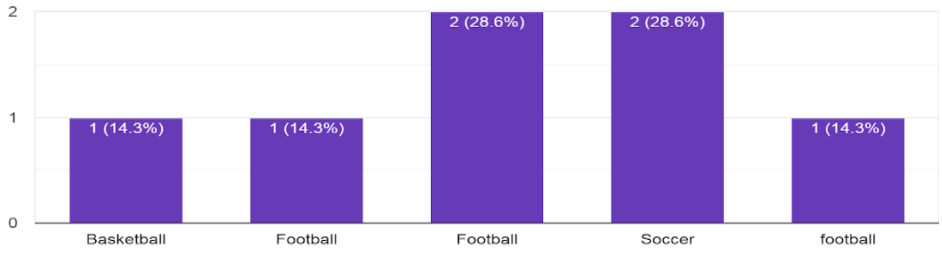
(Figure 2) Shows the gender representation of participants in the survey; males represented eighty-two percent (82%), while females represented eighteen percent (18%).

Figure 3. *Student-Athletes*



(Figure 3) The representation of student-athletes participating in the survey: most participants were student-athletes at sixty-eight percent (68%). Moreover, thirty-two percent (32%) were not student-athletes.

Figure 4. *Sports Played by Student-Athlete*



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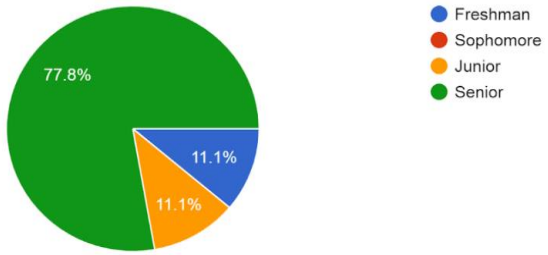
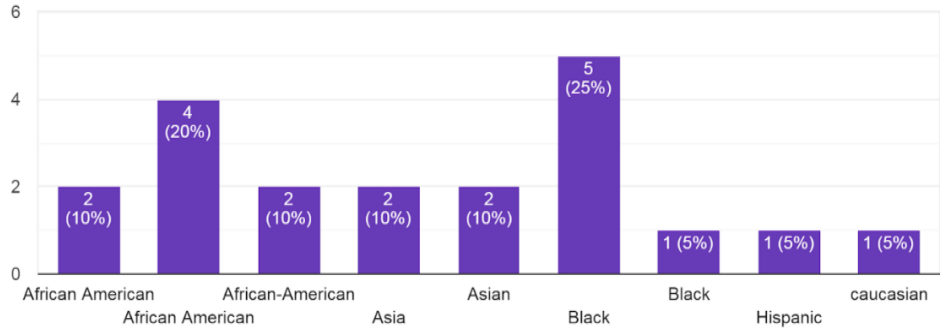
(Figure 4) The sport the student-athletes played; most played sport was football at fifty-seven percent (57%). Soccer represented twenty-nine percent (29%), while basketball only represented fourteen percent (14%).

Figure 5. *Collegiate Classification*



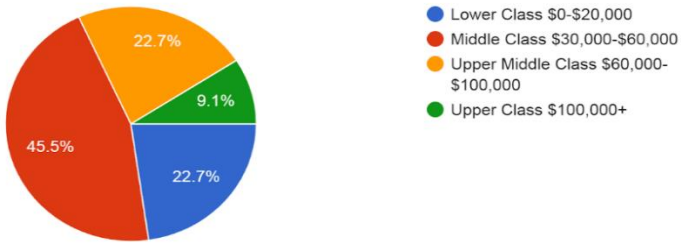
(Figure 5) Seniors and Graduate Students represented seventy-nine percent (79%) of the participants. First-year students and Juniors each represented eleven percent (11%).

Figure 6. *Race of Participants*



(Figure 5) The graph shows the race of each survey participant; African-American students represented seventy percent (70%), while Whites, Asians, and Hispanics together represented thirty percent (30%).

Figure 6. *Economic Background*



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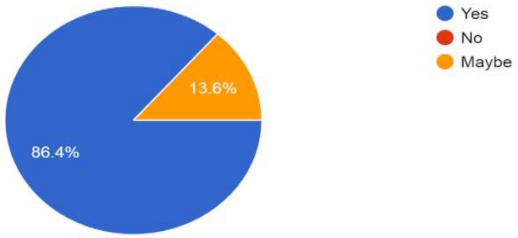
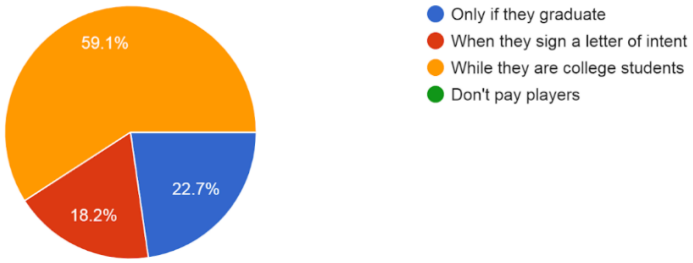
(Figure 6) The chart shows the economic background of the participants; the middle class, forty-six percent (46%), represented the majority of the opinion in this survey.

Figure 7. *Athletic Compensation Beyond Scholarship Value*



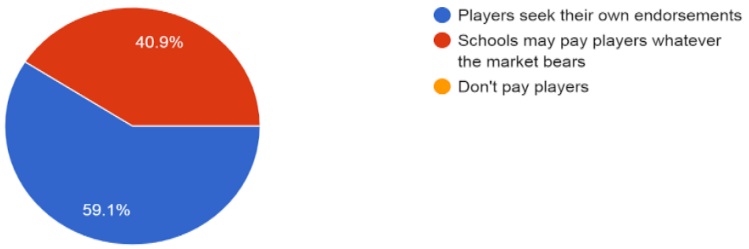
(Figure 7) The chart shows that eighty-six percent (86%) believed that student-athletes should be compensated in other ways besides the scholarship they received from the universities. At the same time, fourteen percent (14%) seem neutral to the idea.

Figure 8. *Compensation Accessibility for Student-Athlete*



(Figure 8) The chart shows that fifty-nine percent (59%) agreed that while these student-athletes are in college, they should receive all extra compensation. Twenty-three percent (23%) wanted the student-athletes to receive their money only if they graduated.

Figure 9. *Best Way to Compensate an Athlete*



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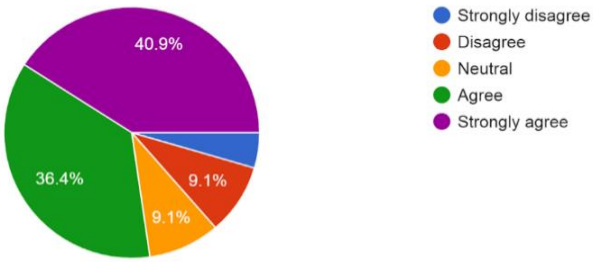
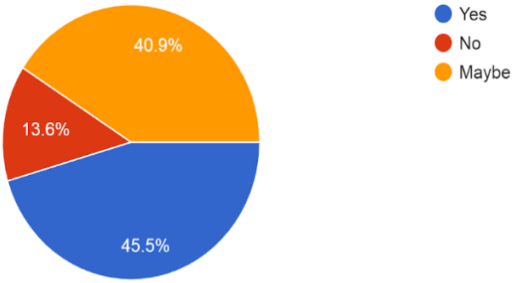
(Figure 9) the chart shows sixty percent (60%) believed that the best way to compensate an athlete is to allow the player to seek their endorsements. At the same time, forty-one percent (41%) disagreed with the question.

Figure 10. *International Athletes Compensation*



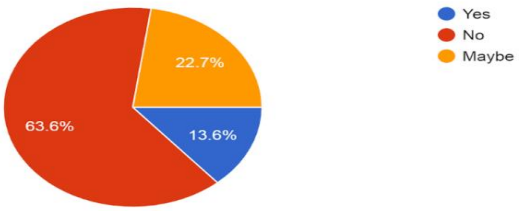
(Figure 10) International athletes do not receive financial aid; therefore, forty-one percent (41%) strongly agreed that these students precisely should be compensated in another way. Nine percent (9%) disagreed with international athletes receiving financial aid.

Figure 11. *Female Athlete Compensation*



(Figure 11) The chart shows that forty-six percent (46%) believed that female athletes should be awarded the same compensation as male athletes; forty-one percent (41%) had no preference for whether females should be paid, while fourteen percent (14%) did not want female athletes to be paid.

Figure 12. *Payment Amount for Each Program*



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(Figure 12) The chart shows that more than half, sixty-four percent (64%) of the participants, agreed that if athletes were to receive compensation, each program should not receive the same payment amount. Fourteen percent (14%) disagreed with the thought of athletes being paid, while twinty-three percint (23%) neither agreed nor disagreed.

Discussion

The gender representation of participants in the survey was unexpected, with males representing eighty-two percent (82%) while females represented only eighteen percent (18%). To remove any bias, the researchers made the survey accessible to subjects other than student-athletes. The accessibility to the survey for the college students led to the representation of student-athletes being sixty-eight percent (68%) while - thirty two percent (32%) were not student-athletes. Regarding the sports student-athletes played and participated in, the most played sport for the student-athletes was football at fifty-seven percent (57%). Soccer represented twenty-nine percent (29%), while basketball only represented fourteen percent (14%). Seniors and Graduate Students represented seventy-nine percent (79%) of the participants. First-year students and juniors represented eleven percent (11%). The results show that each survey participant's official African-American students represented seventy percent (70%), while Whites, Asians, and Hispanics together represented thirty percent (30%). The chart shows the economic background of the participants; the middle class, forty-six percent (46%), represented the majority of the opinion in this survey. The results show that eighty-six percent (86%) believed that student-athletes should be compensated in different ways besides student-athlete scholarships from the athletic department or the university. At the same time, fourteen percent (14%) seem neutral to the concepts. The results show that fifty-nine percent (59%) agreed that while these student-athletes are in college, they should receive all extra compensation and may be in the future in different forms. Twenty-three percent (23%) wanted the student-athletes to receive their money only if they graduated. The results show that sixty percent (60%) believed that the best way to compensate an athlete is to allow the players to discover connections to seek endorsements. While forty-one percent (41%) disagreed, which supports Hutchins (2015) that average student-athletes spend forty-three (43) hours per week, including practice, weight training, watching a film, meetings with coaches, and study hall time. International athletes do not receive financial aid; therefore, forty-one percent (41%) strongly agreed that these students precisely should be compensated in another way. Nine percent (9%) disagreed with international athletes receiving financial aid. Furthermore, this supports Russo (2015) that the financial aid office calculates the cost of the students covering tuition and other college expenses such as textbooks,

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transportation, room and boarding, personal expenses, food, and insurance, which is not included in their educational scholarship. Forty-six percent (46%) believed that female student-athletes should get the same compensation as male student-athletes. Forty-one percent (41%) prefer female athletes to get paid, while (14%) do not agree that female athletes should get paid. Moreover, this supports Romero's (2018) opinion that NCAA athletes should get compensation. The results show that more than half, sixty-four percent (64%) of the participants agreed that if athletes were to receive compensation, each athletic program should not receive the same payment amount. Fourteen percent (14%) disagreed with the thought of athletes being paid. In comparison, twenty-three percent (23%) neither agreed nor disagreed, which supports policy research (2018) that some reports have claimed that college sports teams do not bring in as much revenue. Drozdowski (2023) Some 107,000 spectators have packed the "Big House," paying an average ticket price of $141. The game airs on ESPN, one of three networks linked to the Big Ten, thanks to a $2.64 billion contract. Players are awash in Nike gear owing to the apparel giant's $174 million deal with Michigan and $252 million deal with Ohio State. On the sidelines, Michigan head coach Jim Harbaugh (salary: $8 million) and his counterpart, Ryan Day (salary: $5.7 million), finalize their game plans. According to Dorozdowski, College sports generate billions of dollars for schools, networks, and corporate sponsors. The Supreme Court ruled that colleges can offer "education-related" payments to student-athletes. Also, the ruling opened the door for name, image, and likeness endorsement deals for student-athletes. According to (Sprung, 2021), Student-athletes and their parents have likely heard that the NCAA has opened the door to allow collegiate athletes to profit off their name, image, and likeness. The NCAA policy will allow college athletes and recruits to make money from activities like autograph signings, endorsements, and personal appearances as long as they are consistent with any applicable state law where the athlete is located. Not only some athletes but every athlete can take their career beyond college to the professional level or the Olympics. Many athletes will find college sports are their only opportunity to monetize their name, image, and likeness. For these athletes, planning carefully, with little margin for error, will be crucial as they position themselves to build and protect wealth in the short term.

Applications In Sport

The NCAA has tranquil regulations on the institutions and the time players can spend taking part in their sport but has tight rules on the money the student-athletes can receive. Suppose the NCAA considers paying student-athletes or allowing them to receive compensation for their hard work and dedication to their preferred sport. In that case, revenues may improve for a

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particular sport and the university. In other words, like all students and affiliates (i.e., parents, fans, and community), student-athletes tend to give more when they feel appreciated and sufficiently accommodated. Furthermore, more money for sports translates to improved college sports programming. According to Forbes, the NCAA proposes a radical shift in college sports where athletes can get paid—here is how it could work (Skipworth, 2023). The National Collegiate Athletic Association's president proposed a new tier of Division I sports for the schools with the most resourced athletic departments, in which students can be paid straight through a trust fund, have name, image, and likeness deals directly with their schools and receive educational benefits. This move could mark a significant shift for college sports and acknowledges one of its biggest disapprovals. The key facts for this offer to put on the table Division I schools would be able to choose whether to opt into the new tier. However, even Division I school outside the new tier could deliver their student's educational benefits (education-related cash benefits are currently limited) and strike name, image, and likeness deal with their students. This future system would require schools in the higher tier to dedicate at least $30,000 per athlete every year for at least half of their athletes and put it into this "enhanced educational trust fund" that would originally get calculated to pay for athletes so they can pursue further education during the summer or following their careers. However, ESPN reported that the NCAA has not set any spending requirements.

Recommendations

While they may be considered amateurs, student-athletes should be compensated or allowed to receive external money from endorsements and fan appreciation. The hours the student-athletes are required to put in for their sport are equal to and, in some cases, exceed the hours of some employees who work part-time jobs. Student-athletes work for the college or university, bringing the institution and conference millions of dollars. However, the billion-dollar, non-profit organization they are governed by requires them to live at or below the federal poverty line. Allowing student-athletes to receive a different form of revenue or a good percentage of endorsements, food, or fan donations will not hurt the brand of the university, or anyone involved. The issue with paying student-athletes from an institutional standpoint would be how the sports programs that are not producing a profit get compensated. The NCAA wants to keep an equal playing field for those student-athletes contributing to programs that do not generate as much income for the university as football and basketball. The NCAA has relaxed regulations on how much time a student-athlete can contribute to athletic events; because of this, some athletes suffer. (ACC) Commissioner John Swofford says the stipend system is not perfect, but it is the right thing to do today (Powers 2015).

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It has been two years since the NCAA passed the rule that schools can award athletes the cost of attendance.

Conclusion

College and university sports leaders should not perceive student-athletes as just mere athletes but as assets that create organic growth for their institution. Institutions and athletic programs must ensure their students' safety, security, and welfare during student-athletes' time in college. In the case of the college athlete, it is far more profitable to ensure that all students are supported equitably and feel respected by their alma mater. Colleges are heavily subsidized financially by former students and their respective families. University coaches are signing multi-million dollar contracts while their players are forced to live off $12,000 – the majority of which they will never see because this money goes toward their tuition, room, books, board, and class needs. The NCAA has relaxed regulations on the institutions and the time players can spend participating in their sport but has tight rules on the money the student-athletes can receive. Not all sports generate the same sort of revenue, but if the governing body of student-athletes, the NCAA and the conferences, are receiving endorsements and advertisement deals off the backs of these student-athletes, the opportunity for the student-athletes to gain some additional compensation to bring them above the poverty level of living is undoubtedly present.

College sports generate billions of dollars for schools, networks, and corporate sponsors. The Supreme Court ruled that colleges can offer "education-related" payments to student-athletes. The future ruling opened the door for name, image, and likeness endorsement deals for student-athletes.

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Appendix I - Survey

College Athletics Survey If Student Athletes Should Be Paid for Play
https://www.academia.edu/6887423/College_Athletics_Survey_If_Student_Athletes_Should_Be_Paid_For

1. What is your gender? Male Female
2. Student-athlete? Yes No
3. What sport do you compete in?
4. College Levels Freshman Sophomore Junior Senior Graduate-Student
5. What is your race? (Please check all that apply)
   A) Black or African American
   B) White
   C) Asian or Asian-Pacific American
   D) Hispanic or Latino
   E) Other
6) What is your income?
   A) 0-$20,000
   B) $20,000-$30,000
   C) $30,000-$60,000
   D) $60,000-$100,000
   E) $100,000+
7. Should college athletes be compensated in any fashion beyond their current scholarship value?
   A) Yes
   B) No
8. If universities entered into licensing agreements with players, when should that money be available to players?
   A) Only if they graduate
   B) Upon graduation or college eligibility expires
   C) While they are college students
   D) Do not pay players
9. If you support more compensation for players, rank the reasons from most important to least important. (1 as very important and six as least important)
___Television revenue and conference realignment show this is already a big business
__Players may get access to a free (or partial education), but are enough of them genuinely being educated? The hypocrisy of administrators and coaches making so much money
___Without the players, there would be no games for the NCAA, schools, and conferences to sell

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___Playing college sports is a job, and players deserve the compensation opportunity.
___No long-term health benefits for players who sustain injuries
___Other

10. What would be the best model if college athletes were to receive extra compensation?

A) Sharing TV and licensing revenue divided equally among players
B) Players seek endorsements
C) Schools may pay players whatever the market bears
D) Do not pay players

11. NCAA President Mark Emmert and some major conferences have so far been unsuccessful in pushing for athletes to be allowed to receive an additional stipend of up to $2,000 to cover their total cost of attending college. Would you support this stipend opportunity?

A) Yes
B) No
C) Do not know

12. If athletes have the opportunity to share revenue or were free to secure endorsements, would your interest in college sports change?

A) Yes, I would be less interested
B) No, I would have the same interest
C) Yes, I would be more interested
D) Do not know

13. Would it be fair to other students if athletes got the opportunity to get paid?

A) Yes, non-athletes have more time for a job.
B) Yes, athletes put in much work to their sport(s) and should get paid for it
C) No, a sport is not a job in college
D) not everyone is good at sports and has this type of opportunity.

14. Student-athletes generally "have it harder" than average students.

A) Completely Agree
B) I Slightly Agree
C) Neutral
D) Slightly Disagree
E) Completely Disagree

15. Do student-athletes receive better or preferential treatment from colleges and universities than average students?

A) Completely Agree
B) I Slightly Agree
C) Neutral
D) Slightly Disagree
E) Completely Disagree

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16. We should define playing, practicing, or otherwise participating in a sport as "labor" for student-athletes

A) Completely Agree
B) I Slightly Agree
C) Neutral
D) Slightly Disagree
E) Completely Disagree

17. Student-athletes should not be paid for playing, practicing, or participating in a sport because they choose to do so.

A) Completely Agree
B) I Slightly Agree
C) Neutral
D) Slightly Disagree
E) Completely Disagree

18. Is it fair to pay female athletes the same amount as male athletes? Even if that program does not generate as much money as a men's program. Or vice versa.

A) Yes
B) No
C) Do not know

19. Should every program receive the same payment amount if athletes were to have a payment amount?

A) Yes
B) No
C) Do not know

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La Tecnología del Desempeño Humano y su Contribución al Cambio Organizacional, una Consideración sobre los Modelos iniciales y de Diagnostico

Dr. Jesús Manuel Gutiérrez Rodríguez
Universidad Centro de Estudios Panamericano de Estudios Superiores

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Resumen

El presente trabajo expone una descripción detallada de los modelos de procesos de mejora del desempeño, centrándose en el modelo de Tecnología del Desempeño Humano (HPT) en sus fases iniciales y de diagnóstico. Este enfoque se presenta como una herramienta integral para evaluar y establecer acciones de manera sistemática, con el objetivo de mejorar la eficiencia y eficacia en la organización en la que se implementa. La investigación es de tipo descriptivo ya que la información obtenida tiene por objeto especificar propiedades, características y rasgos importantes dentro del contexto de lo que significa un modelo de un proceso de mejora del desempeño y los diferentes tipos desarrollados, todo esto soportado en estudios e investigaciones realizadas por la Sociedad Internacional para la Mejora del Desempeño (ISPI), los resultados obtenidos indican la clasificación, el alcance y el nivel de detalle. Se concluye que la aplicación de esta información permite identificar los atributos esenciales de un modelo de un proceso de mejora del desempeño organizacional, facilitando así el desarrollo sostenido de esta a través de la modificación de la cultura organizacional con acción directa en las conductas de los integrantes, conociendo las brechas de una situación actual del desempeño contra la deseada.

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Palabras clave: Cultura Organizacional, Conducta, Desempeño, Brechas, Proceso de Mejora del Desempeño (PMD)

The Technology of Human Performance and its Contribution to Organizational Change, a Consideration of Initial and Diagnostic Models

Dr. Jesús Manuel Gutiérrez Rodríguez
Universidad Centro de Estudios Panamericano de Estudios Superiores

Abstract

This paper presents a detailed description of performance improvement process models, focusing on the Human Performance Technology (HPT) model in its initial and diagnostic phases. This approach is presented as a comprehensive tool to evaluate and establish actions in a systematic way, with the objective of improving efficiency and effectiveness in the organization where it is implemented. The research is of a descriptive type since the information obtained aims to specify properties, characteristics, and important features within the context of what a model of a performance improvement process means and the different types developed, all this supported by studies and research conducted by the International Society for Performance Improvement (ISPI), the results obtained indicate the classification, scope and level of detail. It is concluded that the application of this information allows to identify the essential attributes of a model of a process of organizational performance improvement, thus facilitating the sustained development of this through the modification of the organizational culture with direct action in the behaviors of the members, knowing the gaps of a current situation of performance against the desired one.

Keywords: Organizational Culture, Behavior, Performance, Gaps, Performance Improvement Process

Introducción:

Según Bernárdez (2007) se ha evidenciado a lo largo de los 226 años desde el inicio de la sociedad industrial hasta los primeros indicios de la sociedad del conocimiento, que la capacidad para establecer organizaciones competentes y productivas es un factor esencial para el progreso tanto a nivel social como individual.

Desde los inicios de los registros históricos y antropológicos, la humanidad ha organizado sus sociedades a través de grupos con diversos

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niveles de estructuración. La creación de organizaciones, entendidas como conjuntos estructurados con orientación hacia objetivos productivos, tiene sus raíces en los albores de la civilización.

El avance y progresión en el resultado de las entidades humanas son elementos cruciales que influyen en el desarrollo o retroceso de sociedades e individuos. Estos factores también desempeñan un papel fundamental en la generación de conocimientos científicos, tecnológicos y artísticos, impactando así en las expectativas, calidad de vida, prosperidad, ingresos, seguridad, y en las libertades y derechos humanos.

Las organizaciones se caracterizan por la estructura fundamental que respalda su funcionamiento. El primer paso consiste en comprender el comportamiento a través del análisis del entorno y la dinámica interna, es decir, examinar su diseño y cultura (Hellriegel & Slocum, 2009). Este enfoque facilita la orientación para la gestión del rendimiento del personal, con el objetivo de alcanzar los objetivos preestablecidos y lograr una mejora en el desempeño (Rothwell et al., 2007).

En este sentido, su papel es crucial en el desarrollo y obtención de resultados, como señala Senge (2009), al establecer una visión compartida que proporciona enfoque y energía para el aprendizaje y la consecución de metas deseadas.

Este documento detalla las acciones necesarias para llevar a cabo una transformación en los resultados de una organización, independientemente de su sector, mediante la implementación de un proceso de mejora del rendimiento. La mejora del desempeño no está ligada a una disciplina específica ni es responsabilidad de una única área; más bien, constituye un objetivo compartido. La combinación de diversos elementos, como el monitoreo del desempeño, el análisis e identificación de soluciones, así como su planificación e implementación, resultará en una mejora continua y sostenida para la organización.

Las acciones emprendidas se derivan del tipo de modelo de mejora del desempeño que se pretende aplicar. Se ofrece una breve explicación de los modelos iniciales que dieron origen a la tecnología del desempeño humano (HPT), seguido de un análisis conciso de los modelos de diagnóstico. Este análisis se basa en la revisión de documentación pertinente relacionada con el tema, disponible en el sitio de la Sociedad Internacional para la Mejora del Desempeño (ISPI), y sirve como base descriptiva para el presente estudio.

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Marco conceptual

De acuerdo con Rummler et al. (2010) se considera a cada organización ya sea pública o privada como un sistema de partes independientes las cuales están sujetas a esquemas lógicos. El concepto de sistemas se aplica a cualquier nivel de una organización determinada, si se trata de una empresa entera que existe dentro de una estructura mayor de fuerzas de mercado, ambientales, y competitivas, o una unidad de negocio o incluso un solo departamento, existente en el interior como un sistema dentro de los mismos. En este contexto, los elementos que forman parte del entorno constituyen un sistema organizativo que se perpetúa a través de decisiones que actúan como enlaces hacia situaciones posteriores. Esto implica una influencia directa en los resultados, afectando individualmente el resultado de la organización.

En un sentido más simple, se puede definir una organización como un conjunto social compuesto por individuos, funciones administrativas y tareas que interactúan dentro de una estructura sistemática con el fin de alcanzar sus objetivos. Estos conjuntos pueden, a su vez, estar conformados por subsistemas interrelacionados que cumplen funciones específicas (Guerra-López, 2007).

Es crucial subrayar que la existencia de una organización depende de la comunicación y la disposición coordinada de las personas para cumplir con su misión. El funcionamiento de estas entidades se rige por normas establecidas con el propósito de alcanzar sus metas. Además, resulta esencial que dichas organizaciones dispongan de una red de recursos, abarcando recursos humanos, tecnológicos, económicos, inmuebles, naturales e intangibles, necesarios para llevar a cabo las tareas asignadas y lograr sus objetivos (Bernardez, 2007).

De forma análoga, (Arellano & Cota, 2012) afirman que las organizaciones se constituyen a partir de individuos, considerándolos como las unidades fundamentales del sistema. Dado que se trata de un sistema social, la organización se estructura a través de la comunicación, particularmente mediante el proceso de toma de decisiones. En este contexto, se puede concebir la empresa como un sistema organizativo que se mantiene a través de decisiones, actuando como conexiones hacia acciones futuras dentro de la propia empresa y orientándose según decisiones previas.

En una perspectiva complementaria, (Bernárdez, 2006) destaca la relevancia de la influencia del entorno organizacional desde una óptica sistémica, ya que incide directamente en el desempeño, aspecto central en el contexto abordado en este trabajo.

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Cultura Organizacional

De acuerdo con (Hellriegel & Slocum, 2009), la cultura se define como una abstracción, una construcción teórica que se origina a partir de las conductas de los individuos que integran un grupo. Por lo tanto, la comprensión de la cultura de un grupo se logra a través de la observación de sus miembros, lo que se traduce en la identificación de patrones particulares de comportamiento. Para comprender este fenómeno, es esencial analizar la naturaleza humana. Las personas son entidades en constante movimiento, creación y desarrollo, factores que han propiciado la formación de diversas culturas a lo largo del tiempo. En términos etimológicos, la palabra "cultura" proviene del latín "*cultum*", que significa cultivar, es decir, el acto de cultivar lo propio y las raíces de cada comunidad. La cultura abarca todas las expresiones que el ser humano ha integrado a su entorno, a la naturaleza en su totalidad. Este concepto engloba pensamientos, arte, arquitectura, literatura y, en general, toda manifestación creada por el ser humano. Se afirma que la cultura abarca todo lo que una persona necesita conocer para comportarse adecuadamente dentro de un grupo social.

Geertz (2003), mencionado por (Watkins & Leigh, 2010) en su obra, describe el "concepto de cultura que defiende y cuya utilidad buscan demostrar los ensayos que siguen, es esencialmente un concepto semiótico. Compartiendo la creencia de (Max Weber, 2014) de que el ser humano es un ente inmerso en tramas de significado que él mismo ha tejido, Geertz (2003), considera que la cultura es esa red intrincada y que el análisis cultural no debería ser una ciencia experimental en búsqueda de leyes, sino más bien una ciencia interpretativa en busca de significados. En otras palabras, implica la explicación e interpretación de expresiones sociales que resultan enigmáticas en su superficie" (Interpretación de las culturas). Por otro lado, Beckhard, citado por Chiavenato (2007), conceptualiza la cultura como una forma de vida, un sistema de creencias, expectativas y valores, una forma de interacción y relaciones.

Santillán & Navarro (2008) refiere que el concepto de cultura organizacional es un concepto reciente y tiene sus orígenes en los Estados Unidos de América para después trasladarse a Canadá y adquiere su singular significado en Europa. Sobre este punto puede asegurarse que la conducta individual y la conducta de la organización son el reflejo de la cultura, que en los actores son programaciones mentales que orientan su actuación dentro de la organización.

Koontz, at al. (2012), refiere a que cada persona tiene una cultura, del mismo modo las organizaciones se caracterizan por tener culturas corporativas específicas. Si se desea conocer una organización se debe empezar por conocer su cultura, de alguna manera pertenecer a una empresa, trabajar, participar de las actividades y crecer en la misma implica adherirse y asimilar su cultura

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organizacional. La manera en que se comunican las personas, las actitudes predominantes, los supuestos, las aspiraciones y la manera de manejar los asuntos considerados importantes forman parte de la cultura en la organización, de esta manera la cultura organizacional solo se puede observar debido a sus efectos y consecuencias.

Koontz, et al. (2012), expresan que la cultura organizacional ilustra cómo cada organización aprende a enfrentar su entorno, siendo una mezcla compleja de suposiciones, creencias, comportamientos, historias, mitos, metáforas y otras ideas que, en conjunto, reflejan el modo específico de operar de una organización. En su definición, la cultura organizacional se conceptualiza como el conjunto de valores, tradiciones, creencias, hábitos, normas, actitudes y conductas que otorgan identidad, personalidad, sentido y dirección a una organización en pos de alcanzar sus objetivos económicos y sociales.

(Hellriegel & Slocum, 2009) indican en su trabajo que la organización de una empresa está compuesta por sus estructuras, políticas y cultura corporativa, las cuales pueden evolucionar y empezar a ser disfuncionales en un entorno de negocios de rápidos cambios. Ahora bien, los directivos pueden cambiar las estructuras y las políticas, la cultura organizacional es muy difícil de modificar, considerando esta premisa adaptar la cultura suele ser el pasaporte para implementar con éxito una nueva estrategia. De esta manera la cultura corporativa la definen como: "Las vivencias, relatos, convicciones y pautas compartidas que definen a una entidad."

Según (Newstrom, 2011) dentro de la estructura organizativa existe una fuerza significativa que influye en la conducta tanto individual como grupal: la cultura organizacional. Él la describe como el conjunto de supuestos, creencias, valores y normas compartidos por los miembros de una organización, constituyendo un elemento crucial del entorno laboral en el cual los empleados llevan a cabo sus funciones. La cultura organizacional, deliberadamente establecida, es fundamental para el éxito de una empresa por varias razones, ya que proporciona identidad y cohesión a los empleados, contribuyendo así al logro de los objetivos de la organización, en otras palabras, una visión que define lo que representa la organización, es fuente importante de estabilidad y continuidad para la organización.

Para (Hellriegel & Slocum, 2009) la cultura organizacional refleja los valores, creencias y actitudes que se han aprendido y que comparten sus miembros, las culturas de las organizaciones evolucionan lentamente con el transcurso del tiempo, a diferencia de la misión y visión, las culturas no suelen estar en forma escrita, sin embargo, son la esencia de la organización, una cultura es un conjunto de tradiciones y reglas tácitas que operan las 24 horas del día. Esto sugiere que la cultura organizacional se puede entender como el conjunto de creencias y expectativas compartidas por los miembros de una

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organización. Además, abarca normas, filosofía y valores comunes, lo que indica las pautas para el comportamiento y la realización de acciones dentro de la organización. Este patrón cultural también se reflejará en las acciones y conductas fuera de la organización.

En este orden de ideas, es conveniente hacer mención de si "se necesita iniciar un cambio radical hacía la mejora en el desempeño traducido en los resultados" (Gutiérrez J., Portilla L., 2023, p.13), se debe influir en los aspectos tangibles que mueven y dan dirección a la organización esto es: estableciendo un liderazgo visible y sobre todo las políticas y estándares que norman la conducta y establezcan ese orden que se está buscando en el cambio cultural, de esta manera se puede obtener un marco de referencia con base en los estándares declarados en la organización y obtener las brechas que se demanden en función de esos resultados siendo estos de carácter individual y observados en el desempeño organizacional como un todo y sus consecuencias.

Modelación de la tecnología de desempeño humano:

Si se consideran los primeros modelos de tecnología del desempeño humano como lo indican Wilmonth et al. (2010) en su trabajo citados por Watkins & Leigh (2010) se observa que tienen una relación directa con los resultados y la mejora del desempeño organizacional, debido a que existe una conexión a través de las brechas entre lo que es y lo que debería ser en los sistemas de actuación aplicando las tecnologías de la mejora del desempeño (HPT).

La modelación ha sido históricamente una componente esencial en los procesos de diseño instruccional. Dado que HPT se originó inicialmente en el ámbito de la tecnología instruccional, es comprensible que la modelación de procesos HPT haya experimentado un proceso de migración y evolución basado en estos principios.

Por otra parte, Wilmonth et al. (2010) citando en su trabajo a Gustafson & Branch (1997) afirman que el papel de los modelos en el diseño instruccional es proporcionar las herramientas conceptuales y de comunicación que puedan ser utilizados para visualizar, dirigir y gestionar los procesos. El concepto clave aquí es la capacidad de la persona cuando se busca en cualquier actividad compleja, aspectos que permitan conceptualizar una gran variedad de relaciones casuales y trazar de alguna manera acciones que puedan ser comunicadas con los demás. Un criterio determinado de un modelo debe permitir a los especialistas de HPT conceptualizar con precisión un problema de desempeño que se observa en un entorno de negocio determinado.

La habilidad para visualizar y comunicar la lógica del proceso a otros se convierte en la verdadera prueba de la eficacia y utilidad de cualquier

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modelo de Tecnología del Desempeño Humano (HPT). Wilmonth et al. (2010), al citar en su obra a Stolovitch & Keep (1992), informan que los pioneros en HPT inicialmente intentaron emplear modelos de diseño instruccional lineales para explicar los procesos de tecnología de desempeño. Sin embargo, estos modelos lineales no siempre lograban describir con precisión el entorno o la interconexión de procesos empresariales multifacéticos y sofisticados.

Como resultado de lo anterior, los primeros iniciadores en el campo de la tecnología del Desempeño Humano (HPT), comenzaron a desarrollar sus propios modelos únicos. La diversidad y complejidad de los entornos analizados, junto con diferentes perspectivas y antecedentes de los iniciadores, han creado un gran número de modelos, muchos de los cuales todavía están emergiendo y evolucionando.

Las contribuciones de Gilbert (1988), Harless (1973), Mager & Pipe (1997). fueron fundamentales en el establecimiento de los principios fundamentales del análisis de desempeño y la teoría de modelado en la Tecnología del Desempeño Humano (HPT). Según Wilmonth et al. (2010), al citar en su obra a Rosenberg et al. (1992), diversos expertos en la materia han reconocido a Thomas Gilbert como el Padre de la Tecnología del Desempeño (HPT).

Gilbert (1988) sintió que la mejora del desempeño de las personas debe comenzar con la identificación y solución de los obstáculos del entorno, permitiendo así que las personas (ejecutores) logren el máximo desempeño (Dean, 1997).

Wilmonth et al. (2010). refieren en su trabajo que otro pionero de la tecnología de desempeño que continuó con el enfoque de diagnóstico de Gilbert (1988) fue Joe Harless (1973) quién adoptó la creencia de que la comprensión de la causa de un problema debe conducir a cualquier solución Ripley (1997). Esta creencia se convertiría en el proceso de análisis de interfaz (Front-End, FEA) como se refleja en el primer modelo del proceso de tecnología del desempeño (ver Figura No. 1).

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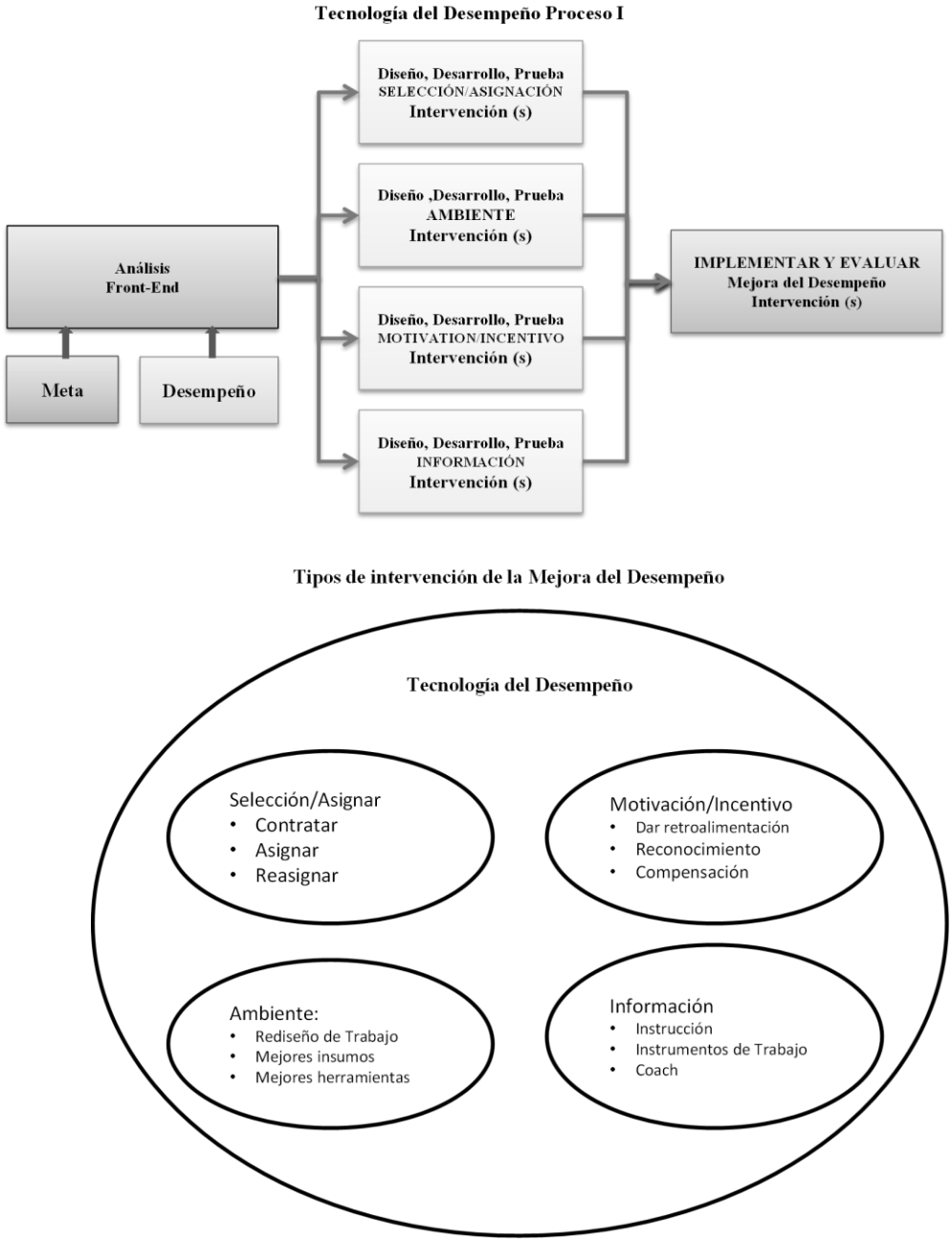
Figura 1. Modelo inicial de tecnología de la mejora del desempeño



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Ripley (1997), tomado del Manual de Mejora del Desempeño en el sitio de Trabajo, Adaptado realizado por Gutiérrez (2023).

Este modelo tenía un claro enfoque en la determinación de manera inicial de las metas y el desempeño durante la fase de análisis. Más adelante

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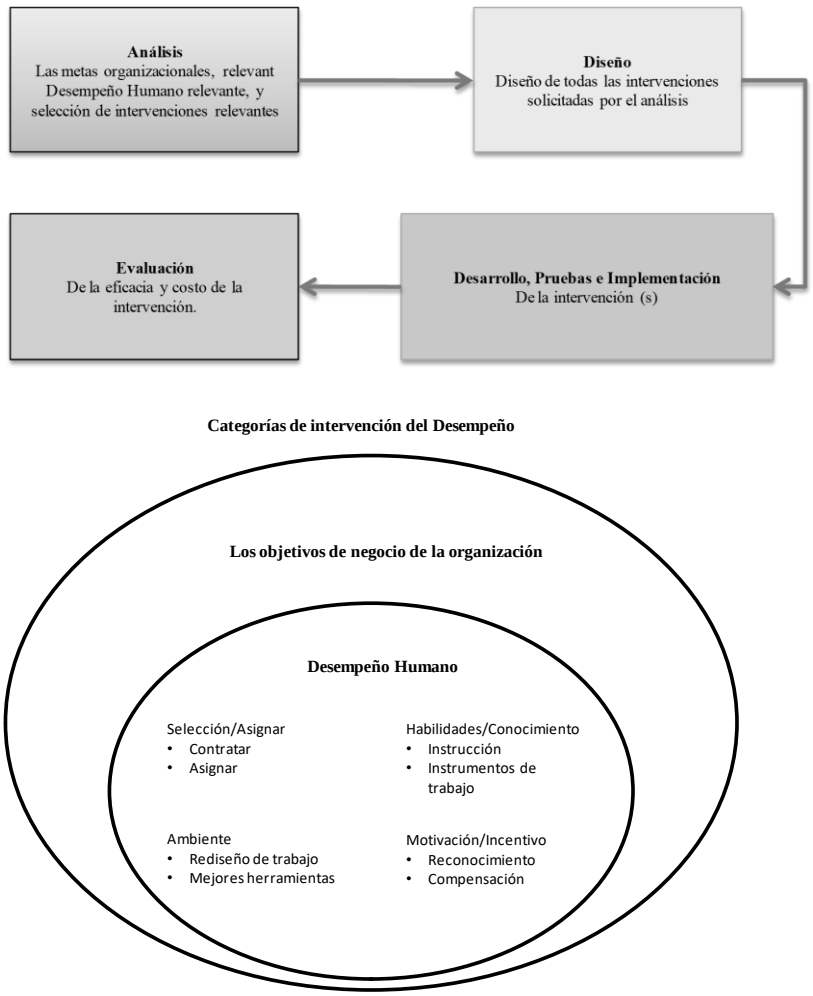
Harless revisó el modelo original de modo que incluye las cuatro fases de análisis, diseño y desarrollo de las pruebas y la puesta en práctica y la evaluación que se hizo muy conocido por su abreviatura, ADDIE (ver Figura 2), y significa Analizar, Diseñar, Desarrollar, Implantar y Evaluar.

Harless propuso a los estudiosos de la tecnología de desempeño que una asociación y enfoque de negocio deben existir a fin de aplicar la intervención de mejor costo-beneficio para la organización.

Figura 2. Modelo posterior de tecnología de la mejora del desempeño



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Ripley, 1997, Adaptado realizado por Gutiérrez (2023)

Wilmonth et al (2010) citando a West (1997) al igual que Moseley et al. (2001) indican que el libro de Mager, Preparando Objetivos de Instrucción, escrito en 1984 y posteriormente revisado en 1997, revolucionó el diseño instruccional y la mejora del desempeño y se considera que es el estándar para

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la profesión del diseño instruccional. Mager introdujo la noción de que los diseñadores de instrucción deberían ir más allá de la determinación de lo que los instructores deben enseñar, sino que deben centrarse en la comprensión de lo que los alumnos deben ser capaces de hacer como resultado de la instrucción.

El trabajo de Mager marcó el inicio de la transición del campo de Tecnología del Desempeño Humano (HPT) hacia metas específicas de desempeño humano. El modelo descompone los objetivos de desempeño en tres componentes: 1) el desempeño, 2) condiciones y 3) criterios (consulte la Tabla No. 1). Mager conceptualizó que el componente de desempeño representa las habilidades que el alumno debe adquirir, el componente de condiciones abarca las situaciones en las que se llevará a cabo el desempeño, y el componente de criterio establece los estándares o niveles de desempeño aceptables. Este modelo contribuyó a cambiar el enfoque del análisis de los procesos de instrucción hacia los resultados, conduciendo a un cambio en el comportamiento de los estudiantes. Además, introduce la idea de que el desempeño humano debe tener normas mensurables aplicadas en condiciones definidas.

Tabla No. 1. Modelo de Mager para objetivos instruccionales

Desempeño (Performance)	Qué es lo que el alumno es capaz de hacer
Condiciones	Las situaciones en las que se producirá el desempeño
Criterio	Calidad o nivel de desempeño considerado aceptable

Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a West, (1997), Adaptado realizado por Gutiérrez (2023).

Bernárdez (2006) al igual que Van T. et al. (2012) reportan que en la obra de Mager (1984) Analizando problemas de desempeño se propuso un flujograma para presentar no solamente los factores de performance, sino el proceso de análisis de causas necesario para entender sus relaciones, indican que en su modelo Mager presenta una serie de pasos que pueden ayudar a identificar y corregir problemas de desempeño, advierte que el modelo no debe interpretarse literalmente, sino que debe utilizarse como una guía para identificar y resolver problemas de desempeño. Si bien gran parte del diagrama de flujo es de naturaleza lineal, partes de él no lo son. Estos componentes no lineales del modelo se presentan como subgrupos que están unidos entre sí por una serie de flechas de fondo que enlazan todos los diversos grupos y subgrupos del modelo (ver Figura No.3)

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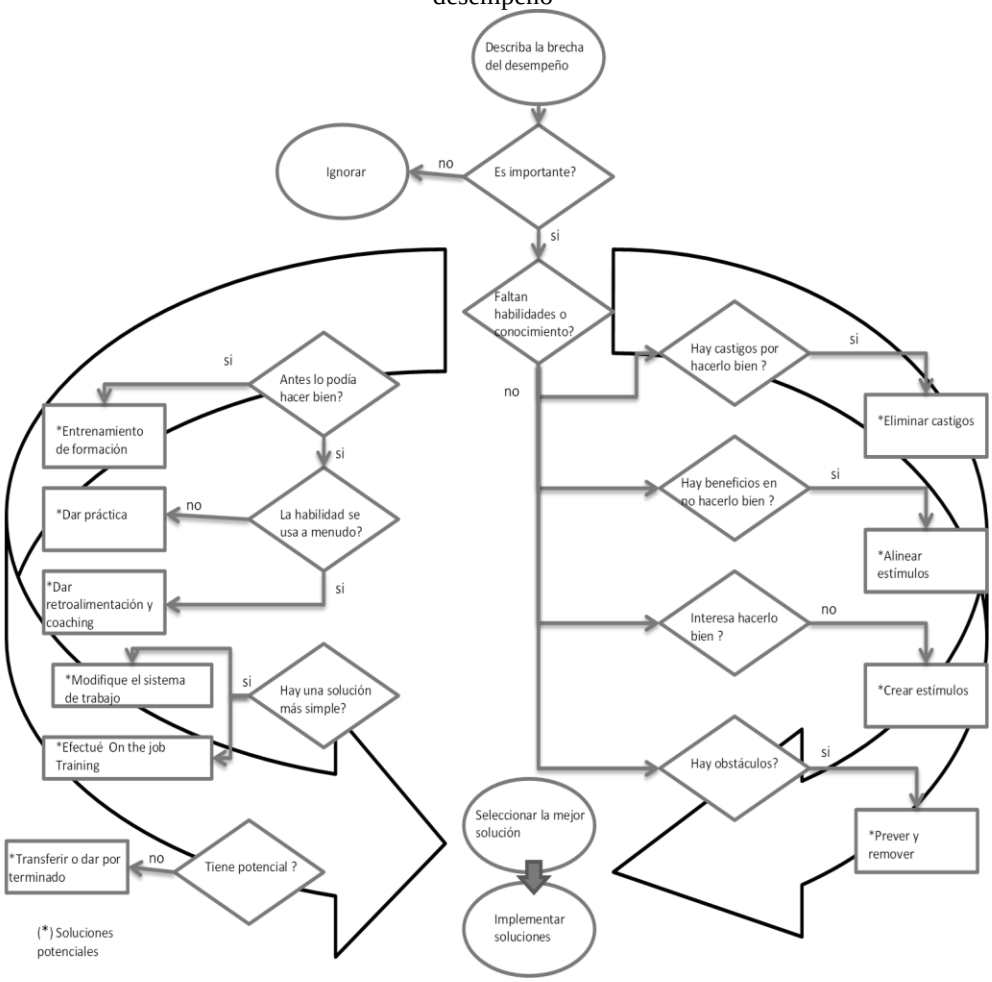
Figura No. 3. Modelo de Mager-Pipe presentando el diagrama de flujo de análisis del desempeño



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Mager & Pipe, (1984) adaptado por Gutiérrez (2023).

Por último, están las múltiples contribuciones formulados por West (1997), Bernárdez (2007) y Rummler (2007) proponen una comparación de la organización como un ecosistema en el que cada componente se encuentra interrelacionado y unido entre sí: Rummler consideró que el análisis debe tener en cuenta el hecho de que el desempeño organizacional y el desempeño individual son únicos y que requieren diferentes soluciones. Desde esta óptica consideraba que el desempeño organizacional es tan importante como el individual.

Si se consideran las nueve variables del modelo de desempeño de Rummler (2007) (Ver Tabla No. 2), el análisis de la organización tiene tres niveles: el nivel de organización, el nivel de proceso, y el nivel de

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puestos/personas. Rummler sostuvo que los tres niveles están relacionados entre sí a través de diferentes funciones dentro de la organización (West, 1997) y Bernárdez (2009).

Los tres niveles de desempeño deben ser considerados y abordados antes de que los problemas de desempeño de la organización se puedan resolver de forma simultánea. Rummler detalla nueve variables de funcionamiento bajo las categorías de objetivos, el diseño y la gestión Bernárdez (2009).

Tabla No. 2. Las nueve variables del desempeño de acuerdo con Rummler

	Necesidades de Desempeño		
Niveles de Desempeño	**Objetivos**	**Diseño**	**Gestión**
Nivel Organizacional	Objetivos Organizacionales	Diseño Organizacional	Gestión Organizacional
Nivel de Procesos	Objetivos de los Procesos	Diseño de los Procesos	Gestión de los Procesos
Nivel de Puestos y Personas	Objetivos de los Puestos	Diseño de los Puestos	Gestión de los Puestos

Fuente: Tomado del modelo propuesto por Rummler (2007), adaptado por Gutiérrez (2023)

En el modelo de Rummler (2010) a un nivel de desempeño en el trabajo, se observa el inicio de una lógica lineal con la entrada a la parte ejecutora, quien después realiza acciones específicas creando así una respuesta de salida productiva, lo que resulta en consecuencias.

Una interfaz de retroalimentación se comunica entre las consecuencias (salida productiva) hacía la parte ejecutora. Rummler ha identificado seis factores que afectan el desempeño humano:1) las especificaciones del desempeño, 2) el soporte de las tareas, 3) las consecuencias, 4) un lazo de retroalimentación, 5) habilidades/conocimiento y 6) capacidad individual. (Ver Figura No. 4)

Un examen a fondo de Rummler de estos factores de desempeño humano establece una base lógica sólida para que otros especialistas en el tema puedan desarrollar acciones bajo un modelo de mejora.

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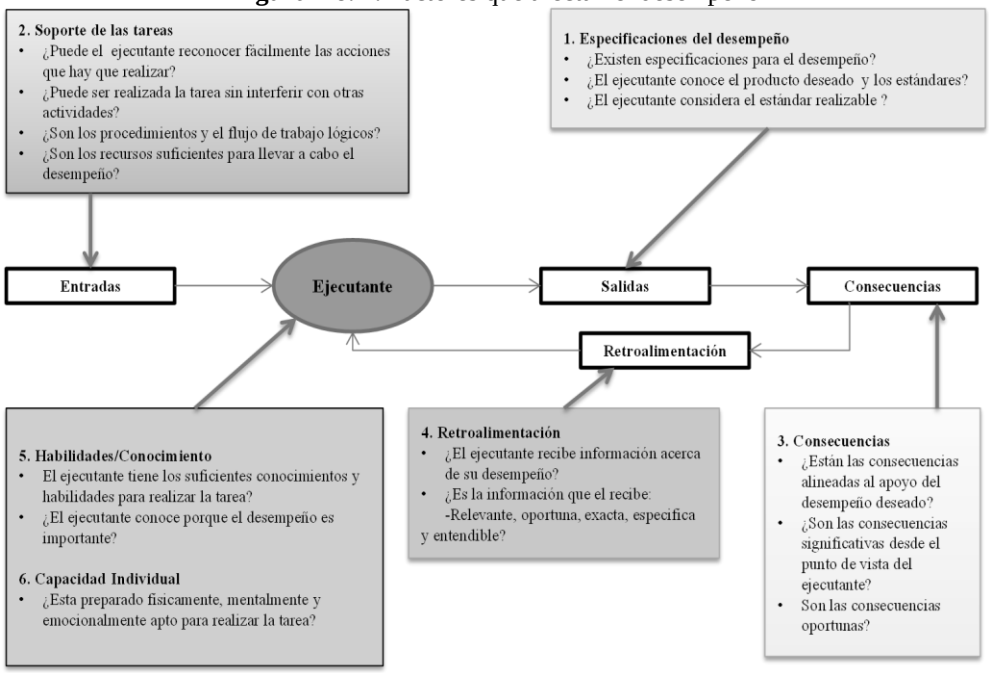
Figura No. 4. Factores que afectan el desempeño



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Rummler, adaptado por Gutiérrez (2023).

El trabajo inicial en los primeros esquemas preparó las bases para hacer una distinción entre una brecha en cuanto a la formación con respecto al desempeño de tal manera que para los futuros profesionales en el tema permitiera construir y probar nuevos modelos. Adicionalmente, el establecimiento de la relación entre el desempeño individual y el desempeño organizacional con su respectiva consonancia y repercusiones ayudó a cimentar la aceptación y credibilidad de las soluciones utilizando la Tecnología del desempeño Humano (HPT).

Clasificación de los modelos

La variedad en contenido y estructura de los diversos modelos de Tecnología del Desempeño Humano (HPT) permite una diversidad de esquemas de clasificación. Es posible identificar orientaciones generales o enfocarse en conjuntos específicos de modelos, como aquellos que se centran en el desempeño individual versus el desempeño organizacional, o que se basan en el modelo de flujo de proceso, como lineales frente a no lineales. Este análisis seguirá el enfoque de Rummler et al. (2010) y comenzará con las categorías de modelos de diagnóstico y de proceso, respectivamente.

Siguiendo la perspectiva de los especialistas, el modelo de diagnóstico orienta al analista de desempeño sobre dónde aplicar la Tecnología del

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Desempeño Humano (HPT), mientras que el modelo de proceso indica cómo aplicarla. Aunque estas categorías son útiles para la mayoría de los modelos estudiados, se observó la necesidad de introducir una tercera categoría: modelos holísticos. La adopción de un enfoque integrado por parte de los modelos en esta categoría justifica su inclusión como un grupo separado. Con estas categorías generales como punto de partida, se evidencia cómo los diversos modelos de HPT se alinean y, en algunos casos, se complementan.

Modelos de diagnóstico

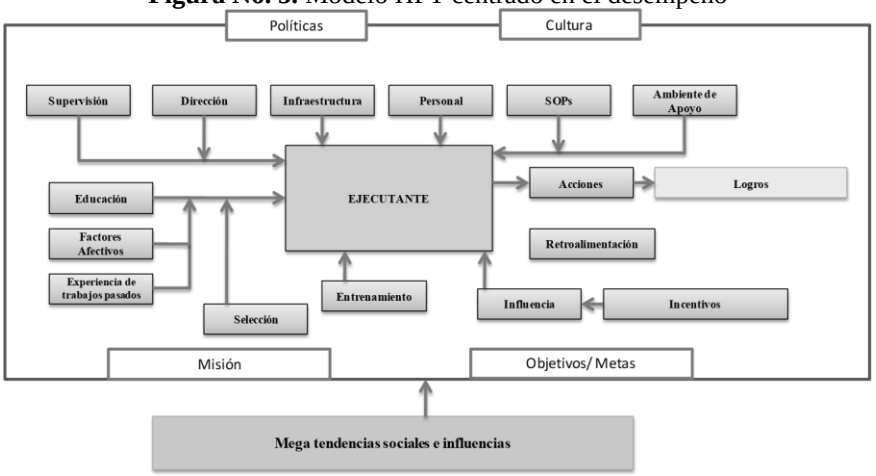
Los modelos de diagnóstico indican al especialista en desempeño en donde se puede aplicar HPT. Harless, con su modelo centrado en la determinación temprana de las metas y el desempeño, pareciera suscribirse a esta dirección de modelado. Rummler realizó el análisis de diagnóstico en toda su gama, con dominios de desempeño organizacional e individuales separados que requieren soluciones distintas. Más tarde los modelos de diagnóstico siguieron los pasos de estos planteamientos iníciales.

El modelo HPT desarrollado por William Daterline (Whiteside, 1998) citado por Wilmonth et al. (2010) se centra en el desempeño humano de manera individual, que el especialista llama al ejecutante (Ver Figura No. 5).

El ejecutante es potencialmente influenciado por múltiples factores, tanto personales como organizacionales. Estos factores son a menudo las fuerzas ajenas que rara vez trabajan en conjunto para mejorar el desempeño individual.

El desafío para el consultor analista de este entorno es el de identificar y comunicar eficazmente estas influencias ajenas a los tomadores de decisiones dentro de la Organización.

Figura No. 5. Modelo HPT centrado en el desempeño



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Whiteside, adaptado por Gutiérrez (2023)

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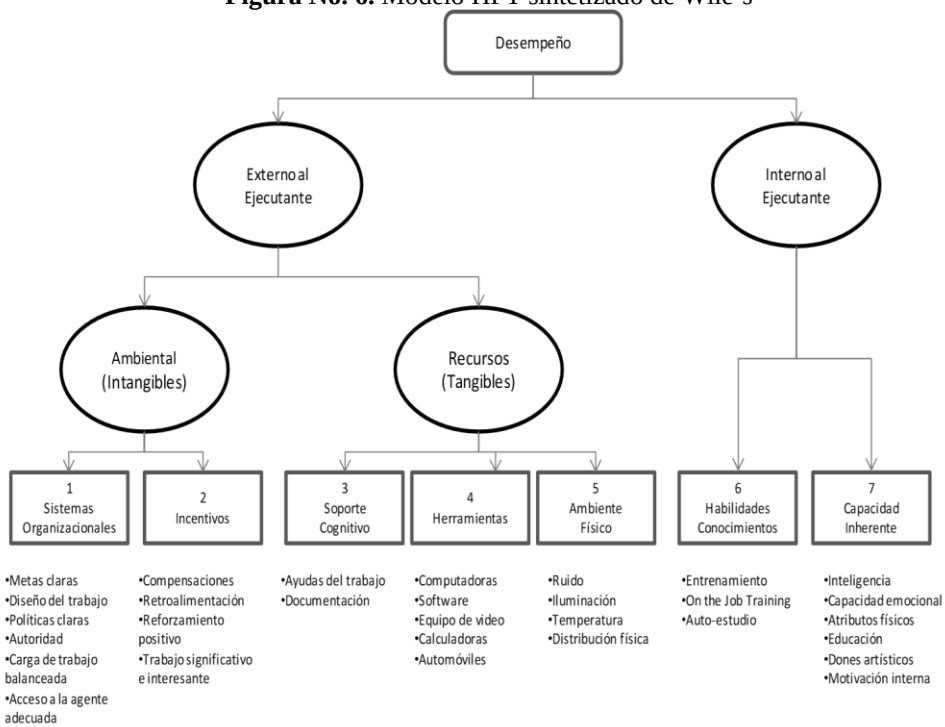
Wile (1996) citado por Wilmonth et al. (2010) sintetiza el modelo HPT en la Figura No. 6, siendo un ejemplo representativo de los modelos de diagnóstico reciente. Emplea un enfoque innovador al presentar dos dominios y patrones separados de análisis a utilizar cuando se examina el desempeño humano, se mantiene fiel a los iniciadores del modelo de diagnóstico, centrándose en los elementos externos e internos para el ejecutante. Se subdivide aún más el dominio de factores externos en las categorías de intangibles y tangibles, y señaló que cada uno requiere intervenciones específicas.

El modelo es único ya que ofrece soluciones concretas a diversos problemas de desempeño y discrimina entre las intervenciones que se están realizando bajo un esquema de entrenamiento y los que no lo son. La simplicidad del flujo de diagnóstico en este modelo hace que sea fácil para el analista de HPT dar los primeros pasos en la solución de un problema de desempeño.

Figura No. 6. Modelo HPT sintetizado de Wile´s



Fuente: Tomado del modelo propuesto por Wilmonth, Prigmore y Bray (2010), citando a David Wile´s, adaptado por Gutiérrez (2023)

El modelo presentado en la Tabla No. 3, se mueve más allá de los modelos individuales de desempeño discutidos previamente. Este modelo, propuesto por Tosti y Jackson (1997) tiene muchas similitudes con el modelo de HPT de Rummler (2007). Los especialistas examinan un problema de

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desempeño en múltiples niveles, incluida la organización, la gente y el trabajo. Su modelo de exploración organizacional gráfica estos niveles contra los criterios de condiciones de dominios, el proceso y los resultados para mostrar las influencias de desempeño en cada una de las nueve áreas de la matriz (Tosti y Jackson, 1997). Hay tres características que hacen de este modelo una herramienta eficaz: 1) es sistemático e integral, 2) es manejable en términos del número de áreas analizadas, y 3) es fácil de comunicar al cliente.

Tabla No. 3. Modelo HPT mostrando los diferentes niveles de influencia en el desempeño

	Condiciones	**Procesos**	**Resultados**
Organización	**Estrategia, Estructura** Misión, estrategia Manejadores externos de los negocios Agrupación funcional Autoridad de decisión/Presupuesto	**Sistemas** Grado de centralización Consistencia de las operaciones Flexibilidad	**Resultados de la Organización** Satisfacción de los inversionistas Satisfacción de los interlocutores sociales Medidas de éxito Alineación de objetivos con la misión
Gente	**Clima, Prácticas** Empresa / Valores individuales Gestión / Liderazgo Normas del equipo Ética, integridad	**Requisitos Ejecutante** Conocimientos, habilidades Ayudas de trabajo / referencias Selección Conferencia	**Motivación, Retroalimentación** Satisfacción de los empleados Frecuencia, ritmo, forma Premios y reconocimiento Expectativas
Trabajo	**Medio Ambiente, Recursos** ambiente físico Herramientas, materiales, información Apoyo al personal / servicios Accesibilidad de los recursos Carga de trabajo, demandas	**Métodos** Asignación de funciones Proceso, procedimientos Flujo del trabajo Duplicidad / brechas	**Productos, Servicios** Satisfacción de los clientes Niveles de productividad Normas / criterios Calidad de la entrega del producto

Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Tosti & Jackson, adaptado por Gutiérrez (2023)

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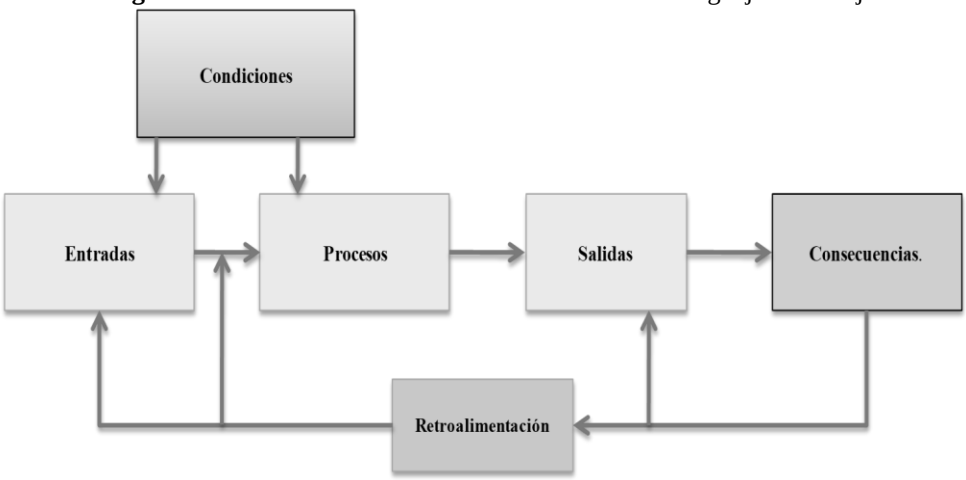
Danny Langdon citado por Wilmonth, et al. (2010), diseñó el último modelo de diagnóstico el cuál examinando en el lenguaje de Landon del modelo de trabajo (Ver Figura No. 7), está diseñado para ser accesible a consultores analistas con menos experiencia, quienes tienen una comprensión de los conocimientos y habilidades de los ejecutantes asociados a una actividad, pero no son capaces de expresar este conocimiento de forma sistemática. El modelo describe el desempeño, como fluye desde la entrada, pasando por los procesos y la salida hacía las consecuencias. Se emplea un sistema de retroalimentación que recuerda al analista que factores externos, llamados condiciones, afectan a la entrada y el proceso mismo.

Figura No. 7. Modelo HPT mostrando el modelo de lenguaje de trabajo



Fuente: Tomado del modelo propuesto por Wilmonth et al. (2010), citando a Danny Langdon, adaptado por Gutiérrez (2023)

Whiteside (1998) citado por Wilmonth et al. (2010), afirma que la simplicidad del modelo de Langdon le permite ser utilizado para examinar el desempeño en cuatro niveles: la unidad de negocio, el proceso principal, el grupo de trabajo, y el individuo. Al igual que en los modelos anteriores, el énfasis está en el diagnóstico de la situación de los problemas del desempeño.

Para ciertos problemas en cuanto al desempeño, el analista sólo puede requerir un modelo que ayude a identificar dónde se encuentran los problemas.

En esos casos, uno de los modelos descritos anteriormente puede ser suficiente y podría ser independiente para abordar el problema. En otros casos, el analista puede desear conocer cómo aplicar una solución bajo un modelo de tecnología del desempeño humano (HPT) para resolver un problema asociado a este concepto. Este enfoque de proceso puede ser utilizado en conjunto con, o en lugar de, uno de los modelos descritos anteriormente.

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Conclusion

Los modelos de desempeño presentados proporcionan una visión de las acciones que pueden llevarse a cabo en una organización para establecer un orden basado en los procesos existentes, de manera que se establezca un punto de referencia enfocándose en el ejecutante y sus resultados, los cuales pueden ser observados de manera tangible en el producto final obtenido.

Es crucial, durante el proceso de modelación, determinar los elementos rectores que validarán los resultados, y esto se logra a través de las políticas y estándares de la organización, que sirven como guía para medir las brechas entre lo deseado y lo real (resultados). De esta manera, los aspectos del desempeño individual pueden ser visualizados en un conjunto de acciones a nivel organizacional.

Al obtener estos resultados según los estándares definidos por la organización, se facilita la medición del desempeño, lo que implica el cumplimiento de objetivos cuantificados. En caso de no alcanzar estos objetivos, es posible identificar causas y establecer líneas de acción con intervenciones específicas para la recuperación y mejora del desempeño, traduciéndose en acciones y un monitoreo continuo de las mismas.

En un lenguaje sencillo, se explican las fases iniciales en los primeros modelos de la Tecnología del Desempeño Humano (HPT) y cómo integran de manera ordenada la efectividad organizacional a través de un sistema estructurado por los procesos existentes en la organización. Esto implica un flujo constante de información y un monitoreo continuo de las funciones departamentales, considerando especialmente los procesos clave que afectan directamente el desempeño de las áreas a intervenir mediante el modelo.

Este modelo incorpora diagnósticos, áreas críticas, factores causales, indicadores, estrategias e instrumentos de control, como la retroalimentación, basándose en las características y elementos contextuales significativos, fundamentados en estándares y atributos de HPT.

Conflicto de intereses: El autor no declaró ningún conflicto de intereses.

Disponibilidad de datos: Todos los datos están incluidos en el contenido del artículo.

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Exploration of the Relationship between Organizational Culture and Its Performance in the Bangladeshi Microfinance Sector with Organizational Innovation as a Mediating Factor

Dr. Parul Akhter, Associate Professor
Dr. Naznin Sultana Chaity, Associate Professor
School of Business, Ahsanullah University of Science and Technology, Tejgaon Industrial Area, Dhaka, Bangladesh

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Abstract

This study aims to explore the relationship between organizational culture and organizational performance, whereas organizational innovation is focused on as a mediating variable in the microfinance organization in Bangladesh. The current study looks at organizational culture, covering mission, employee involvement, and adaptability. Organizational performance is defined by four variables: productivity, effectiveness, efficiency, and quality, while organizational innovation is determined by four variables: innovation strategy, intellectual capital, new process development, and new product development. The study used a self-administered questionnaire using a five-point Likert scale. The data were collected from 300 middle and senior managers and considered Bangladesh's top fifty microfinance organizations. The hypotheses and connections between the constructs were empirically tested using structural equation modeling (SEM) along with the partial least squares (PLS) approach. The findings indicate that organizational culture positively affects organizational innovation and firm performance. Organizational innovation has a strong positive impact on organizational performance. On the other hand, organizational innovation mediates the indirect relationship between organizational culture and performance. The study's findings indicate that executives, entrepreneurs, and

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policy developers should focus on business culture and organizational innovation in addition to increasing efficiency and maintaining a competitive advantage.

Keywords: Microfinance organizations, organizational culture, innovation, performance, Bangladesh

Introduction

Microfinance institutions have received much attention from academics in the past few decades. Since its inception, this industry has expanded significantly, but Bangladesh has faced challenges due to several factors that tend to breed uncertainty. The competitive position of the industry has a significant impact on achievement and sustainability. Rapid technological development and the emergence of market globalization have had an enormous effect on the competitive environments for companies and the formation of new prospects for bolstering the growth of successful ventures. The modern knowledge-driven economy is well understood to comprise a wide range of production and economic methods, organizational innovation and creativity, as well as competency and boosted skills in individuals (Ahmedova, 2015).

Microfinance aims to provide long-term financial support to low-income people and household units. Since microfinance offers monetary and monetary services, it benefits low-income households. Microfinance allows people to easily and ethically obtain a loan for a small business. A physical guarantee is usually needed when clients use loans from monetary institutions like banks (Breza, 2017; Crepon et al., 2015). Microfinance organizations provide credit, deposits, and a range of social development services that help to reduce poverty, foster microbusiness growth, and create jobs. Microfinance institutions (MFIs) have improved Bangladesh's general financial inclusion status by providing microfinance services to 40% of the country's population. MFIs have a significant impact on the nation's economic growth. MFIs do not just offer loans; they also monitor their clients' activities and advise on how best to use the funds. Finally, clients can increase their income and create job opportunities by ensuring their loans are properly used. As a result, MFIs' overall activities are growing quickly. MFI branches and employees have increased by 45.29% and 68.97% over the past seven years (2016-2022). Additionally, the total number of Members and borrowers rose by 41.21% and 30.43%, respectively. In the same time frame, the loan outstanding and disbursement increased by 177.05% and 147.27%, respectively, while client savings increased significantly by 193.56% (MRA, Annual Statistics, 2022).
Organizational culture is a significant weapon to maintain the performance of the organization. It can improve worker efficiency by creating a unique

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motivation for individuals to make their best efforts in taking advantage of the opportunities given by the corporation. Ahmad et al. (2017) state that a company's culture combines values, assets, beliefs, communication, and simplified behaviors that guide society. The fundamental concept of culture arises through numerous learning processes dependent on the right deployment of resources. Employees' decisions are controlled by organizational culture because decisions influence behavior, which in turn affects performance (Han, 2012). Researchers have suggested looking for a mechanism by which organizational culture influences performance/achievement to investigate the effect of organizational culture on institutional success/ performance, as linking organizational culture to firms' performance directly may produce unclear results (Panuwatwanich & Nguyen, 2017). According to research, the culture of the organization and its characteristics have been studied as a predictor of enterprise success (Garavan et al., 2021). In contrast to capabilities, which are decisions and actions in the use of resources, organizational culture, through organizational values, vision, management structures, and decision-making processes, aids in the mobilization, allocation, and use of resources to further business objectives (Chan et al., 2004). Therefore, a firm's organizational culture will be strengthened by its culture of organization for enhanced efficiency.

This research discovers the connections between the culture of the organization forms and organizational achievement/ performance, using the organization's innovation as an instrument to view how organizational culture affects the performance of microfinance organizations. The researchers attempt to study how the various forms of organizational culture stimulate organizational performance and whether organizational innovation controls the connection between organizational culture forms and organizational performance by employing information gathered from MFIs in Bangladesh. By comparing the direct and indirect effects of various forms of firm culture on organizational performance, our research expands the idea of institutional culture as a modest resource. It links it to microfinance organizations' success. We particularly add to the body of knowledge of organization capabilities and examine looking into mediators between organizational culture and organizational performance. Researchers know that organizational culture's effects on organizational performance depend on the context. This study meets the need for studies of organizational culture and organizational performance to be set within the context of microfinance organizations in a developing nation.

The remaining portions of the research work are as follows: section two reviews the most pertinent literature. Section three describes the research data, model specification, and techniques. Section four analyzes the empirical outcomes and the resulting interpretations, and section five concludes and

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discusses the findings. Practical implications, limitations, and future research directions are presented in Sections six and seven, respectively.

Literature Review and Hypotheses Development

Organizational Performance

The assessment of how successfully and efficiently a company performs its objectives and targets is called performance at the organizational level. It includes various elements, including economic outcomes, profitability, client satisfaction, staff involvement, and overall competitive achievement. Excellent organizational performance denotes competent management, strategy alignment, and the capacity to react to evolving situations, leading to long-term development and achievement. According to Carton (2004), Business performance contributes to the continued existence of an organization. Much earlier research has concentrated on the association between an organization's culture and organizational success/performance (Acar & Acar, 2014; Kadek et al., 2019). According to academics, several variables can influence the overall achievement/performance of the institutions, such as staff job satisfaction (Latif et al., 2013), employee commitment, and organizational innovation of the company (Franco & Suguna, 2017). Company acquiring procedure, company culture (Abubakre et al., 2014), and company commitment (Macedo et al., 2016). Organizational performance (OP) is defined as the aggregate of all business/department achievements. These successes are associated with achieving an organization's objective within a specific time frame. The idea of business performance is linked to the business's ability to survive and thrive (Ahmed & Shafiq, 2014).

Organizational Culture

Organizational culture (OC) is the shared views between individuals in a company (Hofstede et al., 2005). According to Denison (2000), organizational culture is a critical determinant in the efficiency of an organization. The four characteristics of the company's culture are engagement, consistency, versatility, and mission. Employee conduct reflects a company's culture. The behavior of employees is shaped by shared common knowledge concerning the organization's principles (Warrick, 2017). Organizations desire personnel who share their beliefs with the company's other employees. It implies that firms may retain inventive employees. Organizational innovation is feasible because of the daily routine and harmony (Sung & Choi, 2014). Organizational culture serves four functions: giving individuals an awareness of identity, increasing commitment, developing organizational principles, and molding conduct via a management system (Nelson & Quick, 2011). According to Ahmed and Shafiq (2014), corporate culture influences many aspects of organizational achievement. According to

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(Strewart, 2010), a company's norms and principles significantly impact people who are completely committed to the organization.

Regarding him, norms are inaccessible, but if firms want to boost their profitability and employee efficiency, they must be addressed first. Organizational culture is the common values, beliefs, customs, and behaviors that determine how employees interact and operate within a firm. It represents an organization's identity, impacting staff attitudes, decision-making processes, and efficiency. A culture of wellness promotes cooperation, efficiency, effectiveness, and an enjoyable workplace. Mission pertains to how a business identifies its long-term strategy and goals and evaluates performance against set objectives. Long-term vision, or a business's understanding of mission, is a characteristic of culture closely related to achievement (Sinkula et al., 1997). In their study, Nguyen et al. (2019) discovered that the mission of business organizations is effectively connected with the organization's innovation. The mission aspect offers a vision of what the business will appear like in the decades to come and defines the business sense of aim and strategy. It also influences and evaluates initiatives toward the business's vision (Yilmaz & Ergun, 2008). Organizational plans and objectives embody the business's ideals; consequently, they may foster the organization's innovation.

Organizational Innovation

The concept of " organizational innovation (OI) " mentions "performing something distinct," which can be dangerous, expensive, and time-demanding (Costello & Prohaska, 2013). Organizational innovation acknowledges innovative items, services, and organizational innovation that must be adopted and applied. Examples of organizational innovation are businesses' goals, mission, and goal assertions, which include terminology. Innovation in an organization fosters the development of new techniques, products, services, and technologies (Kahn, 2018).

Culture is extremely important and is an essential aspect of innovation in an organization. The variable path of organizational innovation includes acquiring knowledge and developing innovative ideas. Culture and imaginative mindset are inextricably linked and encourage individuals to attain goals, aiding in achieving organizational innovation and competitiveness. Cultural obstacles may also impede the process of innovation and efficiency in an organization (Leal-Rodrguez et al., 2014).

Culture is viewed as a continuous progress mechanism, and social knowledge and the organizational framework are two strategic factors that affect inventiveness and competitive potential (Petrakis & Kostis, 2013). According to a recent study by Prajogo and McDermott (2011), organizational background can be a crucial predictor of organizational sustainability. It is also

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said that individuals' inventiveness is a critical aspect that greatly enhances organizational growth, efficacy, and survival (Zain & Kassim, 2012). Many scholars have explored the association between an organization's innovation and organizational achievement across decades. Innovation in an organization is critical to achieving operational success. Researchers have also discovered that organizational innovation has an enormous effect on the success of an organization (Shanker et al., 2017). Firms can improve their effectiveness and efficiency through innovation.

In contrast to non-innovative firms, innovative businesses are growing better at offering new products and services to meet customers' requirements (Cardoso de Sousa et al., 2012). Several studies have indicated that innovation improves an organization's performance (Huang et al., 2016; Noruzy et al., 2013). Organizational innovation is founded on technological advances and research, enabling new ways to accomplish things (Jensen et al., 2007). Many academics have investigated the connection between organizational innovation and business achievement over the years. Innovation in an organization is critical for achieving operational success. Scholars have also found that organizational innovation significantly impacts a company's success (Glor, 2013; Shanker et al., 2017). Organizational innovation is critical to ensure excellent operational effectiveness in businesses that provide services (Wang et al., 2016).

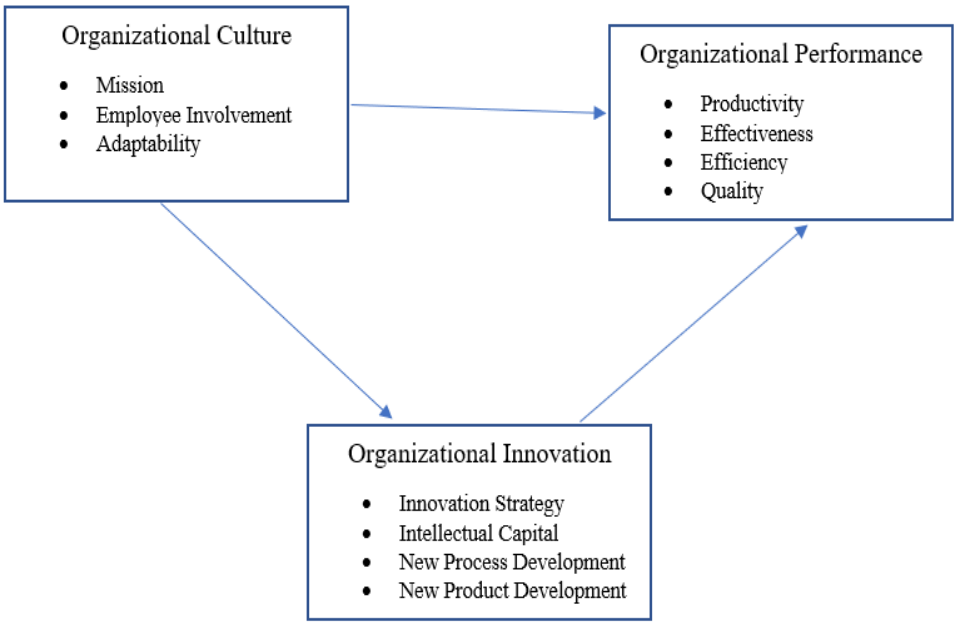

Figure 1. Research Model

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The following research hypotheses guided the study:

Hypothesis 1: Organizational culture is positively associated with organizational performance.

Hypothesis 2: Organizational culture is positively associated with organizational innovation.

Hypothesis 3: Organizational innovation is positively associated with organizational performance

Hypothesis 4: Organizational innovation mediates the association between organizational culture and organizational performance.

Research Methods

The study investigates the consequences of organizational innovation as a mediator in the association between firm culture and organizational success/performance in microfinance organizations in Bangladesh. As a result, exploratory research is required. A technique is employed to achieve this goal. Exploratory research is a method for investigating and creating theories. Many research projects are exploratory. Exploratory research is associated with exploration and the investigator's position in social science domains (Davies, 2006). Exploratory research is an initial investigation that can be used to describe and clarify the underlying cause of a certain problem (Zikmund, 2003). Respondents in this study were from Bangladeshi microfinance organizations. Mid-level and senior managers are eligible to participate in this study. In this study, purposeful sampling is used. A thorough questionnaire survey collected data. The data was gathered using a systematic survey procedure. Four hundred fifty surveys were distributed throughout the top fifty microfinance organizations, with 300 being acceptable. Nearly 98 interviews were invalid because the responses were never returned, and 62 questionnaires were not conducted. In total participation, 65% were male and 45% female, more than 76% had a Bachelor's degree or more, almost 75% had 10-20 years of work experience, and more than 88% were over 30 years old. The collected data were analyzed to evaluate the hypothesis and relationship between exogenous and endogenous aspects by applying structural equation modeling (SEM) along the partial least squares (PLS).

Results

According to Lei and Lomax (2005), the estimation technique and data non-normality settings have no substantial influence on the standard errors of connected parameter estimates. They also revealed that increasing the sample size reduced standard errors. The chi-square was most resistant when contrasted with normed, non-normed, and comparable model fit indexes. It is also recommended that a sample size of 100 or greater be utilized to generate

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accurate parameter estimates (Reinartz et al., 2009). The researchers considered 300 samples for evaluating the data.

Measurement Model

The current study conducted exploratory data analysis on several hypotheses before commencing the main analysis (Hair, Black, Babin, & Anderson, 2010). Following the fulfillment of all hypotheses, the theoretical framework was evaluated utilizing Smart PLS software with partial least square (PLS) method modeling. PLS analysis was also utilized to analyze the data's accuracy and dependability (Ramayah, Lee, & In, 2011). The concerns of reliability and validity are necessary in order to evaluate latent constructs using indicator variables. Reliability describes the degree of organization consistency among different variable levels. It acknowledges the extent to which a particular construct's assessment is devoid of random error and produces the same results in repeated trials (Gable & Wolf, 2012). Internal consistency and repeatability are two characteristics of reliability. These parameters should be measured using the internal coherence technique (Zikmund et al., 2002). While accuracy is evaluated by convergent validity, the average variance extracted (AVE), and discriminate validity, reliability is assessed using Composite Reliability (CR). The results for each component's cross-loadings, loadings, and Cronbach's alpha will be applied to assess the reliability of the measurement device. Cronbach's alpha estimates of 0.70 or above indicate greater reliability (Hair et al., 1998). Cronbach's alpha coefficient, composite reliability, and AVE are shown in Table 1 and Table 2. Organizational innovation (OI) consists of four variables: innovation strategy (OI1), intellectual capital (OI2), new process development (OI3), and new product development (OI4), with cross-loading values of 0.922, 0.943, 0.968, and 0.865, respectively. Organizational culture (OC) includes three variables: mission (OC1), employee involvement (OC2), and adaptability (OC3), with cross-loading values of 0.867, 0.916, and 0.739, individually. Organizational performance (OP) is comprised of four variables: productivity (OP1), effectiveness (OP2), efficiency (OP3), and quality (OP4), with cross-loading values of 0.712, 0.750, 0.902, and 0.874, respectively.

The cross-loading values in this study vary from 0.712 to 0.968, indicating a high level of internal consistency (Nunnally & Bernstein, 1994). Cronbach alpha and composite reliability ratings exceeded the recommended threshold point of 0.70 (Hair et al., 2013). The convergent validity of the test result is subsequently assessed by using Average Variance Extracted (AVE), as shown in Table 2 above, in which any outcomes are greater than 0.5, Hair and colleagues (2016).

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Table 1. Cross Loadings

Latent Variables	ITEMS	Innovation	Culture	Performance
Organizational Innovation (OI)	OI1	0.922	0.343	0.485
	OI2	0.943	0.375	0.522
	OI3	0.968	0.418	0.567
	OI4	0.865	0.479	0.698
Organizational Culture (OC)	OC1	0.383	0.867	0.341
	OC2	0.464	0.916	0.469
	OC3	0.223	0.739	0.245
Organizational Performance (OP)	OP1	0.537	0.391	0.712
	OP2	0.299	0.187	0.750
	OP3	0.541	0.384	0.902
	OP4	0.575	0.386	0.874

Source: Calculated by the authors

Following that, the cross-loadings criterion was used to assess the discriminating validity of the construct (Hair et al., 2016). The Cronbach alpha values for the constructs are shown in Table 2: 0.944 for organizational innovation, 0.802 for organizational/firm culture, and 0.829 for organizational achievement/ performance. Consequently, all of the Cronbach alpha values are greater than 0.7, which is an adequate dependability number (Nunnally & Bernstein, 1994). Over and above Cronbach alpha values, Composite Reliability (CR) was examined, with 0.7 being the appropriate level (Hair et al., 2010). The consistency of a group of parameters is verified with the degree to which the variables are anticipated to be assessed when assessing the indicators' dependability (Urbach & Ahlemann, 2010). Composite reliability (CR) estimations are expected to be adequate to work with a certain construct assessment. Chin (1998) says the indicator loading level should be below 0.7.

Table 2. Reliability and Validity of Constructs

Latent Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (Ave)
Organizational Innovation (OI)	0.944	0.958	0.856
Organizational Culture (OC)	0.802	0.883	0.712
Organizational Performance (OP)	0.829	0.886	0.661

Source: Calculated by the authors

In the present research, the composite reliability of all components was greater than 0.70. As a result, the data from this investigation demonstrated good internal consistency. Convergent validity determines whether or not the

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items represent the constructs. Convergent validity was examined in the current research by examining the outcomes of the loading of items and the extracted average variance (AVE). Factor loading levels 0.60 are appropriate (Joseph Hair et al., 2006). Based on the results obtained, it is possible to conclude that the AVE and item loading levels are adequate for data validity.

Table 3. Latent Variable Construct

Latent Variables	Innovation	Culture	Performance
Organizational Innovation (OI)	1.000		
Organizational Culture (OC)	0.446	1.000	
Organizational Performance (OP)	0.629	0.437	1.000

Source: Calculated by the authors

Discriminant validity can be ascertained for each potential couple of constructs by restraining correlations of parameter estimates amongst those to 1.0 (Anderson & Gerbing, 1988). Discriminant validity is utilized to distinguish measures for latent variables from one another. It attempts to evaluate that the indicators do not measure what it is not expected to measure (Urbach & Ahlemann, 2010).

Predictive Relevance

Confirmatory factor analysis has been employed to address convergent validity. Anderson and Gerbing (1988) mentioned that statistically significant loadings of each factor with the construct indicators can be considered supporting evidence for the validity of the convergence of constructs. The validity of convergence attempts to evaluate the degree to which every item reflects a corresponding construct, converging to indicator variables while measuring other constructs (Urbach & Ahlemann, 2010). Average Variance Extracted (AVE) is applied in the research work to measure convergent validity. An acceptable degree/level of convergent validity could be attained if levels/values of AVE are not as much as 0.5 (Fornell & Larcker, 1981).

Structural Model

The structural model of the PLS study allows for the assessment of hypotheses. The path coefficient, t statistics, average estimate, and error are considered in this case. The structural model for testing hypotheses is displayed in Table 4. The researchers calculated the p-value and t-value in the structural model to assess the proposed hypotheses. The hypotheses can be recognized if the p-value or t-value is less than 0.05 or higher than 1.96.

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Table 4. Path Coefficients and Hypothesis Testing

Relationship	Hypothesis	Beta Coefficient	T Statistics	P value	Level of Significance	Comments
OC→ OP	H1	0.195	4.202	0.000	***	Significant
OC→ OI	H2	0.446	9.029	0.000	***	Significant
OI→ OP	H3	0.541	12.687	0.000	***	Significant

Source: Calculated by the authors

The findings from the structural model, in particular, show a strong correlation between organizational culture and organizational performance ($r = 0.195$, $t = 4.202$, $p < 0.000$), amply demonstrating the validity of hypothesis H1. The result reveals that organizational culture factors such as mission, employee involvement, and adaptability have a positive and substantial relationship with organizational performance measures such as productivity, effectiveness, efficiency, and quality. Results from the structural model, in particular, display a strong positive relationship between organizational culture and organizational innovation ($r = 0.446$, $t = 9.029$, $p<0.000$), firmly establishing the hypothesis H2. The study presents that organizational culture elements such as mission, employee involvement, and adaptability have a positive and significant relationship with organizational innovation, as determined by innovation strategy, intellectual capital, new process development, and new product development. The findings from the structural model, in particular, show a strong and positive connection between organizational innovation and organizational performance ($r = 0.541$, $t = 12.687$, $p<0.000$), amply demonstrating the validity of hypothesis H3. According to the study, organizational innovation elements such as innovation strategy, intellectual capital, new process development, and new product development all have a positive and significant relationship with organizational performance measures such as productivity, effectiveness, efficiency, and quality. The outcomes show that the endogenous and exogenous variables in the PLS-SEM study have a significant relationship. The R-square statistic of the model was assessed, as well as its predictive power. Table 3 shows that 42.6% of the variance in firm competitiveness was explained by the endogenous latent variable, with a regression coefficient (R2). The coefficient of determination (R2) value reveals how much variation in the endogenous variable is caused by the exogenous variables. The present research obtained an R2 value of 0.426, indicating that the independent variables influence the dependent variable by 43%. Thus, the two independent factors included in this study account for 43% of the variation in organizational success/ performance. The remaining 57% variation is due to additional factors not explored in this study.

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Mediating role of Organizational Innovation

Table 5. The Test's Results for the Moderating Effect

Relationship	Hypothesis	Beta Coefficient	T Statistics	P value	Level of Significance	Comments
OC→OI→ OP	H4	0.242	8.121	0.000	***	Significant

Source: Calculated by the authors

The connection between organizational/firm culture and organizational achievement/performance was examined for the mediating impact of organizational innovation. The path coefficient of the association between firm/ organizational culture, organizational innovation and organizational achievement/ performance is 0.242, as shown in Table 5. T statistics for this are 8.121 (P<0.000), which corresponds. Therefore, at a 1% level, it is noteworthy. The result indicates that the affiliation between organizational culture and organizational performance is influenced by organizational innovation as a mediating variable. Thus, hypothesis H4 is widely accepted. This study investigates the indirect effects of organizational culture indicators such as mission, employee involvement, and adaptability on organizational performance measures such as productivity, effectiveness, efficiency, and quality, with organizational innovation aspects such as innovation strategy, intellectual capital, new process development, and new product development serving as a mediating variable.

Discussion

The current study explores the relationship between organizational culture and performance in the Bangladeshi microfinance industry, with organizational innovation as a mediating factor. The findings indicate that organizational culture has a positive and significant relationship with organizational innovation and business performance. Organizational innovation has a significant positive impact on organizational performance. On the other hand, organizational innovation acts as a go-between for the indirect relationship between organizational culture and performance. Some prior study findings suggest that the proposed model is an adequate match. This study's findings were compared to the conclusions of previous studies, which are as follows:

The research found that organizational culture has a beneficial and substantial effect on the organizational performance of financial organizations. The results presented are consistent with those of Abuzarqa (2019) and, Pawirosumarto et al. (2017), Ahmed and Shafiq (2014). Shahzad et al. (2012). According to Ahmed and Shafiq (2014), all dimensions of organizational culture promote various perspectives on the success of organizations. According to Shahzad et al. (2012), organizational culture

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enormously affects organizational performance. These findings support earlier arena investigations, such as those of Abuzarqa (2019) and Pawirosumarto et al. (2017). The organizational culture illustrates the capacity of banks to adapt to modern and operational developments while improving performance through enhanced procedures.

The study also discovered that organizational culture has an important and beneficial effect on organizational innovation. Smith and Webster (2018) stated similar findings, stating that flexibility is interrelated to organizational innovation. Financial institutions and banks require versatility to change regulations or technology. Smith and Webster (2018) emphasized that organizational culture boosts organizational innovation.

Organizational innovation has been found to impact how well an organization performs greatly. The findings of earlier studies, including those by Huang and Hou (2019), Valmohammadi (2017), and Shanker et al. (2017), lend support to the findings. In the context of the banking industry, continuously developing new approaches to handling and managing customers by implementing new technology is crucial to attaining improved efficiency. Businesses with organizational frameworks incorporating administrative and technological innovation can better handle the demands of a competitive environment. Companies must develop innovative skills to demonstrate organizational efficiency (Johannessen & Skaalsvik, 2015; Liu, 2013; Farhangmehr et al., 2006). Culture can either promote or stifle creativity. It indicates that firms should attempt to acquire culture to foster innovation and survive in an atmosphere of competition because the culture encourages risk-taking, autonomy, and adaptability (Zafar et al., 2016).

Conclusion

The present study investigates the association between organizational culture and performance in the Bangladeshi microfinance industry, with organizational innovation as a mediating variable. The researchers employed a self-administered questionnaire using a five-point Likert scale. The statistics were gathered from 300 middle- and senior-level managers of microfinance organizations in Bangladesh. The study used structural equation modeling (SEM) and the partial least squares (PLS) technique to evaluate hypotheses and connect components. The findings show that organizational culture is positively and significantly related to organizational innovation and business performance. Organizational innovation has a strong positive and significant impact on overall organizational performance. The research examines the indirect impacts of organizational culture variables like mission, employee involvement, and adaptability on organizational performance, including productivity, effectiveness, efficiency, and quality, using organizational innovation features such as innovation strategy, intellectual capital, new

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process development, and new product development as mediating roles. This study intends to assist entrepreneurs, human resource managers, practitioners, and strategists to understand organizational efficiency and overall performance more effectively.

This study's results have implications for concept and practice. The research work, which was directed in Bangladesh specifically because there is a need for more investigation on the associates between organizational/firm culture, organizational innovation, and productivity, is one of some researchers ever evaluated in the microfinance industry. The outcomes of this research work provide middle and senior managers of microfinance institutions with beneficial applied guidance about organizational/firm culture components. These findings demonstrate the importance of organizational culture as an approach to promoting creativity and effectiveness in Bangladesh's microfinance industry. Achievement and improved organizational effectiveness would be certainly influenced by developing a culture characterized by business procedure steadiness, the capability to adapt to environmental factors, teamwork, honesty, freedom, commitment, and employee involvement in decision-making processes. Managers of microfinance institutions in Bangladesh should encourage their staff to form novel philosophies and provide them with the right incentives so they can establish a creative business atmosphere.

The present research has some drawbacks. Because only the top fifty microfinance institutions were considered, the study's findings could be more precisely accurate due to the small sample size. This study's short time frame is yet another drawback. Consequently, future research could extend this study to other industries in Bangladesh. Future research can use more data and a wider range of sectors better to understand the link between organizational culture and performance as driven by organizational innovation.

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Data Availability: All of the data is included in the study.

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Navigating the Digital Frontier: A Literature Review on Business Digitalization

Btissam Benga
Azzouz Elhamma
Research laboratory in organizational management sciences
National School of Commerce and Management of Kenitra
Ibn Tofail University of Kenitra, Morocco

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Abstract

The rise of digital technology has compelled organizations to undergo significant changes or, at the very least, reassess their operational strategies. Many major corporations have poured significant financial resources into what is commonly referred to as "Digitalization." Digitalization, the integration of digital technologies into various aspects of life and business, has revolutionized industries across the globe, but even if Digitalization offers numerous benefits, including increased efficiency, innovation, and improved customer experiences, it also presents challenges such as security risks, the digital divide, technological dependency, and ethical considerations. The objective of our article is to present a literature review on digitalization and provide an overview of the notable constraints and obstacles associated with digitalization and its advancement. The literature review concerning digitalization was conducted through a systematic search across various research databases and platforms including but not limited to ScienceDirect, Google Scholar, and ACM Digital Library. Articles, research papers, books, and conference proceedings published between 2012 and 2024 were considered for inclusion in the review. Synthesizing and analyzing information from various publications and authors revealed a comprehensive understanding of the challenges and opportunities associated with digitalization. The results highlighted common themes such as security risks,

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the digital divide, technological dependency, ethical considerations, and the demand for digital resources. Additionally, the review identified key strategies for addressing these challenges and leveraging digital technologies for positive societal impact.

Keywords: Digitalization, Organizations, Integration, Costumer experiences, Challenges

1. Introduction

In recent decades, the forces of globalization have intensified the need for businesses to adapt. This adaptation is essential not only for survival but also for thriving in competitive landscapes. Efficient adaptation requires businesses to seamlessly integrate digital processes and collaborative tools. Consequently, the significance of digital transformation has grown exponentially. Research underscores the necessity of incorporating digital transformation into existing business frameworks, as it encompasses more than just technological changes. It affects various facets of business operations (Elhamma, 2023). Successful business transformation hinges on the ability to both leverage existing resources and explore new possibilities to enhance organizational agility.

Digital technologies have the potential to disrupt the competitive landscape by reshaping traditional markets. The emergence of platforms has revolutionized existing market structures, leading to the advent of the sharing economy. These platforms facilitate the exchange of digital goods and services, blurring the lines between traditional market boundaries. In this virtual domain, competition transcends physical constraints, allowing for faster and more fluid information flows. As a result, the barriers to entry that once hindered new entrants become less significant in the face of digital innovation.

This article dives deep into the complex world of digitalization, examining its definitions, numerous advantages, and built-in limitations. With the global economy steadily moving towards digital integration, grasping the nuances of this trend becomes crucial for businesses striving to stay competitive in an increasingly interconnected world.

As businesses worldwide wrestle with the need to adapt and innovate, understanding the complexities of digitalization emerges as a vital strategic requirement. From streamlining operations to enhancing customer experiences, the potential rewards of digital transformation are extensive and alluring. Yet, amidst the promises of efficiency gains and expanded markets, there are challenges and constraints that require careful consideration.

By navigating through the intricacies of digitalization, this article aims to provide businesses with the insights needed to fully leverage its potential

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while mitigating inherent risks. In doing so, it aims to be a guiding light amidst the ever-changing landscape of the digital age, empowering enterprises to chart a path towards sustainable growth and resilience in this digital era. The literature review for this article was conducted through a comprehensive search strategy aimed at capturing relevant studies pertaining to digital transformation and its associated challenges and benefits. Relevant kinds of literature were obtained through academic databases such as Scopus, IEEE Xplore, and Google Scholar. The search encompassed a variety of keywords and phrases including digital transformation, business innovation, digitalization challenges, and among others. Studies were selected based on predefined inclusion criteria, which included relevance to the topic, publication in peer-reviewed journals, and recency of publication. Exclusion criteria comprised studies not available in English, duplicate publications, and those lacking empirical evidence or substantial theoretical contributions. A total of 64 studies were identified and included in the review process. The synthesis and analysis of findings were carried out by systematically categorizing and comparing insights from various publications and authors, allowing for a comprehensive understanding of the complexities and nuances surrounding digital transformation in business contexts.

This article will be structured as follows: Firstly, we will clarify the notion of digitalization through a literature review, then, we will present the components of the digitalization phenomenon, and finally, we will point out the main advantages and limits of the digitalization of businesses.

2. Definition and components of digitalization

2.1. Digitalization's definition

The digitalization of companies involves incorporating digital technologies and solutions across all facets of a business or organization (Elhamma and El-moumane, 2023). This evolution entails leveraging digital tools, technologies, and data to optimize business operations, boost efficiency, and align with the evolving digital landscape. It encompasses aspects like operations, communication, customer engagement, marketing, and the broader spectrum of business processes.

The industrial management literature defines digitalization as the phenomenon of intelligent connected machines that information and digital technologies power (Lenka et al .2017).

Digitalization is defined as the use of digital technologies and of data in order to create revenue, improve business, replace/transform business processes, and create an environment for digital business, whereby digital information is at the core (Clerck, 2017).

Digitalization is the growing application of ICT across the economy "encompassing a range of digital technologies, concepts and trends such as

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artificial intelligence, the “Internet of Things” (IoT) and the “Fourth Industrial Revolution” (Morley et al. 2018).

Digital transformation is the combined effects of several digital innovations bringing about novel actors (and actor constellations), structures, practices, values, and beliefs that change, threaten, replace, or complement existing rules of the game within organizations, ecosystems, industries, or fields (Hinings et al. 2018).

Digitalization is the process of spreading a general-purpose technology. The last similar phenomenon was electrification. Digitalization of products and services shortens distances between people and things. It increases mobility. It makes network effects decisive. It allows the use of specific data to such an extent that it permits the satisfaction of individual customer needs – be it consumers or businesses. It opens up ample opportunities for innovation, investment, and the creation of new businesses and jobs. Going forward it will be one of the main drivers of sustainable growth (Devereux and Vella, 2018).

The concept of "digital transformation" is derived from the broader notion of "digitalization", which refers to the utilization of digital technologies to drive business innovation and generate new sources of revenue and value (Kohtamäki et al .2019).

The term "digital transformation" encompasses much more than simply incorporating new technologies. It represents a fundamental shift in business models, encompassing a change in approach to internal and external processes. To fully realize the benefits of digitalization, companies must cultivate new skills, foster a supportive corporate culture, and adopt innovative organizational and operational models (Eller et al .2020).

The advantages of digital transformation are substantial, encompassing heightened efficiency, speed, and quality of work, along with cost reductions, enhanced asset utilization, and overall business efficacy.

Digitalization offers tremendous opportunities for improving efficiency, speed, and quality of work, reducing costs, enhancing asset utilization, and optimizing the use of raw materials, labor, and other key aspects of business performance. It is a complex phenomenon that encompasses various levels, including digital entrepreneurship, digital strategies, digital processes, and digital education (Kraus et al .2019). furthermore, orchestrating a successful digitalization effort can be challenging, as it requires restructuring existing processes, realigning strategic goals, and adjusting organizational structures (Hinings et al .2018).

Digitalization is considered the set of changes that digital technology causes or influences in all aspects of human life (Benkaraache and Ghanouane, 2020)

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The term “digitalization” goes beyond simply digitization (Apte and Nerlekar, 2020) although digitization typically refers to the straightforward conversion of analog information into digital form, the terms "digital transformation" and "digitalization" are often used interchangeably and encompass a wider array of political, commercial, and social issues. They refer to the integration of innovative digital technologies related to the Internet into a company's operations (Benkaraache and Ghanouane, 2020).

Research emphasizes that Digitalization should be included in the existing business perspectives, as this topic addresses much more than just technological shifts (Bouncken et al . 2021).

The combination of various technologies, such as cloud technologies, sensors, big data, and 3D printing, enables the development of entirely new products and business models that incorporate digital services within physical products (Abou-foul et al .2021).

Several researchers from different disciplines have contributed to the evaluation of Digitalization and its opportunities and challenges (Burton-Jones et al. 2020; Hai et al. 2021). As digitalization reshapes industries, its impact extends beyond mere economic shifts to affect societies at large. Consequently, as the significance of digital transformation becomes increasingly evident, it also brings with it heightened expectations.

Digitalization is a process that affects all aspects of society and the economy, and there are several factors that contribute to its progress. Technological advancements, changes in consumer behavior, government policies and regulations, as well as increased access to the internet and the popularity of mobile devices, are all key factors in digitalization. Companies are also increasingly being driven to digitize to stay competitive, realize cost savings, and meet the demands of their customers (Ejbari and Bouali, 2022). Moreover, businesses must undertake a digital transformation project to ensure their survival in a constantly evolving world (Ejbari and Bouali, 2022). The digital freedom of access to products and information also risks leading to imitation and increased competition. As a result, companies are required to review their strategies to maintain their longevity and satisfy the changing expectations of their customers (Ejbari and Bouali, 2022).

Digital tools such as Social, Mobile, Analytics, and Cloud (SMAC) technologies are driving digitalization (Teubner and Stockinger, 2020), and offering opportunities to change the way in which firms work (Aström et al .2022). In accordance with (Chan et al .2022), Social networks provide market exposure for a company and foster connections with stakeholders. Mobile networks further link various actors within the business ecosystem and offer continuous access to learning and information from anywhere, anytime. Cloud technology enables accessibility, storage, and the exchange of pertinent information, along with workflow monitoring and remote collaboration.

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Lastly, analytics aids in comprehending business and customer requirements, identifying opportunities and market trends, and delivering personalized services and communications.

Digital technologies are therefore easily available to the firm and can improve its effectiveness in profitable ways (Chan et al . 2022), provided their introduction is accompanied by innovative business models or transformations of the traditional model (Aström et al. 2022). Nevertheless, an investigation must continue on the impact of new technologies on the decision-making process of the firm (Troise et al. 2022) and consumer privacy (Quach et al. 2022).

In a recent study, Witschel et al. (2022) demonstrated that the innovation of the business model is an effective way of continuing to be competitive in the digital era. To do so, these authors defended the role that dynamic capabilities play in the innovation of the business model, as well as contextual factors, leadership, and business mentalities. Although, Wen et al .(2022) affirmed that manufacturing firms with greater viability are more adaptable to Digitalization and tend to implement differentiated competitive strategies, for which reason they concluded that the effect of incentivizing innovation is greater for firms of higher viability.

The antecedents of Digital transformation (digital orientation, digital intensity, and digital maturity) were also analyzed to understand their influence on the financial success of firms (Nasiri et al .2022). Khan and Javaid (2022) considered that the IoT was a critical component of Industry 4.0, which improved product manufacturing efficiency because it was done with fewer errors and costs. Somohano-Rodríguez et al. (2022) analyzing the role that enabling digital Industry 4.0 (I4.0) technologies played in SME innovations, found that strategic planning advanced I4.0 and that enabling Information and Communication digital technologies promoted innovation more intensely than enabling digital technologies for integration and advanced robotics.

When transitioning processes from manual to digital, and with digitalization in place, machines become automated through the utilization of digital services such as Cloud computing, IoT, Big Data analytics, Database Analytics, Blockchain technology, and Smart machines. This integration allows machines to work in conjunction with humans, advancing automation while synchronizing with standardization. Advancements in robotics, artificial intelligence, and machine learning are ushering in a new era of automation, where machines can match or even surpass human performance across various domains. Automation offers businesses opportunities to enhance performance, quality, and speed while minimizing or eliminating errors. Additionally, it helps in reducing labor costs and fostering skill growth. In certain activities,

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the productivity and outcomes achieved through automation exceed human capabilities.

Therefore, within the framework of this paper, we understand the concept of digitalization as a comprehensive change in processes using innovative digital technologies, guided by a specific digital strategy, and supported by qualified digital capabilities, aimed at creating value and increasing business performance.

2.2. Digitalization's components

Digitalization represents a profoundly disruptive, ongoing, and intricate process. Organizations need to be agile and ready to surmount the challenges posed by this digital transformation swiftly to thrive in the contemporary market landscape (Morakanyane et al. 2017).

Digitalizing companies entails the transformation of conventional business processes, operations, and models through the incorporation of digital technologies. The table below summarizes the essential components of digitalization:

Table 1. The essential components of digitalization

Components	Definition
Digital Strategy	Firms require a well-defined digital strategy that outlines their objectives, initiatives, and roadmap for digital transformation, aligned with overall business goals (Weill and Woerner, 2018).
Data Analytics	and Business Intelligence: Utilizing analytics tools to derive insights from data, aiding in data-driven decision-making, understanding customer behavior, and enhancing operational efficiency.
Cloud Computing	Leveraging cloud services for storage, computing power, and software applications, offering scalability, flexibility, and cost-effectiveness.
Internet of Things (IoT)	Connecting physical devices to the internet for real-time monitoring, predictive maintenance, and process automation across industries.
Digital Customer Experience	Enhancing interactions through digital channels, including personalized marketing, self-service options, and seamless omnichannel experiences (Weill and Woerner, 2018).
Automation and Robotics	Implementing automation technologies to streamline tasks, reduce errors, and boost productivity.
Artificial Intelligence and Machine Learning	Integrating AI and ML algorithms for decision automation, personalized customer experiences, operational optimization, and data insights.
Cybersecurity	Deploying robust measures to safeguard digital assets, customer data, and sensitive information from cyber threats.

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Digital Talent Development	Investing in recruiting and upskilling employees with digital expertise.
Collaboration Tools and Platforms	Utilizing digital tools for communication, teamwork, and knowledge sharing.
Regulatory Compliance and Governance	Ensuring adherence to regulations and standards governing digital operations, data privacy, and cybersecurity.

Digitalization is an ongoing process, requiring companies to continuously adapt their strategies to leverage emerging technologies and maintain competitiveness in the digital era.

3. Advantages and limits of Digitalization

3.1. Advantages of digitalization in business

This article is poised to enrich our comprehension of the multifaceted benefits of digitalization in business, spanning from operational efficiency and customer experience to innovation, sustainability, and societal influence.
Jacobides et al .(2018) delved into the ways digital platforms facilitate collaboration within ecosystems, driving value co-creation, competitive advantage, and sustained business growth. Gupta et al .(2019) examined how digital technologies, like artificial intelligence and big data analytics, empower personalized customer experiences, targeted marketing, and operational efficiency, bolstering business success.

Chesbrough (2020) discussed open innovation in the digital age, stressing how digitalization encourages collaboration, knowledge sharing, and co-innovation among organizations, accelerating growth and market leadership. Moreover, Smith et al. (2019) explored how digitalization enhances operational efficiency and cost reduction through automation and data-driven decision-making.

Additionally, Chen (2020) investigated how digitalization drives market expansion and internationalization for businesses via e-commerce platforms and digital marketing strategies. Furthermore, Gupta et al. (2020) analyzed how digitalization elevates customer experiences and loyalty through personalized interactions, targeted advertising, and seamless omnichannel engagement.

Lee and Park (2020) highlighted the benefits of digitalization in supply chain management, emphasizing real-time tracking, inventory optimization, and demand forecasting enabled by IoT and AI technologies. Similarly, Wang and Li (2021) discussed the strategic advantages of digital transformation in fostering innovation and agility, enabling rapid adaptation to market changes and capitalization on emerging opportunities. In addition, Zhou et al. (2021) examined the environmental sustainability benefits of digitalization, including

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reduced paper consumption, minimized travel through remote collaboration tools, and optimized energy usage via smart building technologies. Moreover, Kim et al. (2021) investigated how digitalization enhances employee productivity and satisfaction through remote work capabilities, flexible scheduling, and digital training programs.

Lastly, Kim et al. (2021) explored digitalization's advantages in risk management and compliance, showcasing how advanced analytics and AI systems bolster fraud detection, regulatory compliance, and cybersecurity. Furthermore, Li and Wang (2021) analyzed the societal impact of digitalization, emphasizing its role in bridging socioeconomic disparities, promoting digital inclusion, and fostering economic growth through digital skills development and entrepreneurship.

We have previously highlighted the transformative impact of digitalization on the business landscape. Now, let us delve into specific advancements and their advantages:

- Enhanced Operational Efficiency:
    - Digital technologies streamline workflows, minimizing errors and boosting operational efficiency.
    - This streamlined approach translates to cost savings, as operations are executed with greater precision.
- Secure Cloud-Based Data Storage:
    - Cloud storage has become standard practice for businesses, offering secure data management.
    - Major players like Microsoft and Google provide high-security cloud services, ensuring robust digital asset management.
- Empowerment through Data Analysis:
    - Digital technologies enable sophisticated data analysis tools like Google Analytics.
    - These tools are indispensable for modern businesses, facilitating informed decision-making and driving growth.

These advancements underscore the myriad benefits of digitalization, from heightened productivity and efficiency to enhanced innovation and customer experiences. In today's digital age, embracing these changes isn't just a trend but a necessity dictated by contemporary realities.

Additionally, here are some other benefits of digitalization:

1. Time and Cost Savings:
    - Digitizing documents and processes reduces operational costs and eliminates errors.
    - Automation frees up time for complex tasks while promoting eco-friendly practices by reducing paperwork.
2. Enhanced Customer Experience:

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- Online payment options and streamlined processes enhance convenience for customers.
- Automation decreases order processing time, leading to higher customer satisfaction and increased orders.

3. Innovation:
    - Digital platforms offer creative tools for business improvement and product expansion.
4. Improved Productivity:
    - Digital tools like Mailshake streamline processes, saving time and ensuring accuracy.
5. Global Reach:
    - Digitalization removes geographical barriers, allowing businesses to reach customers worldwide.
6. Increased Profits:
    - Statistics from organizations like SAP Center for Business Insights and Oxford Economics indicate a significant boost in profits post-digital transformation.
7. Agility:
    - Digitalization enables faster innovation and adaptation to market changes, enhancing business agility.
8. Brand Building:
    - Online presence facilitates brand identity establishment and recognition through digital marketing tools.
9. Expanded Target Audience:
    - Websites and mobile apps broaden the reach of businesses, tapping into diverse demographics and markets.

However, certain challenges such as siloed decision-making and reliance on legacy systems hinder digital transformation efforts. Overcoming these obstacles is crucial for businesses to fully leverage the benefits of digitalization and thrive in the digital era.

3.2. Limits of digitalization in business:

Digitalization represents a profoundly disruptive, ongoing, and intricate process. Organizations need to be agile and ready to surmount the challenges posed by this digital transformation swiftly to thrive in the contemporary market landscape (Morakanyane et al .2017).

Digital transformation heralds a paradigm shift, transcending mere technological upgrades to redefine the essence of business operations. Consequently, as organizations embark on this transformative journey, they must meticulously assess various dimensions, including stakeholder reactions, customer impacts, financial considerations, and strategic alignment. Through

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such endeavors, companies not only fortify their competitive edge but also chart a course toward future growth and expansion. However, navigating this transformation is fraught with multifaceted challenges. Analyses of workforce dynamics underscore concerns about heightened unemployment and exacerbated income disparities arising from technological advancements. These challenges are compounded by the risks associated with digitalization, spanning data breaches, cyber threats, and privacy infringements, which erode consumer trust and tarnish brand reputations. Moreover, discussions surrounding digitalization's limitations in ensuring equitable access reveal persistent disparities in internet connectivity and digital literacy, particularly among marginalized communities. Similarly, assessments of its impact on supply chain management unveil vulnerabilities to cyber threats, operational disruptions, and overreliance on digital platforms. Consequently, addressing these challenges necessitates a comprehensive approach that prioritizes responsible digital transformation.

The challenges of digitalization are multifaceted and warrant comprehensive examination. Chen et al. (2019) explored the impact on the workforce, highlighting the potential for increased unemployment and income inequality due to job displacement and automation. Moreover, Kopalle et al. (2021) delved into the risks associated with digitalization, including data breaches, cyberattacks, and privacy concerns, which undermine consumer trust and brand reputation. Furthermore, Zhang and Lu (2020) discussed the limitations in achieving equitable access to technology, especially in marginalized communities with limited internet connectivity and digital literacy. Lee and Park (2020) analyzed the downsides in supply chain management, such as increased vulnerability to cyber threats and disruptions from system failures. Additionally, Chen and Tian (2021) examined the challenges in organizational culture and change management, highlighting employee resistance and cultural barriers to integrating digital technologies. Moreover, Wang and Li (2021) explored the environmental impacts, such as increased energy consumption and electronic waste generation. Lastly, Kim et al .(2021) investigated the limits in customer relationships, including depersonalized interactions and concerns about data privacy. Additionally, Li and Zhang (2021) discussed regulatory challenges, including antitrust concerns and the need for ethical standards. Lastly, Kim et al .(2021) analyzed the social implications, including social isolation and the digital divide.

One of the main drawbacks of undergoing digital transformation is the potential rise in complexity and fragmentation. For instance, as businesses transition away from traditional methods, they often embrace various new technologies, leading to a more intricate overall system. Moreover, the piecemeal adoption of these technologies can further fragment systems, with data fragmentation being a significant hurdle. Nevertheless, digital

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transformation offers an opportunity to tackle these issues by identifying disparate systems and fostering a more integrated approach to technology utilization. For instance, many companies leverage AI and automated data management to consolidate their technology stack and establish a more cohesive data architecture. Thus, while integrating new technology and managing data from diverse sources can introduce complexity, a primary advantage of digital transformation lies in centralizing and simplifying these systems.

Another drawback is the lack of standardization across different industries. Due to the novelty of digital transformation, there are no universally accepted standards for its implementation. This absence of standardization complicates comparisons between solutions and vendors, making it challenging for businesses to determine the optimal approach. However, this lack of standardization also fosters creativity and flexibility in finding tailored solutions that suit individual business needs. Digital transformation is inherently adaptable, allowing businesses to tailor their approach based on factors such as size, digital maturity, and specific requirements.

High costs are often perceived as a significant disadvantage of digital transformation. Investments in new hardware, software, and employee training can accumulate expenses. Additionally, reassessing existing processes and procedures incurs costs associated with evaluation and modification. However, digital transformation doesn't necessarily have to be prohibitively expensive. Incremental approaches enable conservative technology investments, yielding returns from early-stage innovations. By adopting a phased approach, businesses can identify opportunities to reduce costs, such as centralizing technology, automating processes, and migrating to cloud solutions.

There is also a risk of failure associated with digital transformation due to the substantial changes it entails. Implementing new technologies or altering processes can lead to unexpected challenges and financial losses if initiatives fall short. Mitigating this risk involves understanding common failure points, preparing for challenges, and maintaining flexibility. Businesses should identify transformational needs, acquire necessary skills, test technologies before deployment, and promote a digital-first culture to minimize failure risks.

Digital transformation can disrupt employees by requiring them to acquire new skills and adapt to changes in work processes. Furthermore, technological advancements may render some roles redundant, causing stress and anxiety. Transparent communication and providing opportunities for training and advancement can alleviate these concerns and foster a smoother transition for employees.

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Loss of customer trust is another potential drawback of digital transformation. Changes to systems or processes may unsettle customers, leading them to seek alternatives. Maintaining trust requires transparent communication about transformation goals and benefits. By prioritizing customer needs, businesses can leverage technology and data management to enhance the overall customer experience.

Finally, digital transformation increases the risk of data breaches and cyberattacks as businesses store and share more data electronically. Robust cybersecurity measures, including employee training and investment in security technologies, are essential to mitigate these risks. However, hasty cybersecurity investments without proper assessment can exacerbate issues such as complexity and costs.

Conclusion

In conclusion, the literature reviewed provides a multifaceted understanding of business digitalization, encompassing various definitions, boundaries, and advantages. Through this review, it becomes evident that digitalization is not merely a technological shift but a comprehensive transformation that reshapes organizational structures, processes, and strategies. One key finding is the diversity of definitions surrounding digitalization, reflecting its complex and evolving nature. While some scholars emphasize the adoption of digital technologies, others highlight broader organizational changes and cultural shifts. Despite these differences, a common thread emerges: digitalization entails leveraging technology to enhance efficiency, innovation, and competitiveness.

Moreover, this review underscores the importance of recognizing the limits and challenges associated with digitalization. From concerns about data privacy and cybersecurity to the risk of job displacement, businesses must navigate various obstacles on their digital transformation journey. Understanding these limitations is crucial for developing effective strategies and mitigating potential risks. In light of these findings, it is clear that business digitalization is not a one-size-fits-all endeavor. Instead, it requires careful consideration of organizational goals, resources, and capabilities.

Moving forward, further research is needed to address emerging trends and challenges in business digitalization. From the rise of artificial intelligence and machine learning to the growing importance of data ethics and governance, there are numerous avenues for future exploration. By staying abreast of these developments and fostering a culture of innovation, businesses can continue to thrive in an increasingly digital world. This article provides a clear understanding of Digitalization foundations in regard to the advancements achieved in the last few years: on the one hand, the developments achieved in the service industry are being made in combination

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with synergies between digital services and other new technologies, such as AI or IoT; on the manufacturing domain, companies are also pursuing new venues in finding competitive advantages by applying innovative digital practices on their industrial process (e.g. servitization strategies). Moreover, several authors have concluded that additional debate on the digitalization agenda is needed, to further develop a deeper understanding of how digital initiatives are changing existing business models.

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La Politique Économique en Débat : Une Lecture Critique

Dkhssi Atman, Département d'Économie et Gestion
Faculté d'Économie et Gestion, Université Ibn Tofail- Kenitra, Maroc
Laboratoire d'Économie et de Management des Organisations (LEMO)

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Résumé

Cet article présente une analyse critique des politiques économiques depuis 1945, structurée autour de quatre périodes clés. De 1945 à 1980, le keynésianisme atteint son apogée dans les années 1940 et 1960, mais commence à s'essouffler dès le début des années 1970, ouvrant la voie à une contre-révolution libérale. De 1980 à 2008, une pensée post-consensus de Washington émerge, suscitant les critiques à l'encontre des thérapeutiques préconisées par les institutions de Bretton Woods et remettant en question leur hégémonie doctrinale. À partir de la crise de 2008, malgré le recours à des politiques de relance budgétaires temporaires, un nouveau consensus en faveur de la rigueur s'installe. Finalement, face à la crise pandémique mondiale du COVID 19, le keynésianisme renaît avec le retour des plans de relance, tandis que le remboursement de la dette liée à la COVID reste un défi pour la majorité des pays. Plus récemment, les politiques de normalisation monétaire prennent de l'ampleur.

Pour clarifier les concepts dans la littérature et examiner la manière dont la recherche est menée sur le sujet, une ébauche d'un examen de la portée (scoping review) a été réalisée, susceptible de servir de précurseur à une revue systématique.

Mots-clés: Débats doctrinaux, Analyse critique, Politiques non-conventionnelles, Politiques discrétionnaires, Dette Covid, Examen de la portée

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Economic Policy under Debate: A Critical Review

Dkhssi Atman, Département d'Économie et Gestion
Faculté d'Économie et Gestion, Université Ibn Tofail- Kenitra, Maroc
Laboratoire d'Économie et de Management des Organisations (LEMO)

Abstract

This article presents a critical analysis of economic policies since 1945, structured around four key periods. From 1945 to 1980, Keynesianism reached its peak in the 1940s and 1960s but began to wane as early as the 1970s, paving the way for a neoliberal counter-revolution. From 1980 to 2008, a post-Washington Consensus thinking emerged, fueling criticisms against the therapies advocated by Bretton Woods institutions and questioning their doctrinal hegemony. From the 2008 crisis onwards, despite the temporary adoption of fiscal stimulus policies, a new consensus favoring austerity took hold. Finally, faced with the global COVID-19 pandemic crisis, Keynesianism resurged with the return of stimulus plans, while repayment of COVID-related debt remains a challenge for the majority of countries. More recently, there has been a growing focus on monetary normalization policies.

To clarify the concepts in the literature and examine how research is conducted on the subject, a draft of a scoping review has been conducted, which may serve as a precursor to a a systematic review.

Keywords: Doctrinal debates, Critical analysis, non-conventional policies, Discretionary policies, COVID-19 debt, Scoping review

Introduction

« Les bonnes questions ne se satisfont pas des réponses faciles ». PAUL SAMUELSON, Prix Nobel d'Économie 1970.

Dans les années 1970, les politiques Keynésiennes révèlent leurs insuffisances et furent à l'origine du retour en force des politiques libérales. Notamment, avec le monétarisme représenté par Milton Friedman (1956), l'économie de l'offre par Arthur Laffer et la théorie des anticipations rationnelles de John Muth (1961), Robert Lucas (1972) et Thomas Sargent (1976). L'ensemble de ces courants et d'autres défendent avec des nuances les mêmes idées.

Une nouvelle ère semble s'ouvrir avec l'adoption de programmes politiques de rupture par rapport à la période précédente des Trente Glorieuses, avec le démantèlement progressif de l'État providence, l'abandon des

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politiques discrétionnaires sur le plan budgétaire et monétaire, la déréglementation de l'économie, la flexibilisation du marché du travail…etc. Depuis les années 1980, la majorité écrasante des économies développées ont adopté le consensus de Washington, une approche néolibérale promue par les institutions de Bretton-Woods. Ces dernières recommandaient des politiques économiques visant à inverser les mesures interventionnistes mises en place pendant les décennies d'après-guerre.

Les premières politiques de transformations structurelles néolibérales ont été appliquées dans un premier temps au Royaume-Uni et aux Etats-Unis, avant qu'elles ne soient généralisées aux autres pays de la Communauté économique européenne (CEE). Ainsi, des politiques d'inspirations libérales s'imposent au détriment des politiques interventionnistes keynésiennes ayant dominé les programmes politiques au lendemain de 1945 et jusqu'à l'effondrement de Bretton-Woods. L'attention des décideurs publics semble être tournée désormais vers la régulation par le marché et l'encouragement de l'initiative privée.

Aux États-Unis, à partir de 1981, la mise en œuvre des idées reaganiennes a donné lieu à un "New Deal inversé". Le président Reagan (1981-1989) considérait que « l'État n'est pas la solution de nos problèmes, l'État est le problème ». Cette période a été marquée par le désengagement de l'État, avec des réductions d'impôts et des coupes dans les dépenses publiques pour stimuler l'initiative privée.

Au Royaume-Uni, à partir de 1979, M. Thatcher (1979-1990) accède au pouvoir dans un contexte économique difficile. La crise stagflationniste des années 1970, caractérisée par une récession et une inflation élevée, a remis en question la validité des modèles économiques keynésiens. Pour lutter contre l'inflation, Thatcher adopte une politique monétariste basée sur le ciblage de l'inflation, selon les enseignements de M. Friedman (1956) et F. Hayek (1974). Sur le plan fiscal, une réforme en profondeur est lancée pour réduire la pression fiscale. Du côté des dépenses, la priorité est donnée à l'équilibre des finances publiques, entraînant un allégement du poids de l'État-providence avec la diminution des retraites et des aides sociales.

Dans le même sens, depuis la fin des années 1980, la majorité des pays de la CEE ont également adhéré à une approche similaire à l'occasion de l'acte unique et de la préparation de l'Union économique et monétaire (UEM). On recourt à un "Policy mix" qui repose sur une politique restrictive aussi bien sur le plan monétaire que sur le plan budgétaire. Parallèlement, des directives européennes ont été mises en place pour préparer la libéralisation des marchés de capitaux, l'harmonisation des conditions de concurrence et la flexibilisation du cadre réglementaire régissant le travail.

Au moment de la crise financière des subprimes en 2008 et après un bref épisode de politiques de relance budgétaires, il a été constaté un retour

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des cures de rigueur sous l'impulsion d'Alberto Alesina et Ardagna (2010) et Alberto Alesina et al. (2015) qui plaidaient pour quelques effets expansifs de la rigueur budgétaire. Ce nouveau consensus pour la rigueur budgétaire nourrit une pensée anti-keynésienne (NAK)[1]. Pour cette dernière, la solution serait de s'engager durablement à réduire les déficits publics, à travers la baisse des dépenses principalement. Une consolidation budgétaire crédible et durable conduira selon les anti-Keynésiens à une amélioration des taux de croissance économique. Pour le Fonds monétaire international (FMI), Une consolidation budgétaire durable a un impact positif significatif sur la croissance économique. En général, une consolidation budgétaire à plus long terme assure la stabilité macroéconomique en rassurant les investisseurs quant à l'absence de futures hausses d'impôts et de taux d'intérêt pour financer des déséquilibres budgétaires. Les ajustements budgétaires de courte durée peuvent avoir des conséquences néfastes sur la viabilité budgétaire et la croissance économique. Selon le FMI, réduire le déficit public de 4% à 2% peut entraîner une accélération de la croissance par habitant de ½ à 1 point dans les pays à faible revenu. Ainsi, une consolidation budgétaire bien planifiée, impliquant une réaffectation des dépenses vers des utilisations plus productives et la réduction du déficit, peut stimuler la croissance dans les économies en difficulté.

Depuis 2020, la persistance des taux d'intérêt bas a constitué un climat favorable à l'adoption de politiques budgétaires de relance face à une croissance mondiale en berne, sous les effets néfastes de la pandémie. Cependant, ces politiques jugées nécessaires dans des circonstances d'urgence ont débouché sur une aggravation de la dette mondiale. Selon le FMI[2] en 2020, la dette mondiale a fortement augmenté pour atteindre un record de 226 000 milliards de dollars, soit 256% du PIB mondial en 2020.

Sur le plan monétaire, la Réserve fédérale (FED), la Banque centrale européenne (BCE), la Banque centrale du Royaume-Uni et d'autres autorités monétaires ont toutes relevé leurs taux directeurs à des niveaux les plus élevés depuis au moins une décennie. Ces mesures s'inscrivent dans une démarche de normalisation de la politique monétaire face aux pressions inflationnistes, mettant ainsi fin aux mesures d'urgence adoptées pendant la pandémie. La BCE a mis fin à ses programmes de rachat d'actifs liés à la crise pandémique, tandis que la FED a progressivement réduit ses propres achats depuis novembre 2021.

Actuellement, le contexte mondial de stagflation interroge le décideur public sur les politiques économiques à mettre en place. Il est impérieux de réexaminer profondément l'approche des institutions internationales et

[1] New « Anti Keynesian View ». On parle également de la théorie allemande (German view) ou parfois de la théorie des anticipations (expectational view).
[2] FMI, la base de données mondiale sur la dette (GDD).

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européennes. Ainsi, il s'avère impératif de s'accorder sur de nouveaux principes clairs et palpables, permettant d'instaurer une politique contracyclique efficace en temps voulu.

Objectif et méthodologie du travail

Pour répondre à cette problématique, une lecture approfondie des politiques économiques mises en place successivement depuis l'après-guerre -dans les principales économies mondiales- a été suggérée. Ainsi, les enseignements nécessaires pour éclairer le décideur public quant aux politiques futures à envisager ont été tirés. En somme, cette analyse critique des politiques économiques déployées depuis 1945, repose sur une méthodologie rigoureuse dont les étapes clés sont les suivantes :

- Délimitation Temporelle : La période étudiée couvre les années 1945 à nos jours, avec une attention particulière portée sur quatre périodes distinctes : 1945-1980, 1980-2008, la crise financière de 2008, et l'ère post-COVID. Ces quatre moments sont utilisés comme points d'ancrage pour structurer l'analyse.
- Recherche documentaire : Plusieurs bases de données pertinentes (Scopus, Web of Science, ScienceDirect…etc) ont été consultées pour étudier l'efficacité des politiques économiques pendant les périodes sus-mentionnées. Cependant, l'attention a été portée exclusivement sur une sélection d'articles scientifiques considérés comme fondateurs en la matière. Le critère principal de sélection utilisé est le nombre de citations sur les différentes bases d'indexation. En annexe (Sélection des références pertinentes) 15 articles ont été retenus. Pour ces références le taux de citation varie entre 687 citations dont 222 sur ScienceDirect et plus de 43750 citations dont 11969 sur ScienceDirect.
- Synthèse et rédaction : L'articulation de la rédaction autour des périodes clés mentionnées précédemment a été rendue possible grâce à l'analyse des articles sélectionnés et de la littérature grise. Pour chaque période étudiée, un paradigme distinct a émergé, évalué en fonction de la nature des politiques économiques mises en œuvre, de leurs instruments et de leurs résultats. Ces analyses sont contextualisées en prenant en compte les événements historiques majeurs et le contexte global qui ont pu influencer les politiques économiques au cours de chaque période.

I.Le renouveau de la politique économique à partir des années 1970

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1. Quelle attitude face à l'obsolescence des politiques macroéconomiques discrétionnaires d'après-guerre ?

Contrairement aux classiques, les keynésiens ont axé l'analyse sur le rôle joué par l'Etat qu'ils définissent comme étant providence. Le chef de file, J.M Keynes (1936), fait de la politique interventionniste de l'Etat un gage de réalisation de la croissance économique. À travers le multiplicateur de la dépense publique, la politique budgétaire prend toute son importance pour devenir sans conteste la clef de voûte de la prospérité économique à laquelle tout décideur public aspire. Après les ravages de la guerre, et sous l'impulsion des idées keynésiennes le monde se lance dans une période de reconstruction économique. Le système capitaliste connaît une croissance remarquable jusqu'en 1973, marquant ainsi les "Trente Glorieuses" selon l'expression de l'économiste Jean Fourastié. Cette période de trente années est caractérisée par une prospérité économique sans précédent.

Les années 1970 ont témoigné d'une refonte totale des schémas et grilles classiques d'analyse et d'une réhabilitation du rôle de l'Etat. Autrement dit, l'Etat est devenu le moteur de la dynamique économique à travers des politiques d'offre mises en en place du côté de l'entreprise et dont l'objectif et d'améliorer la compétitivité de ces dernières. En outre, la croissance économique est désormais considérée comme étant un phénomène endogène et non pas exogène. Paul Romer (1986), Robert E. Lucas (1988) et Robert Barro (1990), considèrent le progrès technique (désormais endogène), le capital humain et l'action publique comme des moyens de réalisation d'une croissance économique durable et auto-entretenue. Le retour de l'Etat est justifié par la capacité de ce dernier à générer à travers ses actions des externalités positives qui profitent à l'ensemble de l'économie. Désormais, la quête d'une croissance économique durable est tributaire de l'usage d'une politique économique structurelle qui transcende toute mesure conjoncturelle. Réellement, on a assisté à une révolution doctrinale avec les travaux fondateurs des économistes de la Nouvelle École Classique (NEC).

Face à l'obsolescence des politiques macroéconomiques discrétionnaires, l'avènement des politiques de règle est confirmé. Ces dernières en trouvent leurs fondements dans les travaux de F. Kydland et E. Prescott (1977) ainsi que ceux de Barro et Gordon (1983) concernant l'incohérence temporelle des politiques discrétionnaires.

Selon O. Blanchard et S. Fisher, (1989) : *« Une politique est incohérente quand une décision de politique future, qui fait partie d'une procédure d'optimisation formulée à un instant initial, n'est plus optimale du regard d'un instant ultérieur à l'instant initial, même si aucune information nouvelle n'est apparue entre-temps »*. L'incohérence temporelle, décrite par les économistes de la Nouvelle Macroéconomie Classique (NMC) Kydland et Prescott dans leur article de 1977 intitulé "Rules rather than discretion : The

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inconsistency of optimal plans", se produit lorsque les banques centrales ne respectent pas leurs engagements. Dans ce cas, les agents économiques perdent confiance dans les objectifs annoncés et sont tentés d'entamer des négociations, par exemple sur les salaires, ce qui peut avoir des effets inflationnistes.

2. La refonte des politiques monétaires à l'heure de l'indépendance des Banques centrales

Sur le plan monétaire, une politique de règle revient à allouer à la Banque centrale (autorité monétaire) un objectif clair de maîtrise de l'inflation. Ces trois dernières décennies, La politique monétaire a posé ses objectifs selon un principe de neutralité et a rationalisé ses instruments en privilégiant un pilotage par les taux directeurs. En d'autres termes, elle est devenue une politique de ciblage de l'inflation. Selon la théorie quantitative de la monnaie de Milton Friedman (1956), cela conduit naturellement à définir un "objectif final" concernant l'inflation, en fonction d'un "objectif intermédiaire" lié à la croissance de la masse monétaire (taux d'intérêt actuellement). Les partisans de l'orthodoxie économique (néoclassiques, friedmaniens…etc.), considèrent que l'indépendance des banques centrales est une condition essentielle pour garantir leur crédibilité. Cela permet d'éviter qu'elles ne soient soumises à des politiques discrétionnaires dictées par les besoins du politique. Cette indépendance concerne non seulement les politiques monétaires expansionnistes, mais aussi les politiques monétaires visant à accompagner l'expansion budgétaire (politiques monétaires accommodationnistes). Ainsi, une banque centrale indépendante est moins encline à favoriser l'apparition de l'inflation, comme l'ont démontré Barro et Gordon dans leur ouvrage « Rules, discretion and reputation in a model of monetary policy » en 1983. Cependant, le sens de la causalité peut être sujet à débat : les pays présentant le moins d'inflation peuvent être les plus prompts à développer l'indépendance de leur banque centrale. De plus, les politiques de désinflation mises en œuvre dans les années 1980 ont pu être efficaces contre l'inflation même en l'absence d'indépendance des banques centrales.

La crédibilité dans le domaine monétaire repose sur l'application de règles claires. Cette crédibilité est également renforcée par la transparence de la communication des banques centrales. Cependant, cette communication doit être suivie d'effets concrets et s'inscrire dans la durée. Dans le domaine monétaire, la règle prédominante est celle développée par Taylor[3] dans son

[3] La règle de Taylor est la suivante : $r = r^* + p + 0{,}5(p - p^*) + 0{,}5(y - y^*)$, Dans cette formule, r représente le taux d'intérêt à court terme, r* est le taux d'intérêt neutre qui n'a aucun effet expansionniste ou récessif et correspond au taux de croissance tendanciel de l'économie, p est l'inflation actuelle, p* est l'objectif d'inflation, et y - y* représente la différence entre le PIB observé et le PIB potentiel (output gap ou écart conjoncturel de production).

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article de 1993 intitulé "*Discretion versus policy rules in practice*". Cette règle consiste à calculer un taux d'intérêt optimal en fonction du niveau d'inflation et du PIB (et donc indirectement du chômage). Cette règle montre bel et bien les différences doctrinales entre la BCE et la *Federal Reserve* ou la FED. Si la première accorde toute l'importance à l'objectif de l'inflation, la deuxième tient compte des deux objectifs de croissance et d'inflation.

La séparation effectuée entre les banques centrales indépendantes, qui ont le monopole de conduire la politique monétaire et les gouvernements qui ont le monopole de la politique budgétaire, ainsi que le recours à des règles de discipline monétaire et budgétaire, permettent une plus grande aisance en matière de réalisation des différents objectifs de la politique économique : selon la règle de Tinbergen, « Une condition nécessaire (mais non suffisante) pour qu'une politique économique soit efficace, est qu'il existe autant d'instruments indépendants que d'objectifs à atteindre ». (Jan Tinbergen, 1970). Pour Mundell, « Chaque instrument doit être affecté à la poursuite de l'objectif pour lequel il a l'efficacité relative la plus forte. Il convient d'affecter la politique monétaire à la recherche de l'équilibre externe et la politique budgétaire à la recherche de l'équilibre interne ». (Robert A. Mundell, 1964)
Toutefois, Nordhaus, dans son ouvrage "Policy games" en 1994, souligne les risques d'absence de coopération entre les autorités budgétaires et monétaires, qui peuvent conduire à des jeux non coopératifs. Une politique monétaire très restrictive pourrait entraîner une politique budgétaire expansionniste pour compenser ses effets, ce qui radicaliserait les politiques conjoncturelles. On peut se demander si la politique de l'Union économique et monétaire (UEM) n'a pas illustré ce risque. Les règles budgétaires sont alors perçues comme un garde-fou pour prévenir cette radicalisation budgétaire.

3. Le retour en force des politiques de consolidation budgétaire

Sur le plan budgétaire, l'Etat adopte une règle de conduite claire qui consiste à réduire le déficit budgétaire et à le maintenir à un niveau jugé soutenable. En fait, il a fallu attendre les années 1990, avec le traité de Maastricht, au début de la décennie et le « Pacte de stabilité et de croissance » à Dublin en 1996-1997, et ce pour assister à la création d'une limite de 3% pour le déficit budgétaire et 60% pour l'endettement publique. En juin 1997, lors du Conseil européen réuni à Amsterdam, une forte insistance est mise sur la nécessité pour les pays européens de présenter un budget équilibré, voire en excédent. Le critère d'un déficit budgétaire ne dépassant pas les 3 % du Produit intérieur brut (PIB) est maintenu, mais avec une nuance : ce taux peut être dépassé en cas de déclin d'au moins 2 % du PIB du pays concerné (ou de 0,75 % sur décision spéciale du conseil des ministres). Les pays ne respectant pas cette condition doivent effectuer un dépôt de devises à la Banque centrale

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européenne, qui sera définitivement perdu si le budget n'est pas maîtrisé dans les deux ans (Jérôme Creel, 2013).

Pour le Fonds monétaire international (FMI) et un certain nombre d'économistes libéraux, la politique budgétaire doit poursuivre un objectif principal d'équilibre des finances publiques. À travers une politique de consolidation budgétaire, on s'engage à réduire durablement et selon une règle claire et transparente le niveau d'endettement public et le déficit (Schaechter et al., 2012). En effet, la rigueur budgétaire est un bon signe d'une gestion budgétaire saine et transparente qui solidifie le lien de confiance entre le gouvernement et les agents économiques. Ces derniers peuvent espérer au non-recours de l'Etat à un ajustement budgétaire sévère qui peut s'identifier à une augmentation des taux d'imposition. De même, le recours à l'emprunt pour financer la relance économique peut causer une hausse des taux d'intérêt (effet éviction). Dans une logique de solidarité intergénérationnelle, les partisans de la rigueur budgétaire justifient cette dernière par le fait qu'une politique discrétionnaire risque d'hypothéquer l'avenir des générations futures qui devront payer la facture de la relance actuelle.

Dans les faits, le contexte de crise post chocs pétroliers à largement causé une forte baisse de la croissance économique, accompagnée d'un gonflement des dépenses publiques, ce qui a *engendré des déséquilibres budgétaires importants. Aussi, avec le recours excessif à l'endettement,* la situation a soulevé les craintes des bailleurs de fonds internationaux, (en particulier le FMI et la BM). Ces derniers ont été contraints à étendre les Programmes d'ajustement structurel (PAS) à la quasi-totalité des pays à partir du début des années 1980. Il s'agit d'un ensemble de réformes structurelles, soutenues par le tournant libéral qu'a connu la théorie économique dans les années 1970-1980 : John Williamson l'a théorisé comme étant le "consensus de Washington". Ce corpus de recommandations sur lequel s'appuyaient le FMI et la BM au cours des années 1990 se déclinait en un ensemble de propositions : une stricte discipline budgétaire, Une réorientation des dépenses publiques vers des domaines à fort rendement économique et capables de réduire les inégalités de revenu (santé, éducation, infrastructures), une réforme fiscale (élargissement de l'assiette fiscale, réduction des taux marginaux), une libéralisation financière, un taux de change flottant et compétitif, une ouverture accrue au commerce extérieur, une levée des restrictions sur les investissements étrangers, une privatisation des entreprises publiques...etc.

Sur la liste des pays bénéficiaires des Programmes d'ajustement structurel, une bonne partie était constituée de pays africains. Le rapport conjoint de la Banque africaine de développement (BAD) et de la Commission Économique pour l'Afrique des Nations unies (UNECA) met en 1985 l'accent sur les principes directeurs suivants : une importance particulière donnée au secteur agricole et au monde rural, un encouragement de l'initiative

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individuelle et de l'investissement privé, une libéralisation du commerce extérieur et du régime de change, une flexibilisation du marché du travail, une meilleure gouvernance du secteur public et un retrait de l'État au profit de la liberté des prix et de la concurrence, une réforme du système fiscal et des dépenses de l'État...etc.

Ces directives constituent la base du Plan d'ajustement structurel (PAS) négocié avec le FMI et la BM par chaque pays demandeur en contrepartie de leur aide. En 1992, quasiment tous les États africains (exception faite de la Libye) étaient dotés d'un tel programme, ou étaient en train d'en élaborer un. La même orientation était donc adoptée par d'autres ayant des situations différentes. Un trait commun caractérisait pourtant les pays africains : leur endettement, mais avec des différences de degré selon le pays.

4. La naissance d'une pensée post-consensus de Washington

Pour les détracteurs des thérapeutiques proposées par les institutions de Bretton Woods il y a hégémonie doctrinale de ces institutions qui mettent en avant une pensée libérale privilégiant la rationalité économique et la suprématie du marché. La régulation par le marché devient la règle indépendamment des cheminements historiques et des diversités culturelles. Les institutions, les normes sociales ou les particularités locales, considérées comme des distorsions entravant le marché, doivent donc être supprimées. Dans un pays, le Programme d'ajustement structurel (PAS) vise en théorie à restructurer l'économie pour retrouver la croissance ainsi que des perspectives réelles de développement. Il s'agit de mener de front des réformes sectorielles et une réorganisation macroéconomique par l'accroissement du rôle du secteur privé et la réorientation des fonctions de l'Etat.

Les limites des politiques de rigueur initiées à partir des années 1980, ont nourri une pensée post-consensus de Washington que l'économiste Philippe Hugon (2013) définit ainsi :

« De nombreuses failles sont ainsi apparues dans ce modèle et une pensée du post-ajustement (Ben Hammouda, 1999) ou du post consensus de Washington (Stiglitz, 1998) a émergé. Les nouvelles analyses « structuralistes » prennent en compte, dans la tradition de l'économie du développement, les asymétries internationales, les blocages et les handicaps structurels, les liens entre répartition et accumulation ou la nature des biens et services échangés. Mais elles raisonnent en économie ouverte (contrainte de compétitivité, rôle de l'attractivité des capitaux et des techniques) et elles lient la stabilisation financière de court terme avec le long terme. Les liens entre inégalités de revenus et croissance sont fonction des contextes internes et internationaux et du rôle décisif des politiques économiques et sociales.

Le comparatisme analytique et empirique permet de contextualiser les théories et les thérapies. Le cadre analytique retenu est celui de la

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concurrence imparfaite, des asymétries d'information, des rendements d'échelle, des externalités et des effets d'agglomération (Krugman, 2008). Le contexte est celui d'un univers incertain et d'un monde instable où les acteurs ont des pouvoirs asymétriques. Des effets de seuil liés à des trappes à pauvreté apparaissent de manière significative pour les pays les moins avancés (Sachs, 2005) et (Guillaumont, 2009). Dès lors, les recettes préconisées se font davantage au cas par cas ou par grand type de catégories de pays. Les "bonnes politiques" se jugent ex post sur leurs résultats ».

Source : Philippe Hugon, Les politiques de développement après le consensus de Washington, Problèmes économiques, Comprendre les politiques économiques, n° 4, H.S, pp. 120, 2013.

II.La politique économique au lendemain de de la crise des subprimes

1. Stagnation séculaire et retour des politiques de relance budgétaires

Globalement l'économie mondiale semble être coincée dans une sorte de stagnation séculaire, selon l'expression de Larry Summers (2013). Le concept renvoie vers la fin des années 1930 et aux travaux d'Alvin Hansen[i], qui partageait avec certains de ses contemporains l'idée que la Grande Dépression aurait entraîné une diminution permanente du taux de croissance tendanciel à long terme [4] (une sorte de dépression permanente). En effet, En 2013, à la suite de la récession de 2008, l'économiste Lawrence H. Summers observe une situation similaire à celle évoquée par Alvin Hansen dans les années 1930 : une faible croissance, une inflation faible et un niveau d'investissement réduit pour une épargne excessive, entraînant par là une baisse du taux d'intérêt réel. Pour L. Summer, la période d'euphorie qui a précédé la crise financière mondiale de 2008, ne représente qu'une parenthèse dans un cycle économique dépressif qui a débuté les années 1980. La preuve est l'absence de tensions inflationnistes malgré les interventions successives des pouvoirs publics pour permettre aux économies de se rapprocher du plein emploi. En dépit de ces interventions, les taux de croissance affichés demeurent loin de leur niveau potentiel (croissance potentielle) et celui tendanciel à long terme. En employant la terminologie keynésienne on dirait que l'écart de production conjoncturel (output gap)[5] est si grand que le décideur public n'arrive pas à le combler aisément. Pour Summer, une économie qui se porte bien et qui ne se voit pas coincée dans cette sorte de stagnation séculaire, connaitra sûrement des tensions inflationnistes pendant toute période d'expansion à laquelle on assiste. Avant la dépression de 2008 par exemple, l'économie mondiale n'a pas connu l'inflation tout en restant éloignée de la situation de plein-emploi, malgré le laxisme monétaire auquel

[5] Discours rédigé en 1939 par Alvin Hansen sous le nom de « Economic Progress and Declining Population Growth »

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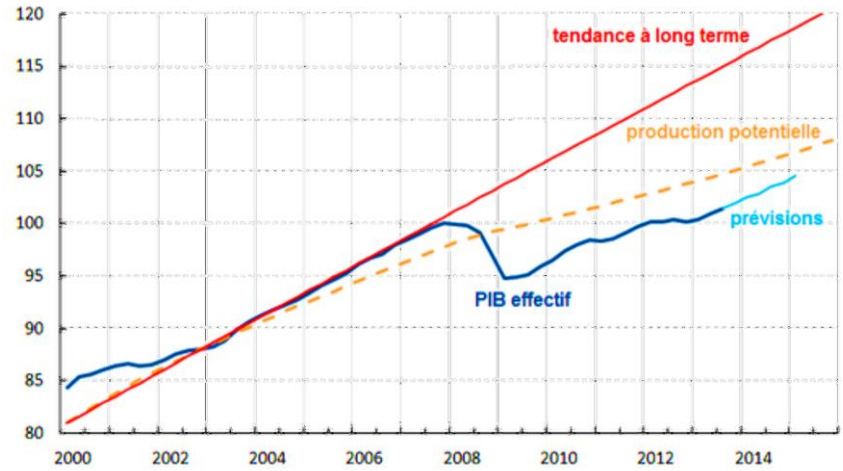
on a assisté depuis le début des années 2000. À chaque fois que les politiques monétaires sont accommodantes, cela se traduit par des bulles spéculatives (bulle immobilière en 2008) et une augmentation de l'endettement des ménages.

Graphique 1. Évolution du PIB effectif, du PIB potentiel et du PIB tendanciel du G4 (Etats-Unis, zone euro, Japon et Royaume-Uni)



Source : DAVIES, Gavyn (2013), « The implications of secular stagnation », In Financial Times, 17 November

Note : Il y a deux constats sur lesquels Summers, L.H s'appuie :

- En premier lieu, suite à la Grande Récession de 2008-2009, la reprise économique s'est avérée particulièrement lente dans les pays avancés, malgré les politiques monétaires très accommodantes mises en œuvre par les banques centrales. Bien que la croissance économique ait en partie retrouvé son niveau d'avant-crise, le PIB n'a pas encore totalement récupéré sa trajectoire pré-crise. Le PIB cumulé des quatre principales économies développées dépasse à peine son niveau d'avant-crise, comme l'indique le graphique.
- En deuxième lieu, le PIB s'éloigne progressivement de sa trajectoire tendancielle à long terme, ce qui suggère une détérioration de la production potentielle.

Summer semble raviver les débats autour de l'efficacité de la politique monétaire friedmanienne. Pour cet auteur néo-keynésien, dans le contexte actuel, il est difficile de considérer que les politiques monétaires déterminent l'inflation. Par conséquent, les Banques centrales doivent intervenir afin de permettre à l'économie d'atteindre son potentiel de croissance au lieu de le freiner à travers des politiques monétaires systématiquement désinflationnistes. Pour faire face à la stagnation séculaire, l'auteur préconise de reconnaître d'abord la réalité de cette situation. Cela implique de

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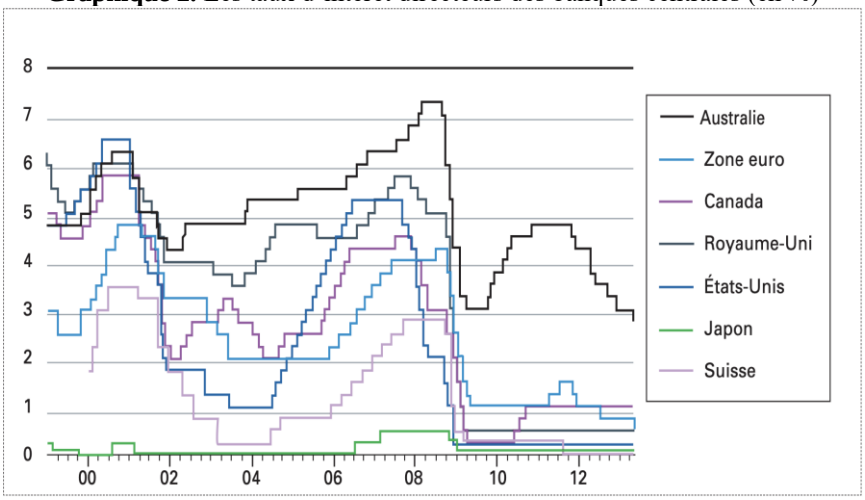
comprendre que l'investissement privé ne parvient pas à absorber entièrement l'épargne privée, ce qui peut entraîner une demande insuffisante et des taux d'intérêt bas. Ensuite, il est essentiel de se concentrer sur les problèmes qui en découlent, comme des taux faibles de croissance économique, des taux d'intérêt bas et l'absence d'inflation.

Dans les faits, la crise de 2008 a bel et bien montré que les politiques conjoncturelles n'ont pas disparu et qu'elles sont toujours présentes dans le débat public. Les mesures budgétaires de relance sont justifiées dans des circonstances exceptionnelles. Le levier budgétaire se révèle particulièrement utile pendant la période de récession consécutive à la crise de 2008, car les taux d'intérêt déjà très bas soulèvent le risque de trappe à liquidité. Face à la panne des canaux traditionnels de transmission de la politique monétaire, la politique budgétaire devient le seul recours efficace sans effet d'éviction.

Graphique 2. Les taux d'intérêt directeurs des banques centrales (en %)



Source : Thomson Reuters Datastream

Note : À partir de septembre 2007, Ben Bernanke entame une série de baisses de taux d'intérêt, atteignant 2% en avril 2008. En juillet 2008, les taux atteignent un niveau plancher de 0,25% qui est maintenu depuis lors. En revanche, la Banque centrale européenne (BCE) adopte une approche moins réactive, maintenant son taux directeur principal à 4% dans un premier temps, puis le relevant de 0,25 point à l'été 2008. Ce n'est qu'avec la baisse de l'inflation à l'automne 2008 que les taux commencent à diminuer, atteignant 1% en 2009. Finalement, en 2013, la BCE rejoint le niveau de la Fed lorsque l'inflation passe en dessous de 1%.

Au sein du G20, la nécessité de ces politiques est rapidement reconnue. Aux États-Unis, le PIB a déjà reculé de 0,3% en 2008 et de 3,5% en 2009. Le plan d'Obama est adopté en janvier 2009 et représente 787 milliards de dollars, soit 5% du PIB. Le déficit public, qui était déjà de 2,7% du PIB en 2007, atteint

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10,7% en 2010. La dette, quant à elle, s'établit à 67,5% du PIB en 2007 et monte à 99,1% en 2010. En Europe, la Commission européenne déclare un plan de relance de 200 milliards en 2008, soit 1,5% du PIB de l'Union européenne, mais la majorité de ce montant provient des plans nationaux, seuls 30 milliards (0,2% du PIB) étant financés par des fonds européens. Ainsi, les plans varient en termes d'ampleur selon les pays. Au Royaume-Uni, la relance repose principalement sur la consommation des ménages (baisse de la TVA) et représente 4% du PIB. Le déficit public passe de 2,7% du PIB en 2007 à 10,3% en 2010, tandis que la dette passe de 44,4% en 2007 à 79,6% en 2010. En France et en Allemagne, les plans sont plus modestes, d'environ 2% du PIB. En France, l'accent est mis sur les investissements publics et privés, avec une augmentation du déficit de 2,3% à 7,1% entre 2007 et 2010, et une augmentation de la dette de 64,2% à 82,3%. En Allemagne, le déficit était seulement de 0,7% en 2007, il passe à 4,3% en 2010, et la dette augmente de 65,4% en 2007 à 83% en 2010.

2. Le bilan sombre des politiques d'austérité en Europe suite à une sortie hâtive des plans de relance

Les politiques d'austérité visent à réduire, plus ou moins rapidement, les niveaux de déficits et de dettes publiques. Cela correspond également à la logique de la règle d'or adoptée. À partir de 2010, et bien que le taux de chômage reste élevé, les plans de relance laissent place à des politiques budgétaires plus restrictives, en particulier en Europe, dans le contexte de la crise des dettes souveraines. Ces politiques se traduisent par une réduction importante des dépenses publiques (réduction de 10 milliards d'euros en 2013 en France), des emplois publics, des rémunérations et éventuellement des privatisations. Elles entraînent généralement une augmentation des prélèvements obligatoires pour augmenter les recettes. Ainsi, selon l'INSEE, le taux de prélèvements obligatoires est passé de 41,2% du PIB en 2009 à 43,9% en 2012 et 45% en 2018 (48,4% selon Eurostat, qui inclut les crédits d'impôt notamment). Cette politique a évidemment un impact négatif sur l'activité économique en réduisant la consommation, l'investissement et l'emploi. De plus, la réduction de la dette entraîne de nombreux effets pervers: si tout le monde se désendette en même temps, le problème s'aggrave. Par exemple, si tous les ménages augmentent leur épargne simultanément, cela affecte considérablement et négativement la demande globale et nuit à l'activité. De plus, les banques sont incitées à assainir leurs bilans en réduisant les prêts. Cela explique la prolongation des délais pour Bâle III et des critères de ratios moins contraignants. Cette orientation est critiquée par de nombreux économistes, comme Paul Krugman, qui la qualifie d'erreur comparable à celle de Roosevelt en 1937 lorsqu'il pensait que la crise était terminée. Paul Krugman (2012) critique également cette approche en s'étalant sur les

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conditions de l'émergence du consensus en faveur de l'austérité entre 2010 et 2011, notamment en critiquant avec ferveur un article d'Alberto Alesina et Ardagna (2010) qui misait sur les effets stimulants de l'austérité grâce à l'anticipation des réductions de déficit, donc des baisses futures des taux d'imposition et des taux d'intérêt.

Ce consensus pour la rigueur budgétaire nourrit une pensée anti-keynésienne (NAK). En effet, une consolidation budgétaire durable peut affecter positivement la croissance économique. En général, une politique de consolidation budgétaire[6] de plus longue durée peut contribuer à assurer une certaine stabilité macroéconomique en créant un meilleur ancrage des anticipations auprès des différents agents économiques et en les rassurant par rapport à une éventuelle augmentation future de la pression fiscale ou des taux d'intérêt.

En outre, pour les partisans de la nouvelle théorie anti-Keynésienne des finances publiques, la politique budgétaire est utilisée à mauvais escient, pour des fins exclusivement électoralistes et non à des fins de régulation de l'activité économique. Cette instrumentalisation de la politique budgétaire provoque une augmentation excessive du déficit budgétaire et de la dette publique (problème d'insoutenabilité de la dette publique).

Olivier Blanchard et Robert Leigh, économistes du FMI, ont publié en janvier 2013 un article qui révise les calculs du multiplicateur budgétaire, qu'ils estiment entre 0,9 et 1,7 dans les pays avancés depuis 2009, contre 0,5 pour les décennies précédentes : la contraction budgétaire aurait donc des effets récessifs plus importants que prévu. Olivier Blanchard affirme que ce résultat s'aligne sur d'autres études qui estiment que dans le contexte actuel de sous-utilisation des capacités de production, de politiques monétaires contraintes par le plancher des taux d'intérêt nuls et d'ajustement budgétaire synchronisé dans de nombreux pays, les coefficients pourraient être bien supérieurs à 1. Cette constatation indiquerait que la reprise économique pourrait être plus dynamique et dépasser les prévisions, compte tenu de ces facteurs favorables.

3. Les choix budgétaires et monétaires antérieurs à la crise de la Covid

Rachel et Summers défendent l'idée d'une utilisation de la politique budgétaire, tandis qu'ils expriment des réserves quant à l'efficacité de la politique monétaire. Selon eux, l'utilisation de la politique budgétaire ne présente que peu de risques. En effet, Olivier Blanchard (2019) a constaté dans un article intitulée "Public Debt and low interest rates" à l'Association Américaine d'Économie que les inquiétudes traditionnelles concernant

[6] D'autres économistes mobilisent le concept de *consolidation budgétaire*.

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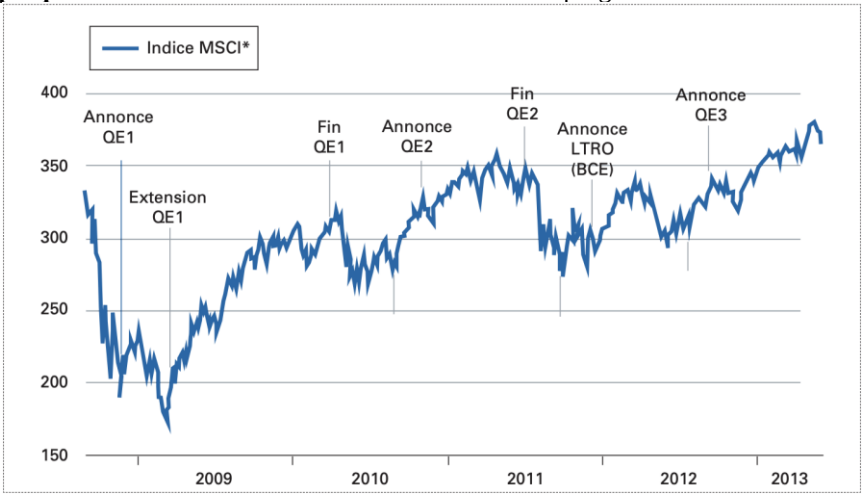
l'endettement public en période de taux d'intérêt réels bas ne semblent pas justifiées à la lumière de l'expérience passée.

Rachel et Summers remettent en question l'efficacité potentielle de la politique monétaire. Ils doutent que les banques centrales disposent de suffisamment de marge de manœuvre pour réduire davantage les taux d'intérêt en cas de nouvelle récession. De plus, ils soulignent que l'assouplissement monétaire pourrait ne pas réellement stimuler l'activité économique lorsque les taux d'intérêt sont déjà faibles. Enfin, ils mettent en garde contre les effets indésirables des taux bas, tels que la formation de bulles spéculatives, l'allocation inefficace des ressources et le renforcement du pouvoir de marché des entreprises.

Graphique 3. Réaction du marché boursier mondial aux programmes non conventionnels



Source : Thomson Reuters Datastream

Note :
QE = Assouplissement quantitatif ;
LTRO = Opération de refinancement à long terme.
* Un indice boursier qui mesure les performances des places financières de pays avancés.

Depuis le déploiement de l'assouplissement quantitatif en 2015, il est constaté que la base monétaire a connu une augmentation de 166 %, passant de 1 200 à 3 200 milliards d'euros. Cependant, pendant cette période, la masse monétaire (M3) n'a augmenté que de 20 %. Ces observations suggèrent que seule une partie relativement faible des 2 000 milliards d'euros de base monétaire créés par l'Eurosystème sont réellement injectés dans l'économie réelle. Par conséquent, il est peu probable qu'une nouvelle expansion significative du bilan ait un impact considérable sur cette situation.

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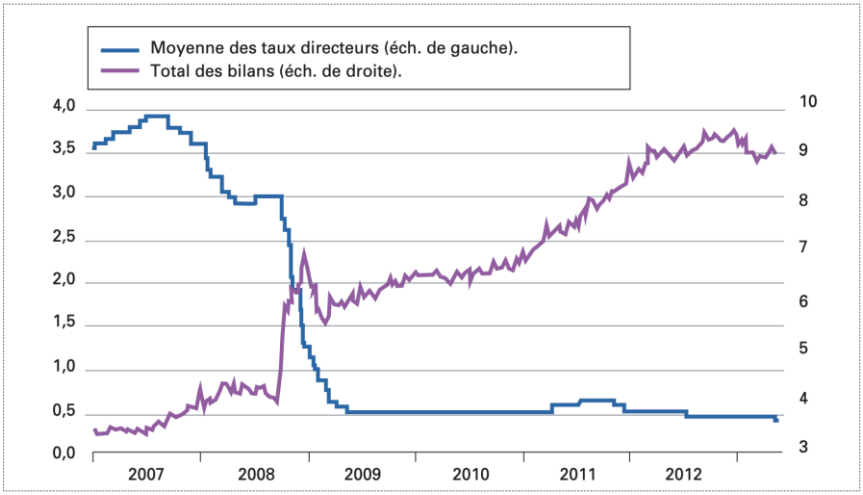
Graphique 4. Bilans des banques centrales du G4 (en milliards de dollars) et moyenne de leurs taux directeurs



Source : Thomson Reuters Datastream

Face aux dysfonctionnements des canaux traditionnels de la politique monétaire, les politiques non conventionnelles sont mises en œuvre pour répondre à divers objectifs définis par les banques centrales, tels que la stabilisation des marchés financiers, la stimulation du crédit et la lutte contre la déflation. Ces mesures varient en fonction des caractéristiques des systèmes financiers et des priorités des banques centrales. Par exemple, certaines banques centrales ont adopté des taux d'intérêt négatifs, obligeant les banques à payer des intérêts sur leurs dépôts auprès de la banque centrale afin de les encourager à prêter aux acteurs économiques. Elles ont également renforcé l'impact de leurs décisions en communiquant de manière transparente et efficace, à travers des stratégies de communication anticipée, connues sous le nom de "forward guidance", qui annoncent à l'avance les orientations futures de leur politique monétaire.

En outre, certaines banques centrales ont facilité l'accès des banques commerciales à des liquidités en satisfaisant intégralement leurs demandes de financement à plus long terme. Elles ont également accepté des garanties de moindre qualité (qualitative easing). De plus, elles sont intervenues directement sur les marchés secondaires en achetant massivement des titres financiers aux banques, ce qui a injecté des liquidités dans le système financier, connu sous le nom d'assouplissement quantitatif ou quantitative easing. Dans la zone euro, par exemple, les mesures non conventionnelles mises en œuvre par l'Eurosystème comprennent une politique de taux d'intérêt particulièrement accommodante, y compris des taux négatifs, ainsi qu'une guidance prospective indiquant que les taux directeurs resteront proches de zéro aussi longtemps que nécessaire. Des facilités d'accès aux liquidités ont

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été mises en place pour les banques commerciales, notamment par le biais d'opérations de refinancement à long terme ciblées (TLTRO), et des programmes d'achat d'actifs publics et privés ont été mis en œuvre, complétés par des facilités de prêts de titres.

Cependant, malgré l'ampleur de ces programmes, ils n'ont pas entraîné une augmentation significative de l'inflation. Bien que la base monétaire ait augmenté (le bilan des banques centrales), la croissance de la masse monétaire (M3) est restée modérée. Entre 2007 et 2020, la base monétaire a augmenté de 330 % dans la zone euro, tandis que M3 n'a augmenté que de 60 %, et les prix ont augmenté de 17,2 % selon la Banque de France. Aux États-Unis, sur la même période, la base monétaire a augmenté de près de 500 %, tandis que M3 a augmenté de 143 % et les prix de 19 %.

III. Quelle politique économique dans le contexte d'après crise pandémique ?

1. Resserrement monétaire et risque d'instabilité financière ?

Comme c'est indiqué dans le graphique ci-dessous, depuis le mois de Mars 2022, la FED a déjà commencé une hausse de son taux directeur. Le pays maintient actuellement le taux directeur le plus élevé parmi les grandes économies occidentales, avec une fourchette de taux comprise entre 5,00 % et 5,25 % en juin.

Quelques semaines plus tard (Juillet), un suivisme européen a été constaté. En effet, la Banque centrale européenne (BCE) a décidé d'augmenter son taux d'intérêt directeur de 25 points de base, le portant à 4,00 %. Parallèlement, la banque centrale du Royaume-Uni a également pris la décision d'augmenter son taux d'intérêt directeur de 50 points de base, le fixant à 5,00 %. Ces mesures visent principalement à lutter contre l'inflation croissante et à maintenir la stabilité économique. Effectivement, les politiques monétaires sont en cours de normalisation, marquant la fin des mesures d'urgence prises en réponse à la pandémie. La Banque centrale européenne (BCE) a mis fin à ses programmes de rachat d'actifs liés à la crise sanitaire, tandis que la Réserve fédérale américaine (Fed) a commencé à réduire progressivement ses propres rachats d'actifs depuis novembre 2021. Auparavant, la Fed achetait environ 120 milliards de dollars de bons du Trésor et autres actifs chaque mois.

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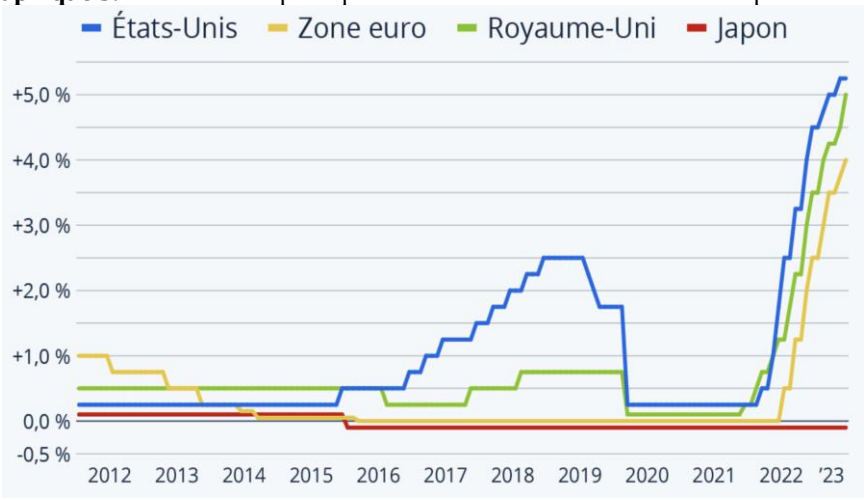
Graphique 5. Évolution des principaux taux d'intérêt directeurs des Banques centrales



Source : Statista, sur données fournies par les principales Banques centrales

Note :

- États-Unis : le taux indiqué correspond à la limite supérieure de la fourchette cible du taux directeur.
- La décision de la BCE (Juillet 2022) d'augmenter ses taux d'intérêt marque la fin d'une période de politique monétaire à taux zéro qui a duré six ans. Cette hausse s'inscrit dans une série de mesures visant à normaliser la politique monétaire.

Toutefois, cette normalisation de la politique monétaire dans les principales économies mondiales, pourrait bien en avoir des conséquences néfastes, notamment sur le fonctionnement des marchés financiers et sur la dynamique de croissance économique dans le monde.

En effet, la maitrise de l'inflation peut s'avérer contradictoire quant à l'objectif de stabilité financière. La possibilité d'un retournement de la courbe des taux, avec l'augmentation des taux directeurs, suscite des inquiétudes quant à une éventuelle crise financière. Une hausse des taux pourrait entraîner une forte dépréciation des actions, ce qui pourrait avoir des conséquences néfastes sur les marchés financiers. En effet, des perturbations sur les marchés ont été déjà observées, en particulier lors des annonces de la Fed en 2021 et 2022, où des baisses de cours ont été enregistrées, notamment sur les valeurs technologiques jugées plus risquées. La crise ukrainienne a également eu des répercussions, bien que probablement moins importantes que les hausses de taux. Par exemple, sur le S&P 500, qui reflète les performances des 500 plus grandes entreprises cotées aux États-Unis, les anticipations de hausse des taux ont entraîné une correction maximale de près de 10 % de l'indice, avant qu'il ne rebondisse et ne se stabilise avec une correction limitée à 4,3 % depuis la

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fin de l'année 2021. La crise ukrainienne a initialement entraîné une chute de 8 % de l'indice, mais le marché a ensuite réévalué la situation, limitant la baisse à 4,5 %. Ainsi, de nombreux signes plutôt inquiétants se manifestent. D'ailleurs, la BCE en février 2022 a récemment mis en garde contre les risques d'exposition des banques européennes à un retournement, notamment sur le marché de l'immobilier commercial, ainsi qu'au risque de surévaluation des prix des logements dans certains pays comme l'Allemagne. On en conclut que les banques centrales sont confrontées à une difficulté majeure dans leur mission, qui consiste à concilier la stabilité financière et la gestion de l'inflation. Selon Kent et Lowe (1997), il est suggéré que les banques centrales puissent prendre en compte l'appréciation des actifs financiers dans leur politique de taux, à condition de juger que cette appréciation n'est pas liée à l'évolution des fondamentaux économiques. Cependant, cela soulève la possibilité que les banques centrales éprouvent des difficultés à distinguer les chocs de productivité réelle d'une frénésie spéculative sur les marchés. Selon Kent et Lowe (1997), les banques centrales se trouvent donc confrontées à un dilemme complexe dans leur prise de décision.

1. Le problème de la dette Covid

Il convient de souligner que la persistance des taux d'intérêt à des niveaux bas a récemment contribué à alléger le fardeau de la dette, comme en témoigne l'exemple de la France. Les obligations publiques ont réussi à se placer sur le marché, parfois à des taux négatifs, ce qui témoigne de l'intérêt croissant pour les investissements considérés comme sûrs. Il existe un consensus général quant à la nécessité de recourir à l'endettement, une réalité partagée par tous les pays développés.

Selon le Fonds monétaire international (FMI), en octobre 2021, la dette mondiale a connu une augmentation significative de 14 % par rapport à 2020, dépassant le niveau record de 226 000 milliards de dollars à cause de la pandémie. Fitch Ratings a également souligné que la dette publique a augmenté d'environ 10 000 milliards de dollars en seulement neuf mois en 2020, une croissance qui aurait normalement nécessité sept années avant la crise. À l'heure actuelle, la dette publique mondiale représente presque un an du produit intérieur brut (PIB) mondial. Les pays développés bénéficient de taux d'intérêt très bas pour financer leur dette, tandis que les pays émergents font face à des taux plus élevés.

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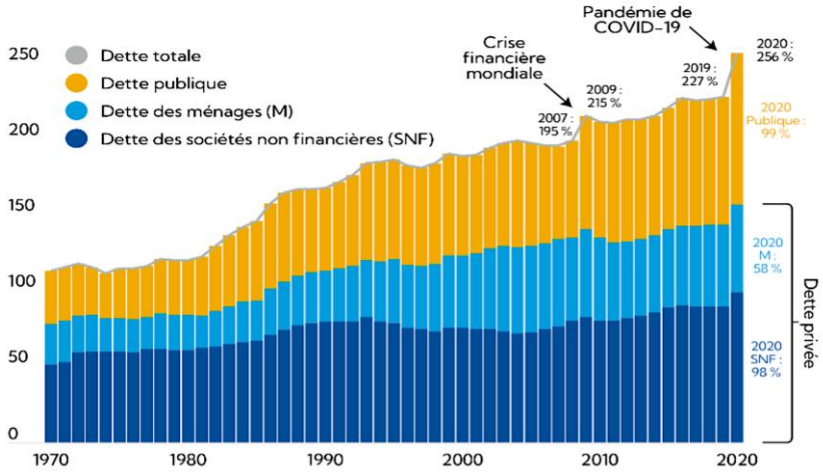
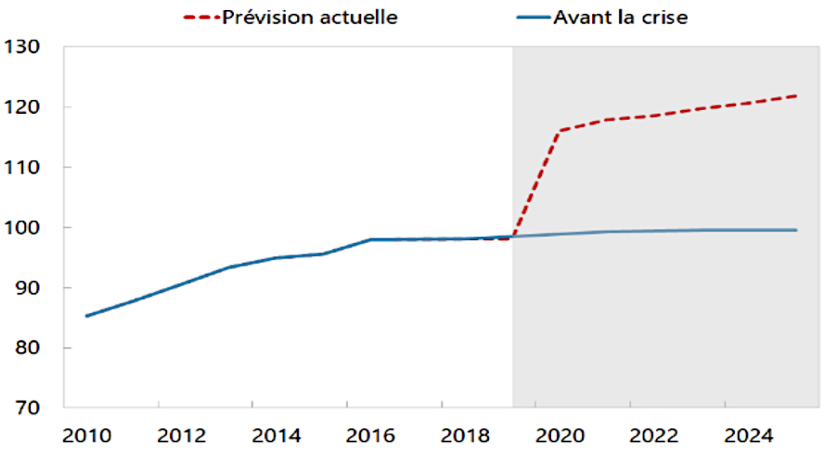
Graphique 6. Évolution de la dette mondiale entre 1970 et 2020 en pourcentage du PIB



Source : Calculs des services du FMI

Note : Les ratios estimés de la dette mondiale sur le PIB sont pondérés en fonction du PIB de chaque payé exprimé en dollars. En 2020, la dette mondiale a connu la plus forte augmentation des 50 dernières années.

Graphique 7. La dette publique de la France devrait augmenter en raison des mesures d'aide budgétaire et de la baisse de la production (en pourcentage du PIB)



Source : Calculs des services du FMI

Note : La zone en gris correspond aux prévisions

Certains économistes ont avancé la proposition d'annuler la dette supplémentaire liée à la pandémie et détenue par la Banque centrale européenne (BCE). Une tribune signée par plus d'une centaine d'économistes et de politiciens, parmi lesquels Thomas Piketty, a soutenu cette idée. Selon eux, environ 25 % de la dette est détenue par la BCE, ce qui signifie que son annulation ne nuirait pas aux créanciers privés. Une alternative consisterait à

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transformer cette dette en une forme de dette perpétuelle assortie de taux d'intérêt nuls. Les partisans de cette proposition suggèrent que les États bénéficiant de l'annulation de dette soient tenus d'investir un montant équivalent dans la transition écologique. Ils expriment des craintes concernant un retour aux politiques d'austérité, comme cela s'est produit après la crise des dettes souveraines, ainsi que l'éventualité d'augmentations d'impôts ayant des effets néfastes sur l'activité économique.

Contrairement à d'autres institutions, une banque centrale ne craint pas de subir des pertes, car elle peut toujours honorer sa dette en créant de la monnaie. Par conséquent, si la banque centrale annulait une partie de sa créance, elle enregistrerait une perte qui serait absorbée par ses fonds propres, sans affecter son fonctionnement. Même si, symboliquement, le bilan de la BCE ne rétrécirait pas (bien que son expansion massive soulève des questions), la recapitalisation pourrait être effectuée par les banques centrales nationales, qui recevraient de la monnaie centrale de la BCE à cette fin.

D'autres propositions alternatives ont également été avancées, comme celle évoquée par Esther Duflo, qui suggère de maintenir le remboursement de la dette, mais en conditionnant celui-ci à une augmentation de la progressivité de l'impôt, de sorte que ce soient les personnes les plus riches qui contribuent davantage. Actuellement, l'affaiblissement mécanique de la dette est principalement dû aux taux d'intérêt très bas, ce qui peut avoir un impact négatif sur les épargnants de classe moyenne.

2. Le dilemme de la politique monétaire aujourd'hui : dominance budgétaire vs dominance monétaire

Actuellement, la Banque centrale européenne se trouve inextricablement prise dans une situation de dominance budgétaire. Cette situation entrave d'ores et déjà la conduite de la politique monétaire dans la zone euro, en limite considérablement l'efficacité et réduit la possibilité d'une quelconque modification dans la trajectoire future de la politique économique. Une situation de dominance budgétaire survient lorsque la politique monétaire devient dépendante du financement de l'État et est de fait, contrainte par la politique budgétaire. Cette situation correspond au cas d'une économie de guerre, où la politique monétaire vise à maintenir des taux d'intérêt bas à long terme pour faciliter le financement de l'effort de guerre et pour contrôler l'inflation. Aussi, l'augmentation des dettes publiques suite à la crise sanitaire (Dette Covid) oblige à la mise en place d'une politique monétaire axée sur des taux directeurs très faibles, voire nuls, et des opérations d'achat d'obligations (notamment publiques) pour maintenir les taux d'intérêt à long terme à un niveau bas, assurant ainsi la soutenabilité de ces dettes. En effet, la dominance budgétaire serait particulièrement préoccupante pour la zone euro. Les spreads, c'est-à-dire les écarts de taux entre les obligations publiques des

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différents pays membres, restent un sujet d'inquiétude. À titre d'illustration, en mars 2020, des tensions sur les spreads sont réapparues, notamment vis-à-vis de l'Italie, où la dette publique dépassait les 130 % du PIB, suscitant des inquiétudes sur les marchés. La passivité de la BCE envers l'Italie a provoqué rapidement un creusement des spreads par une chute du cours des obligations italiennes. Pour y remédier, la BCE a été contrainte d'intervenir, par le biais de nouvelles mesures de relance quantitative et qualitative, et par là apaiser les tensions sur les marchés. La BCE semble donc fortement contrainte dans ses choix en matière de taux d'intérêt et difficilement capable de conduire une politique monétaire autonome.

A contrario, il est question de dominance monétaire lorsque le pays se voit en mesure d'assurer en toute autonomie la soutenabilité de ses finances publiques, tandis que la banque centrale reste indépendante dans le pilotage de sa politique monétaire. Dans ce contexte, la politique monétaire n'est pas soumise aux contraintes de financement du gouvernement, comme c'est le cas lorsque le financement du besoin de financement de l'Etat se fait par l'émission de titres de dettes sur les marchés financiers et que ce financement est viable. En temps normal, lorsque la banque centrale commence à normaliser sa politique monétaire, l'augmentation des taux d'intérêt accroît la charge de la dette du gouvernement, qui se voit contraint de recourir à une politique de rééquilibrage budgétaire sous forme d'augmentation des impôts ou de réduction des dépenses publiques. Cependant, en raison de leur niveau d'endettement élevé, les États pourraient bien décider délibérément de ne pas réduire leurs déficits, voire d'augmenter leur endettement, pour obliger la banque centrale à abandonner son resserrement monétaire. Ce jeu non coopératif entre les gouvernements et les banques centrales peut facilement dégénérer pour donner lieu in fine à un risque de défaillance souveraine. Dans le cas de la zone euro, le régime de dominance monétaire prévalait depuis la création de la BCE en 1998 jusqu'à l'adoption en fin 2012 du dispositif européen de stabilité financière[7] et a fortiori pour gérer la crise de dette souveraine grecque.

[7] Le mécanisme européen de stabilité (MES) a été établi dans le but de garantir la stabilité financière dans la zone euro. Son rôle principal est de venir en aide aux États membres qui se retrouvent en difficulté financière. Effectif depuis le 27 septembre 2012, le MES remplace le mécanisme et le fonds européen de stabilité financière.
À l'heure actuelle, le MES a également la capacité d'accorder une assistance financière aux États faisant face à un niveau d'endettement trop élevé. En échange, ces derniers doivent s'engager à mettre en œuvre des mesures spécifiques, incluant un programme d'ajustement macroéconomique. De plus, ils doivent continuer à respecter les dispositions du pacte budgétaire européen.

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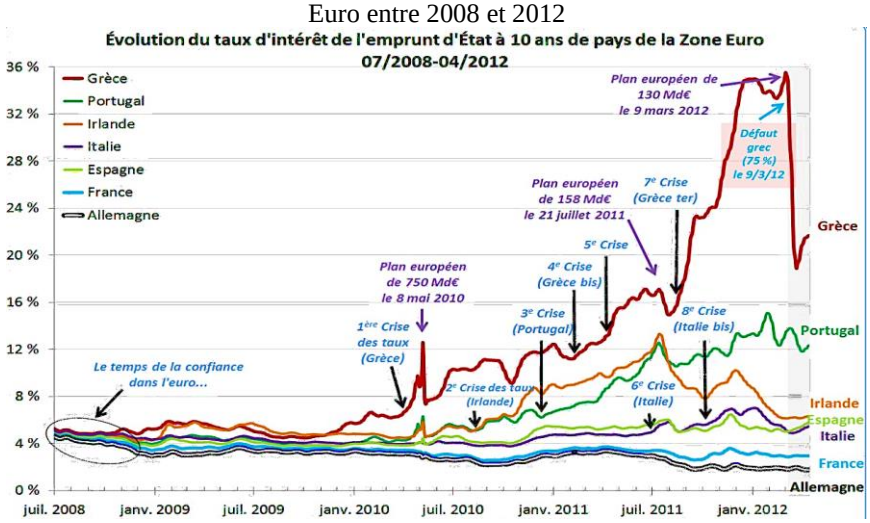
Graphique 8. Évolution du taux d'intérêt de l'emprunt d'État à 10 ans de pays de la zone Euro entre 2008 et 2012



Source : Olivier Berruyer (https://www.les-crises.fr)

- On se souvient qu'en été 2012, il avait fallu le fameux "whatever it takes" de Mario Draghi pour apaiser les marchés.
- Le débat autour du principe de responsabilité nationale dans la gestion des finances publiques, qui constitue un pilier fondamental de la construction et du fonctionnement de l'Union économique et monétaire (UEM), suscite des discussions récurrentes depuis le déclenchement de la crise grecque. Au-delà des remises en question institutionnelles potentielles de ce principe, cet article se concentre sur l'idée selon laquelle les mesures prises par le FMI et la BCE au sein de la "Troïka" pour soutenir les finances publiques grecques semblent, de facto, enfreindre le principe de non-solidarité financière entre les États.

Aujourd'hui, face à une crise stagflationniste qui semble durer dans le temps, l'intervention des Banques centrales est plus sollicitée que jamais. Si l'augmentation des taux d'intérêt correspond à une hausse des taux d'intérêt réels à long terme, compatible avec une augmentation de la productivité et de la croissance réelle, et donc également des recettes de l'État, cela pourrait être absorbé. La deuxième possibilité serait une hausse des taux nominaux par la BCE en réponse à une inflation croissante, un scénario de plus en plus probable avec un contexte géopolitique mondial perturbé. Toutefois, si cela est bien géré, cette hausse des taux n'aurait pas d'effet sur les taux réels pour le gouvernement, préservant ainsi la soutenabilité de la dette. Un troisième scénario impliquerait une panique des investisseurs, qui se détourneraient massivement de la dette publique. Dans ce cas, la banque centrale devrait intervenir "quoi qu'il en coûte", comme elle l'a promis, en assumant une

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responsabilité explicite envers la stabilité financière. Elle devrait prendre des mesures drastiques pour rétablir la confiance et stabiliser les marchés financiers afin d'éviter une crise majeure.

Il est impératif de repenser entièrement l'approche des institutions européennes, étant donné que la Banque centrale européenne (BCE) assume maintenant un rôle inattendu et de facto, dépassant largement les prévisions, tandis que le pacte de stabilité et de croissance (PSC) a été interrompu à cause de la pandémie de Covid-19, étant déjà inefficace et ignoré depuis de nombreuses années. Par conséquent, il est impératif de le remplacer par un nouveau socle de principes simples et tangibles, afin de permettre la mise en œuvre d'une politique contracyclique chaque fois que nécessaire.

Les banques centrales sont donc confrontées à un dilemme : accepter une légère augmentation de l'inflation pour alléger la contrainte budgétaire, ou bien maintenir une orthodoxie monétaire, risquant ainsi de susciter des réactions violentes de la part des gouvernements qui contrecarreraient leurs actions en émettant massivement de la dette publique pour rembourser les dettes passées.

Conclusion

Depuis les années 1980, la plupart des pays développés a adopté le consensus de Washington, une approche néolibérale prônée par le FMI et la BM. Ces institutions ont préconisé des politiques économiques visant à inverser les mesures interventionnistes mises en place pendant les décennies d'après-guerre. Cette orientation a favorisé le désengagement de l'État des activités économiques et sociales, donnant ainsi au marché un rôle central dans la régulation. Les politiques de développement ont également été axées sur la libéralisation commerciale et financière. Sur le plan budgétaire, les politiques de consolidation budgétaires ont été privilégiées, tandis que sur le plan monétaire, les mesures de ciblage de l'inflation étaient devenues la règle pour la plus grande majorité des pays.

Ces dynamiques des années 1980 se sont étendues au-delà des pays développés, touchant également les pays en développement, qui ont été confrontés à des déséquilibres financiers et un endettement croissant. Face à ces problèmes, bon nombre de ces pays ont adopté des politiques alignées sur le consensus de Washington, cherchant à remédier à leurs déficits sociaux chroniques, aux déséquilibres de la balance des paiements et aux crises de la dette par le biais de Programmes d'ajustement structurel (PAS). Toutefois, ces politiques ont rapidement montré leurs limites, notamment en Amérique latine où elles ont été largement appliquées. Bien qu'elles aient contribué à stabiliser les équilibres macroéconomiques et sociaux, elles ont toutefois peiné à résoudre les rigidités institutionnelles et les déficits sociaux inhérents aux économies en difficulté, entraînant une croissance économique faible.

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Aujourd'hui, un changement de cap dans l'analyse est à l'ordre du jour, avec une multiplication des appels en faveur de la politique budgétaire dans un contexte économique compliqué, ce qui aurait semblé difficile il y a seulement dix ans. Face à la crise et au regard de la persistance des taux d'intérêt à des niveaux bas, un consensus général en faveur du recours à l'endettement est partagé par tous les pays développés. Cependant, la dette mondiale a considérablement augmenté, atteignant un niveau record selon le FMI et l'avenir réserve des défis pour gérer cette dette, en particulier pour les économies émergentes. Aussi, le problème d'inflation met les banques centrales dans une situation de dilemme. D'une part, le resserrement des conditions de financement et les mesures de normalisation monétaire se propagent afin d'endiguer l'inflation, au prix de freiner une reprise économique timide à la sortie de la crise pandémique. D'autre part, la poursuite des mesures expansives, en l'occurrence non-conventionnelles, pourrait aggraver l'inflation et perpétuer la dominance budgétaire exercée sur les banques centrales depuis le début de la crise des dettes souveraines en Europe.

L'étude actuelle se concentre sur une sélection d'articles, les plus cités sur les différentes bases de données. Cette dernière ne prétend pas être exhaustive. Ainsi, sa principale limite réside dans le nombre réduit d'articles étudiés. La méthodologie exposée préalablement, démontre que ce travail représente une ébauche d'un examen de la portée (scoping review), qui pourrait servir de précurseur à une éventuelle revue systématique à venir.

Conflit d'intérêts : L'auteur n'a signalé aucun conflit d'intérêts.

Disponibilité des données : Toutes les données sont incluses dans le contenu du document.

Déclaration de financement : L'auteur n'a obtenu aucun financement pour cette recherche.

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Annexe 1. Une sélection des références pertinentes selon le nombre de citations

Auteurs	Titre de l'article	Objet de l'article	Journal ou support de publication	Citations (sur différentes bases de données)
Alberto Alesina, Carlo Favero, Francesco Giavazzi	The output effect of fiscal consolidation plans	Alberto Alesina, Carlo Favero, et Francesco Giavazzi, soulignent que l'expérience adéquate pour évaluer les effets d'un ajustement budgétaire est la simulation d'un plan budgétaire pluriannuel, plutôt que des chocs budgétaires individuels. Leur étude porte sur 16 pays de l'OCDE sur 30 ans montre que les ajustements basés sur des coupes dans les dépenses sont moins coûteux en termes de pertes de production que ceux basés sur les impôts, surtout lorsqu'ils sont permanents.	Journal of International Economics, Volume 96, Supplement 1, Pages S19-S42, 2015	Cité 687 fois dont 222 sur ScienceDirect
Alesina, A., & Ardagna, S.	Large Changes in fiscal policy: Taxes versus spending	En analysant les politiques fiscales des pays de l'OCDE de 1970 à 2007, Les auteurs démontrent que par des	Tax Policy and the Economy, National Bureau of	Cité 2171 fois

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		stimuli budgétaires par des réductions d'impôts favorisent plus la croissance que par des augmentations de dépenses. Les ajustements budgétaires par des coupes dans les dépenses sans augmentation d'impôts réduisent davantage les déficits et les ratios dette/PIB que ceux par des hausses d'impôts. De plus, les ajustements du côté des dépenses sont moins susceptibles de provoquer des récessions. Ces résultats sont confirmés par des régressions simples.	Economic Research (NBER). Volume 24, Pages 35–68, 2010	
Barro R. J. et Gordon D. B.	A positive theory of monetary policy in a natural rate model	Un décideur politique discrétionnaire peut causer une inflation surprise, nuisant à l'emploi et augmentant les recettes publiques. Mais si les individus comprennent les objectifs du décideur, les surprises sont limitées. En équilibre, les anticipations sont rationnelles. Ces dernières engendrent une dichotomie entre la sphère réelle (chômage) et la sphère monétaire (inflation). Des règles d'engagement améliorent les résultats, favorisant les contrats à long terme entre gouvernement et secteur privé.	Journal of Political Economy, Volume 91 (4), Pages 589-610, 1983	Cité plus de 5000 citations
Barro R.J	Government Spending in a simple model of	Les dépenses publiques dans le domaine de la recherche et développement ou celui des infrastructures permet	Journal of Political Economy, Volume 98,	Cité 12995 fois

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	endogenous growth	de générer des externalités positives qui améliore la productivité des facteurs de production. La production des externalités par l'Etat justifie le retour de ce dernier avec les économistes de la nouvelle école classique.	Issue 5, Pages 103-125, 1990	
Blanchard, Olivier	Public Debt and Low Interest Rates	L'auteur montre que les inquiétudes traditionnelles concernant l'endettement public en période de taux d'intérêt réels bas ne semblent pas justifiées à la lumière de l'expérience passée.	American Economic Review, Volume 109 (4), Pages 1197-1229, 2019	Cité plus de 1180 fois
Kydland F. E et Prescott E. C	Rules rather than Discretion: The Inconsistency of Optimal Plans	Les auteurs montrent que malgré que les décideurs connaissent le moment et l'ampleur des effets de leurs actions, la politique discrétionnaire, c'est-à-dire le choix de la décision qui est la meilleure, compte tenu de la situation actuelle et d'une évaluation correcte de la position de fin de période, ne maximise pas la fonction sociale. La rationalité des agents économiques rend la politique discrétionnaire inefficace.	Journal of Political Economy, Volume 85, Issue 3, Pages 473-491, 1977	Cité plus de 2600 fois
Lucas R.E	On the Mechanics of Economics Development	L'auteur examine les perspectives de construction d'une théorie néoclassique de la croissance et du commerce international cohérente avec certaines caractéristiques principales du développement économique. Trois	Journal of Monetary Economics, Volume 22, Pages 3-42, 1988	Cité plus de 43750 fois Dont 11969 sur ScienceDirect

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		modèles sont considérés et comparés aux données probantes : un modèle mettant l'accent sur l'accumulation de capital physique et le changement technologique, un modèle mettant l'accent sur l'accumulation de capital humain par le biais de l'éducation, et un modèle mettant l'accent sur l'accumulation de capital humain spécialisé par l'apprentissage par la pratique.		
Muth, John F.	Rational Expectations and the Theory of Price Movements	L'auteur explique comment les anticipations se forment, en s'alignant sur la théorie économique néoclassique, partant de l'hypothèse des anticipations rationnelles. Par hypothèse, l'économie utilise rationnellement toute l'information, et les anticipations dépendent spécifiquement de la structure de l'ensemble du système.	Econometrica, Volume 29, Issue 3, Pages 315–35, 1961	Cité 9385 fois
Milton Friedman	The quantity theory, a restatement	Milton Friedman, dans son "Restatement" de 1956 de la théorie quantitative, affirmait que son article et quatre autres essais dans Studies in the Quantity Theory of Money faisaient partie d'une tradition orale distincte de la théorie quantitative à l'Université de Chicago. La conception friedmanienne de la politique monétaire s'oppose à la conception keynésienne discrétionnaire.	Journal of International Money and Finance, Pages 1086–1096, 2009	N/A

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Olivier J. Blanchard & Daniel Leigh	Growth Forecast Errors and Fiscal Multipliers	Ce document examine la relation entre les erreurs de prévision de croissance et la consolidation budgétaire planifiée pendant la crise. Les auteurs constatent que, dans les économies avancées, une consolidation budgétaire plus forte a été associée à une croissance plus faible que prévu. La relation est particulièrement forte, à la fois statistiquement et économiquement, au début de la crise. Une interprétation Plausible est que les multiplicateurs budgétaires étaient nettement plus élevés que ce que présumaient implicitement les prévisions.	American Economic Review, Volume 103 (3), Pages 117-120, 2013, Mai 2013	Cité plus de 2090
Romer P	Increasing Return and Long-Run Growth	Cet article propose un modèle de croissance à long terme où la connaissance est considérée comme un facteur de production avec une productivité marginale croissante. Contrairement aux modèles reposant sur des rendements décroissants, ce modèle permet des taux de croissance en augmentation, amplifiant les effets des petites perturbations par les actions des agents privés, et suggère que les grands pays peuvent toujours croître plus rapidement que les petits. Des preuves empiriques à long terme soutiennent ces possibilités.	Journal of Political Economy, Volume 94, Issue 5, Pages 1002-1037, 1986	Cité plus de 37100 fois

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Summers, L.H.	Speech at the IMF 14th Annual Research Conference in Honor of Stanley Fisher	En 2013, Lawrence H. Summers fait un parallèle entre la situation économique actuelle et celle décrite par Alvin Hansen dans les années 1930 : une croissance faible, une inflation modérée et un niveau d'investissement en baisse malgré une épargne excessive, entraînant une chute des taux d'intérêt réels. Il soutient que la période d'optimisme précédant la crise financière mondiale de 2008 était une parenthèse dans un cycle économique dépressif amorcé dans les années 1980.	International Monetary Fund, 2013	NA
Sargent, T. et Wallace, N.	Rational expectations and the theory of economic policy	Il est largement accepté que la politique monétaire devrait suivre une règle claire, basée sur toutes les informations disponibles. Cette approche garantit un réglage optimal de la politique monétaire dans toutes les circonstances, avec des réglages identiques pour les mêmes situations à différentes périodes. Ainsi, une règle monétaire établie offre une orientation constante et efficace pour les décisions de politique monétaire, contribuant à la stabilité économique et à la prévisibilité des marchés.	Journal of Monetary Economics, vol.2 (2), pp. 169-183.	Cité 1288 fois dont 329 sur ScienceDirec
Schaechter et al.	Fiscal rules in response to the crisis	Cet article examine les règles budgétaires mondiales, compilant des données sur 81 pays de 1985 à fin mars 2012. Il	Document publié par le FMI en 2012	Cité 725 fois

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		détaille les principaux éléments de conception et les résume dans des indices. Trois conclusions émergent : l'adoption et le renforcement des règles budgétaires en réponse à la crise, la convergence des caractéristiques de conception entre économies émergentes et avancées, et la complexité croissante des règles budgétaires "de nouvelle génération", combinant durabilité et flexibilité face aux chocs, présentant ainsi de nouveaux défis de mise en œuvre et de communication.		
Thomas Piketty	Le Capital au XXIe siècle	L'auteur analyse la question de la répartition de la richesse. Elle se base sur une vaste compilation de données historiques et comparatives. En explorant trois siècles et plus de vingt pays, il apporte une compréhension de la dynamique du capitalisme en mettant en lumière la contradiction entre la croissance économique et le rendement du capital.	Editions du seuil, Page 885, 2013	Cité 3374 fois