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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 century¹. 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>

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

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Abderrahim Ayad,
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Sara Teidj,
Moulay Ismail University Meknes, Morocco

Gbadamassi Fousséni,
Université de Parakou, Benin

Bouyahya Adil,
Centre Régional des Métiers d'Education et de Formation, Maroc

Haounati Redouane,
Ibn Zohr Agadir, Morocco

Hicham Es-soufi,
Moulay Ismail University, Morocco

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Abdelmalek Essaâdi University, Morocco

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Ivane Javakhishvili Tbilisi State University, Georgia

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Noureddine El Baraka,
Ibn Zohr University, Morocco

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Ngwengeh Brendaline Beloke,
University of Biea, Cameroon

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Sidi Mohamed Ben Abdelah University, Morocco

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University of Georgia, Georgia

Abdelkrim Salim,
Hassiba Benbouali University of Chlef, Algeria

Omar Kchit,
Sidi Mohamed Ben Abdellah University, Morocco

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Ignatius Ajuru University of Education, Nigeria

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Oudani Hassan,
University Ibn Zohr Agadir, Morocco

Merita Rumano,
University of Tirana, Albania

Mohamed Chiban,
Ibn Zohr University, Morocco

Tal Pavel,
The Institute for Cyber Policy Studies, Israel

Jawad Laadraoui,
University Cadi Ayyad of Marrakech, Morocco

El Mourabit Youssef,
Ibn Zohr University, Morocco

Mancer Daya,
University of Science and Technology Houari Boumediene, Algeria

Krzysztof Nesterowicz,
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Muhammed Bilgehan Aytac,
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Quaid-i-Azam University Islamabad, Pakistan

Afzal Shah,
Quaid-i-Azam University Islamabad, Pakistan

Muhammad Tayyab Naseer,
Quaid-i-Azam University Islamabad, Pakistan

Asif Sajjad,
Quaid-i-Azam University Islamabad, Pakistan

Atif Ali,
COMSATS University Islamabad, Pakistan

Shahzda Adnan,
Pakistan Meteorological Department, Pakistan

Waqar Ahmed,
Johns Hopkins University, USA

Faizan ur Rehman Qaiser,
COMSATS University Islamabad, Pakistan

Choua Ouchemi,
Université de N'Djaména, Tchad

Syed Tallataf Hussain Shah,
COMSATS University Islamabad, Pakistan

Saeed Ahmed,
University of Management and Technology, Pakistan

Hafiz Muhammad Arshad,
COMSATS University Islamabad, Pakistan

Johana Hajdini,
University "G. d'Annunzio" of Chieti-Pescara, Italy

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York St John University, UK

Noshaba Zulfiqar,
University of Wah, Pakistan

Muhammad Imran Shah,
Government College University Faisalabad, Pakistan

Niaz Bahadur Khan,
National University of Sciences and Technology, Islamabad, Pakistan

Titilayo Olotu,
Kent State University, Ohio, USA

Kouakou Paul-Alfred Kouakou,
Université Peleforo Gon Coulibaly, Côte d'Ivoire

Sajjad Ali,
Karakoram International University, Pakistan

Hiqmet Kamberaj,
International Balkan University, Macedonia

Sanna Ullah,
University of Central Punjab Lahore, Pakistan

Khawaja Fahad Iqbal,
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Heba Mostafa Mohamed,
Beni Suef University, Egypt

Abdul Basit,
Zhejiang University, China

Karim Iddouch,
International University of Casablanca, Morocco

Jay Jesus Molino,
Universidad Especializada de las Américas (UDELAS), Panama

Imtiaz-ud-Din,
Quaid-e-Azam University Islamabad, Pakistan

Dolantina Hyka,
Mediterranean University of Albania

Yaya Dosso,
Alassane Ouattara University, Ivory Coast

Essedaoui Aafaf,
Regional Center for Education and Training Professions, Morocco

Ahmed Aberqi,
Sidi Mohamed Ben Abdellah University, Morocco

Silue Pagadjovongo Adama,
Peleforo GON COULIBALY University, Cote d'Ivoire

Soumaya Outellou,
ENCG-Ibn Tofail University-Kenitra, Morocco

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Dr. N. K. Rathee

Professor & Director, Education Graduate Programs
Delaware State University, DE, USA

Dr. Joseph Falodun

Associate Professor, Education Department
Delaware State University, DE, USA

Wan Li

Senior Research Fellow,
Sanming University, Fujian, China

Pengyue He

Doctoral Researcher,
Sanming University, Fujian, China

Dr. Vikramjit S. Rathee

Chief Scientific Advisor, Research & Development Department
Nine Star Initiative, DE, USA

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Abstract

Equity literacy refers to the skills and mindsets needed to recognize, respond to, and redress conditions that deny equitable access to education. It involves understanding how identities such as ethnicity, gender, sexual orientation, language, religion, immigration status, and disability intersect and contribute to class inequities. More than mere awareness, equity literacy demands a commitment to deepening individual and institutional understandings of the dynamics of equity and injustice within organizations and communities. Its goal is to pinpoint disparities, eradicate inequities, and actively foster a culture of equity. Evaluating equity literacy is essential to understand how educational disparities impact access to equitable opportunities free from bias and discrimination. Considering the existing

deficiency in tools for assessing equity literacy, this study introduces a survey instrument designed to assess equity literacy in educational institutions. This survey was developed based on Gorski's equity literacy framework (2016). To establish its validity, the survey was reviewed by experts and refined using Lawshe's Content Validity Ratio (CVR). Items with CVR scores below the established threshold were removed. The revised 20-item survey was administered to 34 individuals to assess reliability using Cronbach's alpha. The survey demonstrated robust reliability with an alpha of 0.87. Additionally, the survey categorizes total scores into four rubric levels of equity literacy: exceptional, fair, developing, and little/none. This survey serves as a foundational tool for implementing this framework, thus empowering educators to challenge prevailing mindsets and cultural deficits.

Keywords: Equity, Literacy, Reliable Survey, Measurement Tool, Equitable Institutions

Introduction

Equity literacy refers to a system where common goods are redistributed to create systems that share a greater likelihood of being equal. It is a comprehensive approach to creating and sustaining equitable institutions. Gorski (2013) defined equity literacy as “the skills and dispositions that empower, support, and position individuals to recognize, respond to, and redress conditions that deny some students access to quality educational opportunities received and enjoyed by their peers. This resultantly sustains equitable learning environments for all students and their families.” Equity literacy describes the skills and dispositions that allow individuals to create and sustain equitable learning environments for all families and students (Gorski, 2014).

Equity literacy challenges individuals to deepen their understanding of others, themselves, and the community by moving beyond common multicultural approaches such as cultural competence and responsiveness (Aragona-Young, 2017). Gorski (2016) argues that “there is an ‘epidemic’ of trying to remedy injustice-based problems with culture-based strategies” (p. 222), such as celebrating diversity and cultural differences without scrutinizing and confronting systemic mechanisms that create tangible inequities for marginalized groups.

Evidently, equity issues are embedded in the educational sphere. Therefore, it is essential to reveal how teaching intricately intertwines with subtle processes of inequality, which comes to light only when a broader concept of teaching is actively applied (Burke & Whitty, 2018). Equitable systems need to ensure that education and training outcomes are independent

of socio-economic background and other factors that lead to educational disadvantage and treatment should reflect individuals' specific learning needs (European Commission, 2006). Creating equitable classrooms and schools requires multiple layers of strategies and initiatives. However, simple instructional strategies represent only one of those layers.

The goal of fostering educational equality is to close the achievement gap, increase student accomplishment across the board, and allow all children the chance to participate fully in a democratic society (Nieto, 1996). Over the years, there has been minimal progress in reducing the achievement gap among students from different racial and ethnic groups.

According to the 2019 National Assessment of Educational Progress (NAEP) report, **Figure 1** depicts the progress made in the reading and mathematics scores of 4th and 8th graders from 1990 through 2019. In light of this, it is evident that a great deal of emphasis should be focused on the reading success of minority pupils. The low reading competence of minority pupils in the United States will have long-lasting economic repercussions, thus reducing the capacity to compete in the global market.

MATHEMATICS										
Student Group	Grade 4					Grade 8				
	2019 average score	2019 compared to				2019 average score	2019 compared to			
		2017	2009	2000	1990		2017	2009	2000	1990
White	249	◆	◆	▲	▲	292	◆	◆	▲	▲
Black	224	◆	▲	▲	▲	260	◆	◆	▲	▲
Hispanic	231	▲	▲	▲	▲	268	◆	◆	▲	▲
Asian/Pacific Islander	260	◆	▲	‡	▲	310	◆	▲	▲	▲
American Indian/Alaska Native	227	◆	◆	▲	‡	262	▼	◆	◆	‡
Two or More Races	244	◆	◆	▲	‡	286	◆	◆	▲	‡

READING										
Student Group	Grade 4					Grade 8				
	2019 average score	2019 compared to				2019 average score	2019 compared to			
		2017	2009	1998	1992		2017	2009	1998	1992
White	230	▼	◆	▲	▲	272	▼	◆	◆	▲
Black	204	▼	◆	▲	▲	244	▼	▼	◆	▲
Hispanic	209	◆	▲	▲	▲	252	▼	▲	▲	▲
Asian/Pacific Islander	237	◆	◆	▲	▲	281	◆	▲	◆	▲
American Indian/Alaska Native	204	◆	◆	‡	‡	248	▼	◆	‡	‡
Two or More Races	226	◆	◆	‡	‡	267	▼	◆	‡	◆

▲ Score increase ▼ Score decrease ◆ No significant change
 ‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

Figure 1.

While comparing Mathematics and reading scores for 4th and 8th graders in 2019 to 1990, data from the NAEP (2019) showed disparities. The average reading scores for fourth-graders are as follows: White (230),

Asian/Pacific Islander (237), Black (204), Hispanic (209), and Native American (209). The reading scores for eighth-graders include the following: White (272), Asian/Pacific Islander (281), Black (244), Hispanic (252), and Native American (248). The mathematics scores for fourth-graders are as follows: White (249), Asian/Pacific Islander (260), Black (224), Hispanic (231), and Native American (227). The mathematics score for 8th graders includes the following: White (292), Asian/Pacific Islander (310), Black (260), Hispanic (268), and Native American (262).

The need for educated workers in the workplace in the twenty-first century is driven by substantial demographic changes in the American labor force. The Brookings Institute (Frey, 2018) forecasts that the United States will be "minority white" by 2045 and identifies young minorities as "the engine of future prosperity." However, even after more than two decades of effort, the achievement gap still exists almost to the same degree as in the 1990s. This alarming situation calls for radical change in educational approaches and a shift in focus from equality to equity. There is an urgent need to incorporate culturally responsive pedagogical practices in the school curriculum and climate. Discord can occur when teachers do not share the same cultural backgrounds, linguistic codes, social protocols, and/or value systems which can detract students' learning (Delpit, 2006). The students of color can be best served by teachers and educational leaders who are equity literate, culturally conscious, and equipped with the knowledge, attitudes, and necessary skills to this end.

The parameters to measure equity are quite complex. Nonetheless, the level of knowledge of equity literacy can be measured. Equity literacy refers to an educational and learning environment in which individuals can explore possibilities and make decisions throughout their lives based on their abilities and capabilities rather than on stereotypes, preconceived notions, or discrimination (Opheim, 2004). According to Yang (2000), educational equity is similar to equity in other social sectors. This can be classified into three categories: equity of starting point, equity of process, and equity of consequence. A wealth of literature is available on the meaning of equity, and the concept of equity is present in all conversations centered around the 21st century. Despite this, tangible progress remains elusive.

Accelerated by the impact of COVID-19 across the globe, increasingly greater focus is being directed to efforts that ensure equity and foster inclusion. For example, in a recent survey conducted in 2021, 72% of workers agreed that diversity, equity, and inclusion are important to them at their workplace (DeVon, 2007; Lubechi, 2021; Milner IV, 2018). Concerted efforts are being made to generate more collective power and to identify the ways in which life experiences are affected by gender, citizenship, race, disability, ethnic background, sexuality, parenting status, and other identity markers.

In response to another survey conducted by Hattaway and Lumina (Lumina Foundation, 2019), 87% of subjects reported that the issues of racial equity are significant to them, while only 4% considered it very unimportant.

90% surveyed population agreed or strongly agreed that there should be equitable outcomes in education. However, the same survey also found that almost half of the surveyed population (48%) could not clearly explain what they understood by the term “equity.” Interestingly, out of the total population that responded to this national survey (3099), 68% were White/Caucasian, and only 15% were Black/African American. This trend defies the popular notion that advocacy for equity is exclusively led by Black/African American or other minority groups. Imperatively, this is a call of the nation. Although efforts are being made to promote equity, there is a need to educate the masses about the meaning of equity. Currently, there is a dearth of instruments that can assess or gauge the level of equity literacy in the community, state, and nation.

This paper is focused on constructing a survey instrument that can be used to assess or gauge the level of equity literacy in all sectors. The key to developing equity literacy is cultivating four abilities: Recognize, Respond, Redress, and Cultivate/Sustain (Gorski, 2013). Thus, the purpose of this paper is to develop a valid instrument/survey to assess these abilities and advance literacy. The researchers undertook an extensive review of the literature to create the items and framework for this survey.

Methods

Both the reliability and validity of the survey are crucial for ensuring its trustworthiness and empirical grounding. Content validity is fundamental in verifying if an instrument's items genuinely capture the content they are designed to measure (Ghazali, 2017; Straub, 2004). It is foundational to other validity types and is essential during instrument development (Lynn, 1986; Zamanzadeh et al., 2015). To enhance the assessment's reliability and validity, the study used Lawshe’s Content Validity Ratio (CVR) and Cronbach's Alpha for the equity literacy survey.

The CVR is defined as:

Eq. 1

$$CVR = \frac{N_e - \frac{N}{2}}{\frac{N}{2}}$$

CVR : Content Validity Ratio
Where : *N_e* : Number of experts rating an item as “essential”
N : Total number of experts participating in the evaluation

The Cronbach's Alpha assessed the questionnaire's internal consistency reliability (Nunnally, 1978; Zakariya Yusuf, 2022) and is defined as:

Eq. 2

$$\alpha = \frac{K}{K - 1} \left(1 - \frac{\sum_{i=1}^K \sigma_i^2}{\sigma_T^2} \right)$$

Where : α represents Cronbach's alpha coefficient.
 K is the number of items in the scale or test.
 σ_i^2 refers to the variance of each item.
 σ_T^2 represents the variance of the total scores.

The survey employed a Likert scale format, thus allowing participants to express their levels of agreement. For each item in the survey, the maximum score was 5 and minimum score was 1. Five professors from Delaware State University helped in validating the survey. Their feedback led to its refinement through a thorough review of its items for content representativeness, clarity, relevance, and format in context of gauging equity literacy. They classified each item of the survey as either 'essential' or 'not essential' (Cohen & Swerdlik, 2010). Subsequently, the CVR was calculated using Eq. 1.

The CVR values for individual items were compared to standards set by Lawshe (1975). Only items that met or surpassed the predetermined threshold were incorporated into the survey's final version. This refined version was given to 34 in-service professionals from diverse educational backgrounds to determine the Cronbach's Alpha based on their responses. If the alpha value was greater than 0.7, the survey was deemed reliable (Tavakol & Dennick, 2011).

Results

To maintain the integrity of the survey, its reliability and validity are paramount. Reliability refers to the consistency and repeatability of outcomes derived from the survey, while validity emphasizes the survey's accuracy in measuring its intended objective without any inherent biases (Pierre, Rathee, & Rathee, 2021). Collectively, these attributes ensure the credibility of the survey and the consequent research data it produces.

Table 1. CVR Value For Equity Literacy Survey

Survey Item #	CVR Value	Total Items
1, 2, 3, 5, 6, 8, 10, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22, 23, 24, 25	1.0	20
4, 7, 9, 16, 19, 26	0.67	6

Table 1 provides the CVR scores for each survey item. Originally containing 26 items, the list was reduced by six based on their CVR scores and feedback from experts. This reduction resulted in a refined 20-item survey with a strong foundation in content validity. According to Lawshe (1975), the

CVR evaluates the importance of an item based on expert input, and a score of 1 indicates unanimous agreement on its essentiality.

Based on the Cronbach's Alpha score of 0.87, the survey demonstrated strong reliability. This was determined from the responses of the 34 individuals to whom the survey was administered (see the Methods section). Specifically, this score confirms that the survey items consistently measure the same fundamental concept and equity literacy (Tavakol & Dennick, 2011). By ensuring both reliability and validity, the survey proves its effectiveness in capturing genuine and dependable data regarding participants' understanding of equity literacy.

In addition, the total scores classify respondents into four categories: Exceptional Equity Literacy, Fair Equity Literacy, Developing Equity Literacy, and No or Little Equity Literacy. This information is presented in Table 2 and further elaborated in the Survey Manual. Consequently, these rubric categories can assist institutions in quantifying their need for equity literacy and in devising targeted interventions.

Table 2. Equity Literacy Rubric

Category	Score Range	Description
Exceptional Equity Literacy	81-100	Indicates a strong understanding and proficiency in equity literacy.
Fair Equity Literacy	61-80	Respondents have a reasonable grasp of equity literacy, with potential areas for deeper understanding.
Developing Equity Literacy	41-60	Respondents are building their equity literacy skills, with familiarity in some concepts but lacking full grasp.
No or Little Equity Literacy	20-40	Suggests minimal to no understanding of equity literacy. Foundational learning and further education is needed.

Implications

This equity measurement tool will facilitate the educators to take the following actions:

- Recognize and analyze the depth and prevalence of biases and inequity against individuals facing oppression and discrimination in educational settings.

- Respond proactively to these biases by fostering empowering communication and dialogues.
- Champion evidence-based equitable practices and policies, thereby making informed and actionable decisions.
- Acknowledge that inequity is a manifestation of broader societal conditions, thus signifying an unjust distribution of access and opportunity. This underscores the need for a fair redistribution of access to high academic standards and genuine pedagogical practices that reinforce positive school cultures.
- Grasp the impact of personal beliefs on teaching methodologies and lean on practical strategies to cultivate equitable learning experiences and robust learning communities.
- Maintain a steadfast commitment to enacting a transformative vision that upholds and propagates equity within educational institutions.

Conclusion

Equity literacy remains pivotal in fostering an inclusive educational environment that responds proactively to biases, inequities, and the multifaceted dynamics of identities within the student body. The present study, driven by the foundational work of Gorski and others, highlights the critical need for a reliable and valid tool to assess equity literacy in educational institutions. The refined 20-item survey, developed and validated through rigorous expert reviews and subsequent statistical measures, showcases a promising instrument to accurately gauge equity literacy.

The survey's validity and reliability is demonstrated through its Content Validity Ratio and Cronbach's Alpha score, which ensures its efficacy in capturing authentic and reliable data on participants' understanding of equity literacy. The inclusion of the rubric categories further provides a nuanced, tiered understanding of equity literacy levels. This in turn facilitates educational institutions to better understand and address their equity gaps. As educational landscapes continue to evolve, understanding and addressing equity becomes increasingly imperative. This survey serves as a potent tool for educators and institution, thus providing guidance in their endeavor to cultivate educational environments that are inclusive, equitable, and just.

Furthermore, the implications drawn from this study accentuate the transformative power of equity literacy in reshaping educational paradigms. Empowering educators with the tools to recognize, respond, and redress biases, while advocating for equitable practices, brings individuals closer to an educational framework that not only acknowledges disparities but is also actively committed to dismantling them. The journey towards an equitable educational ecosystem requires a synthesis of awareness, commitment, and actionable tools. This study contributes significantly to the collective

endeavor. In the grand scheme of things, tools such as the Equity Literacy Survey are crucial, especially as society grapples with challenges such as the aftermath of the COVID-19 pandemic and the complexities of global interconnectivity. The survey shows potential for wider applications, including large-scale implementations, demographic comparisons, or comparisons with other similar instruments, which advances the pursuit toward truly equitable communities.

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Analyse des Déterminants de la Connaissance de l'Assurance Agricole par les Agriculteurs de la Commune de Dassa-Zoumé

M. Agossadou

Doctorant Morest AGOSSADOU, Laboratoire d'Analyse et de Recherches sur les Dynamiques Économiques et Sociales (LARDES), Ecole Doctorale des Sciences Agronomiques et de l'Eau (EDSAE), Université de Parakou (UP), Parakou, République du Bénin

J. Yabi

LARDES/DESR/FA/UP, Parakou, République du Bénin

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Résumé

La connaissance de l'assurance agricole par le plus grand nombre d'agriculteurs, en particulier dans les zones vulnérables aux changements climatiques, reste un défi majeur pour les pouvoirs publics car cela reste la première étape menant vers l'adoption de cet instrument de gestion des risques agricoles. L'objectif de l'étude était d'analyser les connaissances que les agriculteurs de la commune de Dassa-Zoumé ont de l'assurance agricole. Les données ont été collectées au moyen d'un questionnaire structuré auprès de 318 ménages répartis dans dix (10) arrondissements et choisis de manière aléatoire. Un modèle de régression linéaire multiple a été estimé à l'aide du logiciel R afin d'identifier les déterminants de la connaissance. Les résultats obtenus ont montré que la plupart des enquêtés (70,76%) ont une faible connaissance de l'assurance (score < 30). Seulement 30% en ont une connaissance allant de moyenne (score entre 30 et 50) et bonne (score > 50). Parmi ces 30% d'enquêtés, environ 25% sont font la production agricole à des fins commerciales. Ces derniers ont donc une meilleure connaissance de l'assurance agricole que leurs homologues produisant pour la subsistance. La majorité des ménages enquêtés connaissent l'assurance agricole comme outil

d'aide à la gestion des risques agricoles. L'étude a révélé que le niveau de connaissance est significativement influencé par la souscription antérieure à une assurance agricole, la taille du ménage ($P < 0,001$) et le type d'agriculteur ($P < 0,005$). Ces résultats soulignent que la sensibilisation et la formation ciblées sont des stratégies importantes pour améliorer les connaissances des agriculteurs en matière d'assurance agricole et espérer son adoption.

Mots-clés: Connaissance, assurance agricole, risque agricole, genre, Bénin.

Gender-Sensitive Analysis of Farmers' Knowledge of Agricultural Insurance in Area Vulnerable to Climate Change

M. Agossadou

Doctorant Morest AGOSSADOU, Laboratoire d'Analyse et de Recherches sur les Dynamiques Économiques et Sociales (LARDES), Ecole Doctorale des Sciences Agronomiques et de l'Eau (EDSAE), Université de Parakou (UP), Parakou, République du Bénin

J. Yabi

LARDES/DESR/FA/UP, Parakou, République du Bénin

Abstract

Raising awareness of agricultural insurance among as many farmers as possible, particularly in areas vulnerable to climate change, remains a major challenge for the public authorities, as it is the first step towards the adoption of this agricultural risk management instrument. The aim of the study was to analyse farmers' knowledge of agricultural insurance in the commune of Dassa-Zoumé. Data were collected using a structured questionnaire from 318 randomly selected households in ten (10) districts. A multiple linear regression model was estimated using R software to identify the determinants of knowledge. The results showed that most respondents (70.76%) had little knowledge of insurance (score < 30). Only 30% had average knowledge (score between 30 and 50) and good knowledge (score > 50). Of these 30% of respondents, around 25% are involved in agricultural production for commercial purposes. They therefore have a better knowledge of agricultural insurance than their counterparts producing for subsistence. The majority of households surveyed were aware of agricultural insurance as a tool to help manage agricultural risks. The study revealed that the level of knowledge was significantly influenced by previous subscription to agricultural insurance, household size ($P < 0.001$) and type of farmer ($P < 0.005$). These results

underline that targeted awareness raising and training are important strategies to improve farmers' knowledge of agricultural insurance and hope for its adoption.

Keywords: Knowledge, agricultural insurance, agricultural risk, gender, Benin

Introduction

L'agriculture est traditionnellement considérée comme l'une des activités de production les plus vulnérables aux aléas naturels tels que les variations importantes de la pluviométrie, les invasions d'insectes ravageurs, les maladies, etc. Cette exposition aux risques naturels peut entraîner une diminution de la qualité et de la quantité de la production, ce qui a pour conséquence majeure une réduction du revenu des agriculteurs et l'insécurité alimentaire. Dans certains cas, cette situation peut rendre difficile le remboursement des crédits agricoles ou même conduire à l'abandon de l'activité agricole (Ndao, 2009). Dans ce contexte, l'assurance agricole se présente comme une solution prometteuse pour aider les agriculteurs à faire face aux aléas climatiques et à atténuer les pertes économiques. Elle est un outil essentiel pour protéger les agriculteurs des risques climatiques dans les pays en développement (Clarke et Mahul, 2015). Cependant, la connaissance et l'adoption de l'assurance agricole restent limitées, notamment dans les pays en développement. De plus, cette connaissance de l'assurance agricole varierait en fonction du genre. Selon plusieurs études, les agricultrices sont souvent confrontées à des obstacles spécifiques qui limitent leur accès à l'information et leur participation à l'assurance agricole (Kumar *et al.*, 2020).

Au Bénin, l'agriculture joue un rôle vital dans l'économie et la sécurité alimentaire. Cependant, les agriculteurs sont confrontés à des risques climatiques tels que les sécheresses, les inondations et les variations imprévisibles des précipitations qui menacent leurs récoltes et leurs revenus (Agossou, 2012). L'assurance agricole pourrait offrir une protection financière et une stabilité à cette catégorie d'acteurs. Pour que l'assurance agricole soit efficace, il est essentiel que les agriculteurs aient une compréhension adéquate de ce concept, des avantages et exigences y afférents.

La présente étude vise à examiner de manière approfondie les différents facteurs déterminants la connaissance de l'assurance agricole en zone fortement vulnérable aux changements climatiques (commune de Dassa-Zoumé). Ceci offrira le mérite de mieux comprendre les axes de renforcement des connaissances des agriculteurs. En identifiant les lacunes existantes et en proposant des stratégies adaptées, il sera possible de promouvoir une meilleure gestion des risques climatiques et de garantir la durabilité de l'agriculture dans cette commune.

Matériels et méthodes

Zone d'étude

L'étude a été réalisée dans la commune de Dassa-Zoumé située dans le département des Collines (figure 1), entre 7° 27' et 8° 46' de latitude Nord et entre 1° 39' et 2° 44' de longitude Est. Cette commune est limitée au nord par la Commune de Bassila au Sud par les Communes de Djidja, Covè et Zagnanado, à l'Est par les Communes de Savè et Ouèssè, et à l'Ouest par les Communes de Bantè et Savalou. Elle bénéficie d'un climat de transition entre le climat guinéen et le climat soudanien (Afouda, 1990), avec un régime pluviométrique intermédiaire entre la distribution bimodale du Sud et celle unimodale du Nord. La commune est caractérisée par des sols ferrugineux en général, alors que des sols hydromorphes se rencontraient dans les bas-fonds et les dépressions. La végétation naturelle est composée de forêts denses sèches, de forêts claires et de savanes boisées. La population de Dassa-Zoumé est, en 2002, estimée à 94 000 habitants (INSAE, 2003). Cet effectif est passé à 112 122 habitants en 2013 avec 51,51 % de femmes (INSAE, 2016). L'Agriculture est la principale activité économique dans le milieu d'étude et pratiquée par 13 692 ménages agricoles (INStAD, 2021) représentant 58 % du nombre total de ménages dans la commune. Les chefs des ménages agricoles sont en majorité des hommes (81%). La commune de Dassa-Zoumé appartient à la zone agroécologique 5 (zone cotonnière du centre) et au pôle de développement agricole 4 (pôle 4), une zone de diversification coton-vivrier-anacardier. Elle se retrouve parmi les communes les plus vulnérables aux changements climatiques au Bénin (PAS-PNA, 2019).

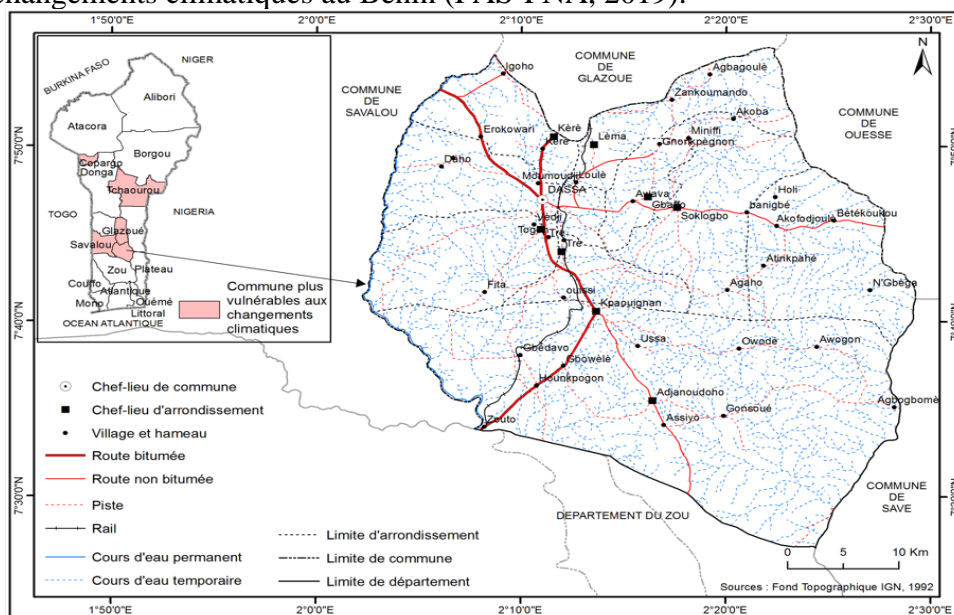


Figure 1. Carte de la zone d'étude
Source : travaux d'enquête de terrain, 2023

Echantillonnage et base de données

Le choix des ménages enquêtés a été fait de manière raisonnée suivant le critère "être exploitant agricole". Pour déterminer la taille de l'échantillon, la formule de Schwarz (1995) a été utilisée. Ainsi, si n désigne la taille de l'échantillon, on a :

$$n = (z\alpha)^2xpq/i^2$$

Où z est l'écart réduit correspondant à un risque α de 5%,
p la proportion des ménages agricoles (13 692) par rapport au nombre de ménages dans la commune (23438) (INStAD, 2021), soit $p = 58 \%$, i la précision désirée égale à 5,42 %, et $q = 1-p$ (ici, $q=42 \%$).

Au total, 318 ménages répartis dans dix (10) arrondissements (Tableau 1) ont été enquêtés de manière aléatoire au moyen d'un questionnaire structuré. La répartition des 318 ménages par arrondissement a été faite suivant une règle de proportionnalité. Les enquêtes se sont déroulées dans les grands villages producteurs (deux à trois villages retenus) par arrondissement. Les données collectées concernaient les caractéristiques démographiques, socioéconomiques des exploitations et leurs connaissances de l'assurance agricole (Tableau 2). La connaissance de l'assurance a été mesurée à l'aide d'une liste de 20 items (indicateurs) en rapport avec l'assurance agricole. Les réponses aux items reçoivent un score de un (1) pour une réponse correcte et zéro (0) pour une mauvaise réponse.

Tableau 1. Répartition des exploitants agricoles enquêtés par arrondissement

Arrondissements	Effectifs ménages agricoles (RGPH, 2013)	Echantillon ménages agricoles	Villages enquêtés
Akoffodjoulè	1 056	36 (3 %)	ATINKPAYE et BANIGBE
Dassa I	117	3 (3 %)	AGBEGBE et LATIN
Dassa II	916	33 (4 %)	IDAHO, ISSALOU et MAHOU
Gbaffo	455	15 (3 %)	AWAVA, GBAFFO et GNONKPINGNON
Kèrè	1 323	45 (3 %)	IGOHO, KERE et OKEMERE
Kpingni	972	31 (3 %)	FITA et VEDJI
Lema	635	24 (4 %)	AGBAGOULE et LEMA
Paouingnan	3 570	66 (2 %)	GBOWELE, GOUNSOE et AGBOGBOME
Soclogbo	1 540	42 (3 %)	AGAO, MINIFFI et DJIGBE
Tré	684	23 (3 %)	GANKPETIN, KPEKPEDE et LAGUEMA-TRE
Total	11 268	318	

Source : Résultats d'enquête de terrain, 2023

Méthode d'analyse des données

La statistique descriptive a permis de résumer les caractéristiques démographiques et socioéconomiques des exploitants agricoles. Le niveau de connaissance de l'assurance agricole par exploitant agricole a été calculé en faisant le rapport de la somme des scores des réponses correctes au nombre

total d'indicateurs administré soit 09 indicateurs. Le seuil retenu dans la littérature pour l'appréciation varie entre 30 % et 50 % (Jamanal *et al.*, 2019 ; Mohapatra *et al.*, 2016 ; Fadhliani *et al.*, 2019). Le seuil minimum de 30 % a été utilisé dans le cadre de cette étude. Le niveau de connaissance est globalement élevé si plus de 50 % des réponses sont correctes. Le niveau est moyen pour un score compris entre 30 % et 50 % de bonnes réponses et faible pour un taux de bonnes réponses inférieur à 30 %. Afin d'apprécier la connaissance de l'assurance selon le genre, le niveau de connaissance a été comparé entre sexes et types d'agriculteur (commercial ou de subsistance) au moyen du test de chi-deux dans R.4.1.0 (R Core Team, 2020). Par ailleurs, un modèle linéaire multiple dans R a été estimé afin d'identifier les déterminants de la connaissance. Le modèle estimé est donné par l'équation suivante :

$$Y_i = \alpha + \sum_{i=1}^n \beta_i X_i + \varepsilon_i$$

Où Y_i (variable réponse) est le niveau de connaissance, ε_i l'erreur aléatoire, X_i représente ici la matrice des variables explicatives (caractéristiques démographiques et socioéconomiques) présentées dans le Tableau 2, α le terme constant, β_i le coefficient indiquant le sens de l'effet de chaque variable explicative. Dans la modélisation, les ethnies minoritaires (Peuhl, Ifè et Lokpa) ont été ignorées vue leur quasi-absence dans la population échantillonnée. Avant l'estimation du modèle, les conditions de multi colinéarité, de normalité et d'homogénéité des résidus ont été vérifiées dans R. La multi colinéarité a été vérifiée au moyen de l'inflation de la variance (VIF) afin de maintenir les variables indépendantes dans le modèle. L'homogénéité des résidus a été vérifiée avec le test de Breush-Pagan et la normalité avec le test de Shapiro-Wilk dans R.

Tableau 2. Résumé des variables explicatives, leur nature et effets attendus

Variables explicatives	Modalités	Nature	Effet attendu
Sexe	0=Femme 1=Homme	Dichotomique	Non différence entre sexe
Education formelle	0=Non 1=Oui	Dichotomique	Positif (+)
Niveau d'instruction	0=Non instruit 1=Primaire 2=Secondaire 3=Universitaire	Qualitative ordinale	Positif (+)
Age		Quantitative continue	Négatif (-)
Type d'agriculteur	1=Commercial 2=Subsistance	Qualitative nominale	Positif (+) Négatif (-)
Ethnie	Idatcha Mahi	Qualitative nominale	Positif (+) Positif (+)

	Fon		Négatif (-)
Taille du ménage		Quantitative continue	Positif (+)
Actifs agricole		Discrète	Positif (+)
Situation matrimoniale	1=Marié (e) 0=Célibataire	Dichotomique	Positif (+)
Appartenance à un GSF	1=Appartient 0=N'appartient pas	Dichotomique	Positif (+)
Appartenance à une OPA	1=Appartient 0=N'appartient pas	Dichotomique	Positif (+)
Revenu de l'exploitation		Quantitative continue	Positif (+)
Superficie emblavée		Quantitative continue	Positif (+)
Échange entre producteurs	1=Echange 0=N'échange pas	Dichotomique	Positif (+)
Expérience agricole		Discrète	Positif (+)
Utilisation du média	1=Utilise 0=N'utilise pas	Dichotomique	Positif (+)
Accès aux RC	1=Participe 0=Ne participe pas	Dichotomique	Positif (+)

Note : GSF=Groupement de Solidarité financière, OPA=Organisation Professionnelle Agricole, RC= Renforcement des capacités
Source : Résultats d'enquête de terrain, 2023

Résultats

Caractéristiques sociodémographiques et économiques des enquêtés

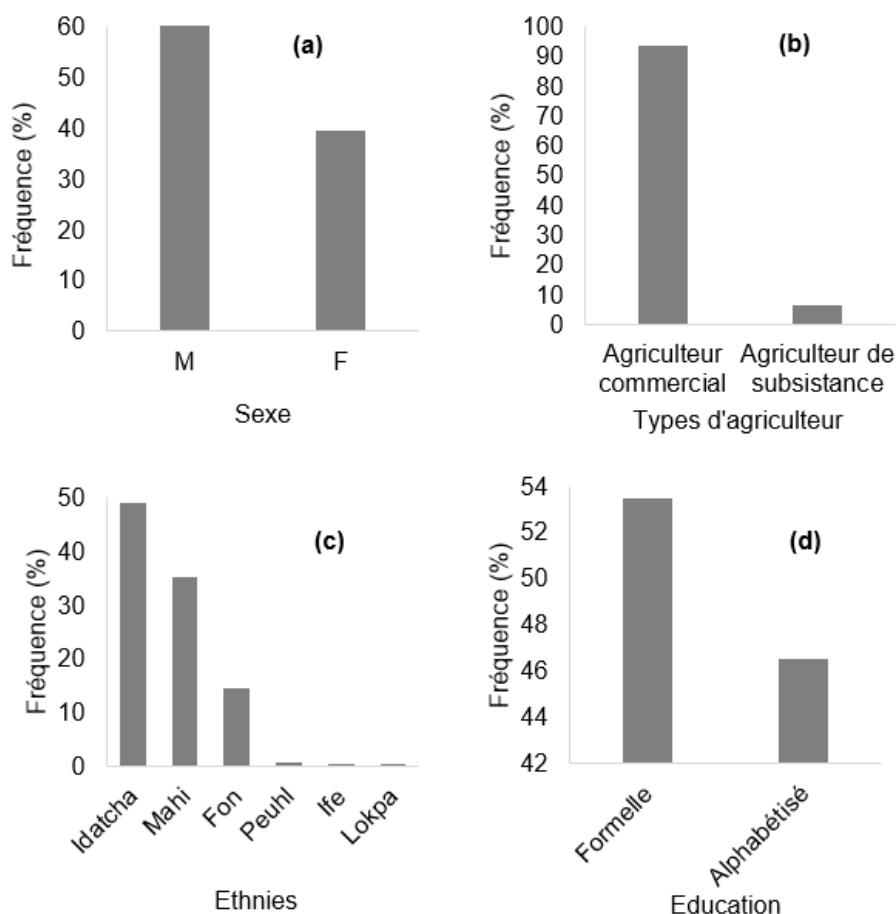


Figure 2. Répartition des enquêtés par sexe (a), type d'agriculteur (b), ethnie (c), type d'éducation (d), niveau d'éducation (e), et situation matrimoniale (f).

Source : Résultats d'enquête de terrain, 2023

Parmi les 318 ménages enquêtés, 40 % sont des femmes contre 60 % des hommes (Figure 2.a). Cela évoque une prédominance des hommes dans les activités agricoles. La quasi-totalité des enquêtés, soit 93,71 %, s'investissent dans l'agriculture pour des fins commerciales, tandis que 6,29 % visent plutôt un objectif de subsistance (Figure 2.b). Les ethnies majoritaires sont les Idatcha (49,06 %) et les Mahi (35,20 %).

En ce qui concerne l'éducation, 53 % des chefs de ménage ont reçu une éducation formelle et 46,54 % alphabétisés (Figure 2.d). Très peu de chefs de ménage (3,14 %) ont un niveau universitaire, tandis que 15,72 % et 22,33 %

ont respectivement un niveau secondaire et primaire (Figure 2.e). La majorité, soit 58,81 %, est illettrée.

Concernant l'état matrimonial, 63 % des enquêtés sont mariées monogames, suivies des mariés polygames (29 %) (Figure 2.f). Les célibataires, veufs/veuves et divorcés sont minoritaires (7 %).

Les ménages enquêtés ont en moyenne 22 ans d'expérience dans l'agriculture et comptent en moyenne 7 membres, dont 3 sont des actifs agricoles. Les chefs de ménage enquêtés ont en moyenne 43 ans.

Analyse des connaissances de l'assurance agricole

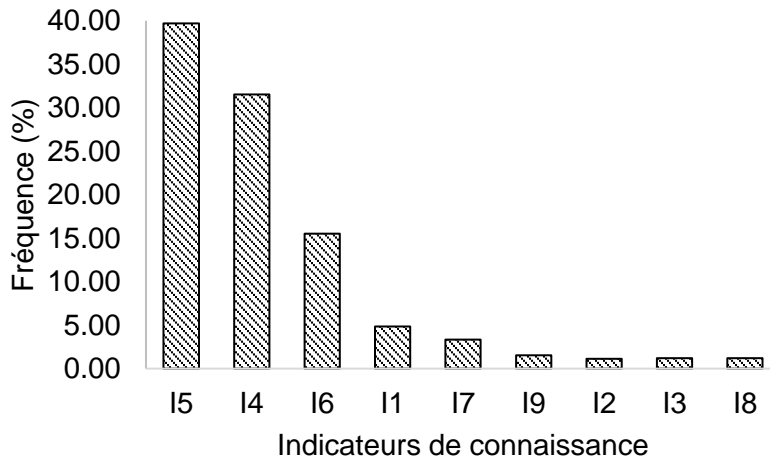


Figure 3. Distribution de fréquence des enquêtés selon les indicateurs de mesure de leur connaissance de l'assurance agricole.

Source : Résultats d'enquête de terrain, 2023

I1=Avoir entendu parler une fois d'une expérience d'assurance agricole, **I2**= Avoir entendu parler une fois de l'Assurance Mutuelle Agricole du Bénin (AMAB), **I3**=Avoir entendu parler une fois de l'assurance agricole indiciaire, **I4**=Objectif de l'assurance agricole, **I5**= Assurance agricole comme outil d'aide à la gestion des risques, **I6**=Durée de l'assurance agricole, **I7**= Prime à verser à l'assureur, **I8**= Indemnisation versée par l'assureur, **I9**=Assurance agricole comme moyen d'accès au crédit agricole

Les résultats montrent que la majorité des ménages enquêtés (39,71 %) perçoit plus l'assurance agricole comme un outil d'aide à la gestion des risques (item I5). La majorité (31,51%) avait aussi une bonne connaissance de l'objectif de l'assurance agricole. Pour ce qui concerne la durée de l'assurance, seulement 15,50 % en avaient une bonne connaissance. Une minorité (1,21 à 4,86 %) avait connaissance des autres aspects de l'assurance agricole (Figure 3).

Considérant le genre, les résultats ont montré que le niveau de connaissance de l'assurance agricole n'est pas corrélé au sexe (Figure 4.a). En revanche, il existe une corrélation significative entre les variables "types d'agriculteurs" et "niveau de connaissance" (Figure 4.b). Les résultats obtenus ont montré que la plupart des enquêtés (70,76%) ont une faible connaissance de l'assurance (score < 30). Seulement 30% en ont une connaissance allant de moyenne (score entre 30 et 50) et bonne (score > 50). Parmi ces 30% d'enquêtés, environ 25% sont font la production agricole à des fins commerciales. Ces derniers ont donc une meilleure connaissance de l'assurance agricole que leurs homologues produisant pour la subsistance.

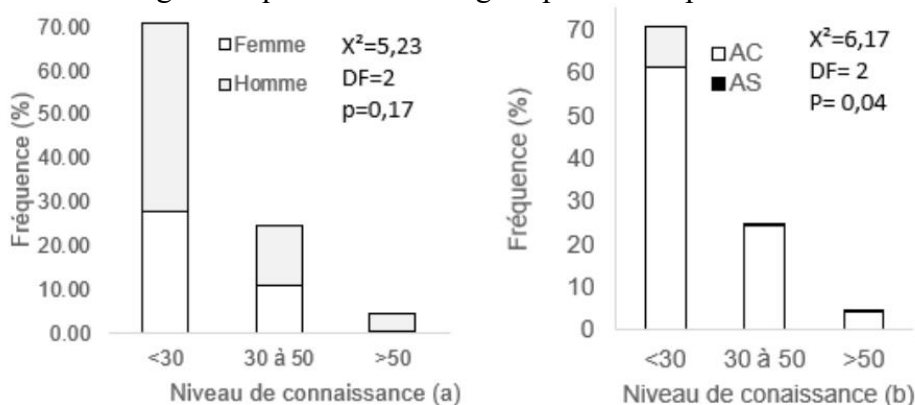


Figure 4. Distribution de fréquence des enquêtés selon les indicateurs de mesure de leur connaissance de l'assurance agricole.

Source : Résultats d'enquête de terrain, 2023

Analyse des déterminants de la connaissance de l'assurance agricole

Le modèle estimé est globalement significatif au seuil de 1% ($F=4,46$; $DF=15$; $P<0,001$). Toutes les variables indépendantes contribuent à 19 % ($R^2=19$ %) à la prédiction du niveau de connaissance de l'assurance agricole (Tableau 3). Au seuil de 1%, le niveau de connaissance est significativement influencé par une expérience antérieure de souscription à une assurance agricole et par la taille du ménage. Autrement dit, les ménages qui ont une fois souscrit à une assurance agricole ont une meilleure connaissance de l'assurance agricole que ceux qui n'y ont jamais souscrit. Aussi, l'effet positif de la taille sur le niveau de connaissance révèle que les ménages dont l'effectif est élevé ont une meilleure connaissance de l'assurance agricole. La dernière variable d'influence du niveau de connaissance est le type d'agriculteur. En effet, les agriculteurs qui produisent beaucoup plus pour des fins commerciales ont une meilleure connaissance de l'assurance que ceux dont la production est destinée à la subsistance.

Tableau 3. Déterminants de la connaissance de l'assurance agricole

		Coefficient	Erreur type	t	Probabilité
	(Intercept)	11,99	5,70	2,10	0,04*
	Age	-0,05	0,12	-0,45	0,66
Sexe	Homme	-0,60	2,23	-0,27	0,79
	Femme				
Type d'agriculteur	Commercial	9,45	4,23	2,24	0,03*
	Subsistance				
Ethnie	Idatcha	2,96	2,23	1,33	0,19
	Mahi	6,16	3,06	2,01	0,05
	Fon				
Education formelle	Oui	3,04	2,21	1,38	0,17
	Non				
Alphabétisation	Oui	-7,59	4,04	-1,88	0,06
	Non				
Appartenance à un GSF	Oui	-4,40	2,28	-1,93	0,05
	Non				
Appartenance à une OPA	Oui	0,42	2,67	0,16	0,87
	Non				
Accès aux SRC	Oui	6,07	6,32	0,96	0,34
	Non				
Souscription à une assurance	Oui	26,00	4,45	5,84	0,00***
	Non				
Autres variables	Superficie emblavée	-0,04	0,25	-0,15	0,88
	Revenu agricole	0,00	0,00	-1,66	0,10
	Expérience agricole	0,01	0,12	0,06	0,75
	Taille du ménage	1,07	0,31	3,40	0,00***
	Actifs agricoles	1,72	0,65	-2,63	0,21

Significativité globale du modèle : R²=19%, F=4,46, P<0,001, E=17,19, DF=15

Note : GSF=Groupement de Solidarité financière, OPA=Organisation Professionnelle Agricole, RC=Renforcement de capacité. F=Statistique du test de significativité du modèle, R²=Coefficient de détermination, P=probabilité, E=Erreur du modèle. Les modalités en italique sont les références pour la comparaison. t=statistique de Student. Les valeurs de probabilité en gras indiquent que la variable a un effet significatif au seuil de 1% et 5%. * p<0,05%, **p<0,01%, ***p<0,001*.

Source : Résultats d'enquête de terrain, 2022

Discussion

Parmi les 318 ménages enquêtés, 40 % sont des femmes contre 60 % des hommes (Figure 2.a) ; ce qui révèle une prédominance des hommes dans les activités agricoles. Ce résultat est en cohérence avec celui de Quisumbing et Meinzen-Dick (2018) qui ont examiné les inégalités de genre dans l'agriculture et ont souligné les différences d'accès aux ressources et aux opportunités économiques entre les hommes et les femmes. Leurs travaux ont mis en évidence les obstacles auxquels les femmes peuvent être confrontées en termes d'accès à la terre, au crédit et aux informations, ce qui peut limiter leur participation aux activités agricoles.

L'analyse descriptive a mis en évidence le fait que la majorité des ménages enquêtés connait l'assurance agricole comme outil d'aide à la gestion des risques (I5). Cette perception positive de l'assurance agricole peut être attribuée à une meilleure compréhension de ses avantages potentiels en termes de protection contre les aléas climatiques et les pertes agricoles. Une proportion non moins importante des enquêtés a également une bonne connaissance de l'objectif de l'assurance agricole. Les autres aspects de l'assurance (assurance indicielle, prime, indemnité, durée de l'assurance, ...) sont moins connus par les enquêtés. Ces différents résultats soulèvent des préoccupations quant au niveau de sensibilisation et de compréhension des agriculteurs à l'égard de ce mécanisme de protection. Il est donc crucial de mettre en place des incitations appropriées et des mécanismes de soutien afin d'encourager les agriculteurs à souscrire à l'assurance agricole et à tirer parti (Barnet, 1990).

L'analyse économétrique, quant à elle, a révélé que le niveau de connaissance de l'assurance agricole n'est pas corrélé au sexe. Ce résultat rejoint ceux de Mensah *et al.* (2018) qui ont montré que le niveau de connaissance de l'assurance agricole ne variait pas selon le sexe. En revanche, il a été établi une corrélation significative entre types d'agriculteurs et niveau de connaissance. Les ménages produisant à des fins commerciales ont une meilleure connaissance que ceux dont l'objectif principale est la subsistance. Cela peut s'expliquer par leur engagement dans des activités agricoles plus intensives, leur accès à des informations et des ressources agricoles ainsi que leur motivation économique à maximiser leurs rendements et leurs revenus. La connaissance accumulée de ces agriculteurs peut leur permettre de mettre en œuvre des pratiques agricoles plus efficaces et innovantes, ce qui peut, à son tour, influencer leur réussite économique et leur résilience face aux aléas agricoles (Loevinsohn *et al.*, 2017 ; Kassie *et al.*, 2020).

Il est ressorti par ailleurs que le niveau de connaissance est significativement influencé par la souscription (au moins une fois) à une assurance agricole et la taille du ménage ($P < 0,001$). Autrement dit, les ménages qui ont une fois souscrit à une assurance agricole ont une meilleure connaissance de l'assurance que ceux n'y ayant jamais souscrite. En effet, lorsqu'un ménage a déjà souscrit à une assurance agricole, il est probable qu'il ait été exposé à des informations, des formations ou des échanges d'expériences qui ont favorisé une meilleure compréhension du sujet. Cette constatation est en cohérence avec les travaux de Anderson *et al.*, (2016) qui ont également identifié un lien entre la souscription à une assurance agricole et la connaissance de cette assurance.

Aussi, la taille du ménage a un effet positif sur le niveau de connaissance. Cela démontre que les enquêtés appartenant à des ménages avec des effectifs élevés ont une meilleure connaissance de l'assurance agricole. En

effet, l'appartenance à une famille nombreuse offre généralement une plus grande diversité d'expériences et de connaissances (effet réseaux sociaux), ce qui pourrait faciliter l'accès à des informations diverses et variées sur l'agriculture en général, les changements climatiques et les stratégies d'adaptation et de résilience (Loevinsohn *et al.*, 2017 ; Hijmans *et al.*, 2020). La dernière variable d'influence du niveau de connaissance est le type d'agriculteur. En effet, les agriculteurs dont l'objectif premier de production est la commercialisation ont une meilleure connaissance de l'assurance que ceux dont la production est destinée à la subsistance. Ce résultat est conforme à ceux de Kassie *et al.*, (2020). Ces auteurs ont montré que les agriculteurs engagés dans des activités agricoles commerciales étaient plus enclins à utiliser les services de vulgarisation et à acquérir une connaissance accrue des meilleures pratiques agricoles.

Conclusion

La présente étude relative à l'analyse des connaissances des agriculteurs de l'assurance agricole en zone vulnérable aux changements climatiques a révélé que les enquêtés avaient dans l'ensemble, un faible niveau de connaissance des caractéristiques de l'assurance agricole. Les aspects de l'assurance les plus connus sont les objectifs et, dans une moindre mesure, la durée de l'assurance agricole. Le niveau de connaissance de l'assurance agricole n'est pas corrélé au sexe. L'étude a également révélé que les facteurs tels que la souscription à une assurance, le type d'agriculteur et la taille du ménage influencent significativement les connaissances des agriculteurs.

Pour une gestion efficace des risques climatiques, il est impératif de promouvoir l'éducation et la sensibilisation sur l'assurance agricole au sein de la communauté agricole, en mettant en avant des approches différenciées selon le genre. Cette recherche offre ainsi une base solide pour orienter les politiques et les pratiques visant à renforcer la sécurité alimentaire et la durabilité des agriculteurs dans les zones vulnérables aux changements climatiques.

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Implications of Student Loan and Finance Management Skills for Undergraduate Students

Dr. Diana Yankovich

Data Analyst, Institutional Effectiveness
Delaware State University, DE, USA

Dr. Nirmaljit Rathee

Professor & Director, Education Graduate Programs
Delaware State University, DE, USA

Dr. Vikramjit S. Rathee

Chief Scientific Advisor, Research & Development Department
Nine Star Initiative, DE, USA

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Abstract

As the Presidential elections in 2024 are approaching, public opinions and politicians' statements about student loans are presented more often. To curb educational borrowing, the entire society is involved. Institutions of higher education are highly engaged in securing possible funds for scholarships and grants to provide their students with the best and most efficient education. States offer scholarships, and students are becoming more selective about their institution, study major, and lifestyle choices during their undergraduate studies. Many borrowers lack a clear understanding of loan terms and finance management skills. This study was conducted to determine the money management skills of undergraduates, their perceived amount of educational loans anticipated upon graduation, and its impact on their academic performance. A specifically designed survey instrument was administered to a total of 565 participants who were students at one of the US HBCUs in the North-Eastern region of the United States. The results revealed significant race differences in the perceived expected amount of debt upon graduation. The study further indicates a heightened requirement for academic

guidance for students whose undergraduate GPAs fall within the range of 2.00 to 3.00, aiming to enhance their retention until graduation within the present institution. Student athletes expressed a significantly higher financial self-efficacy than non-athletes.

Keywords: Student loan, Attitude towards debt, Perceived debt, Academic performance, Managing finance, Debt management, Student financial capability

Introduction

The current amount of student loans is over \$1.5 trillion (Malynski & Kiersz, 2019). Typically, it represents both the loan with the most rapid growth and the loan with the highest rate of default. Due to their amounts and growth rate, student loans are among the highest burdening loans and are set up to continue growing. Recently, new research, statistics, and news articles about student loans and their risk and treatment have been published. Some studies have discussed the importance of educating parents of high school students and undergraduate students about educational loans and financial behavior.

In Shaffer's (2014) research, the author delineates the financially precarious actions of students, delving into the category of Financially At-Risk students (FAR). The recommendation is for collaborative efforts between academic advisers and financial aid counselors to support these students in retaining and attaining academic success. In addition, the author emphasizes the importance of early identification and tracking of the FAR population and its financially risky behavior because it may jeopardize their academic achievements, and the behavior is likely to continue during their post-university career. Thus, higher education institutions should help students learn proper financial behavior besides the educational curricula.

Allen and Kinchen (2009) suggest that all colleges and universities should include introductory personal financial management courses as the graduation requirement. Such courses should teach students about basic understanding of credit, investing, and budgeting (p.112). Eichelberger et al. (2017) suggest that classroom learning, as well as workshops, research, and application of more intricate financial concepts, is needed for college students to master the necessary life and college financial skills (p. 81). The research also found that “access to financial information and aid is impeded” for special population groups and underrepresented groups, such as first-generation students, minorities, women, veterans, students with disabilities, and LGBTQ+. The authors suggest that the institutions should include members of the underrepresented groups in the institutional process of development of policies and program requirements for financial literacy (p. 80).

Simpson et al. (2012) found that freshmen students lacked knowledge about loans, coupled with unrealistic expectations about their income at graduation (p. 24). Also, they found that 13% of the freshman did not know the type of financial aid they were receiving, while almost 70% of those who reported that they received a loan did not know the type of loan received (p. 21-22). They also found that the freshmen who overestimated their income at graduation were equally reluctant to borrow compared to those who did not overestimate (p. 20). Furthermore, they are not eager to accumulate debt but view it as a requisite that allows them to pursue higher education.

Harrison and Agnew (2016) claim that postponing higher education, or diminishing academic performance, including temporary or indefinite withdrawal from higher education, are results of debt-avoidance attitudes or debt anxiety (p. 349). They cite the fear of debt as a significant determinant in demand for higher education, especially for prospective students with lower socioeconomic backgrounds (p. 334). As a result, the views on indebtedness might not accurately mirror the real amount of debt, but rather represent a self-assessment of one's debt situation at that particular moment (p. 349).

This study investigates the relationship between student loan perception and financial skills, self-efficacy, and self-esteem. The results of this study may help potential and current students develop a feasible financial plan for college. This can be achieved by urging higher education institutions to integrate information on educational loans and economic education into university seminar courses, thus facilitating a smoother transition for students from high school to college. It will also enable colleges and universities to assist students with quality financial planning.

Methodology

Research Design

An exploratory mixed-method study was conducted on the population of undergraduate students at a 4-year public historically minority institution. A survey instrument was developed by incorporating the conceptual framework of financial stress, self-efficacy, and financial help-seeking behavior of college students, as outlined by Lim et al. (2014). This instrument integrated elements from the Financial Self-Efficacy Scale (Lown, 2011) and the Student Attitudes Towards Debt scale (Lea, Webley, and Walker, 1995). Furthermore, the survey instrument contains questions regarding the students' demographics, their expected student loans by graduation, financial self-efficacy, financial stress, perceived academic success considering the loan, and attitudes toward debt. The pilot testing of the survey was performed on 15 randomly selected students. After verifying its content validity by obtaining feedback from the faculty experts, the survey was administered to the study participants to obtain data for this research.

Participants

The study involved 565 participants, who were 4-year students from a predominantly minority-serving institution. The participants were randomly sampled to ensure representation from each class category, including freshmen, sophomores, juniors, and seniors. A copy of the letter explaining the purpose of the survey, its confidentiality, and instructions were provided to the participants. The survey was voluntary, and the students were informed that they could withdraw from participation at any time. They were also assured that their data would be kept confidential. No personal data were collected, including students' ID, date of birth, name, or address. This research is characterized by categories, with the loan amount serving as a classification used to assess its correlation with the confidence level in academic performance.

Survey Administration and Data Collection

A survey was conducted in the summer and fall of 2018. The survey was administered by the researcher Diana Yankovich with the help of the administrators, staff, and faculty members from many departments all over the campus. The students were asked to answer the survey questions honestly and not to respond twice. High school students, graduates, or international students were advised not to participate in the survey. "Dreamers," i.e., students within the Deferred Action for Childhood Arrival status (DACA) population, were also included in the study. The survey responses were kept anonymous, and the students were informed about the anonymity. All data collected in paper and pencil form were entered into a Microsoft Excel spreadsheet for further data processing.

A total of 565 responses were collected. To determine that the sample represents the student population at the university, the proportions of the particular demographic groups (including the gender and class—new freshman, returning freshman, sophomore, junior, and seniors) were compared in the sample with the undergraduate university population. Utilizing the Chi-square test, the hypothesis stating that there is no difference between frequencies of demographic categories in the sample and the population could not be rejected ($p\text{-value} > 0.05$). Hence, this sample is considered the representative sample of the entire campus/university population of undergraduate students.

Potential Ethical Issues

The survey was administered to the adult student population, and they are protected by the Belmont Report, the Family Educational Rights and Privacy Act (FERPA), and other laws. Participants were notified that the raw data would be accessible only to the researcher, and their responses would be

kept confidential. No personal details or identifying information will be included in any report, and only the aggregate responses will be presented in the study. The results of the survey and the questionnaire have been kept anonymous and complete protection of the individual identity has been ensured.

Data Analysis

To establish the internal consistency of questions, Cronbach’s alpha was computed using the psychpackage in R. The calculated alpha value for the question pair Q. 9 and Q. 16, along with a 95% confidence interval, is 0.59. In addition to descriptive analyses (Chi-Square and t-test), the Fisher Exact Test was employed to assess the association between responses to question pairs. The results of specific comparisons are given below in the results and discussion section.

Results and Discussion

Table 1. Paired Results of Questions 1 and 9

Q. 1. Gender?

*Q. 9. Is it hard to stick to my spending plan when unexpected expenses arise?
p-value < 0.005*

Gender	Hard to stick with spending plan			
	Exactly True (%)	Moderately True	Hardly True	Not at All True
Female	40.62	45.57	11.20	2.60
Male	32.14	44.64	14.29	8.93

According to the analysis of data obtained from questions 1 and 9, it is indicative that 40.62% of the surveyed female students responded, “Extremely true” to the question (Q. 9), stating that it was hard for them to stick to their spending plan when unexpected expenses arise. Only 2.6% voiced that this was “Not true at all”. Compared to the female students, this statement was found to be extremely true by 32.14% of the male students, while 8.93% mentioned that it was not true at all. These results suggest that when faced with unexpected financial eventuality, female students find it more difficult to deal with such as compared to male students. The results of the paired questions 1 and 9 are projected in Table 1.

Table 2. Paired Results of Questions 3 and 4

Q. 3. What amount of student loan will you acquire by the time you graduate?

Q. 4. Do you pay the tuition fee as an In-State student or an Out-of-State student?

p-value < 0.05

Loan Amount (\$)	In-State (%)	Out-of-State
0	53.39	46.61
1-10,000	57.14	42.86
10,001-20,000	55.93	44.07
20,001-30,000	43.37	56.63
30,001-40,000	55.38	44.62
40,001-50,000	38.46	61.54
More than 50,000	23.16	76.84

As depicted in Table 2 above, results of questions 3 and 4 show that 53.39% of the In-State respondents believe that they will acquire no debt (\$0) till graduation, compared to 46.61% of the Out-of-State students. Furthermore, only 23.16 In-State students indicated that they perceived themselves to owe more than \$50,000 by graduation, while 76.84% of the Out-of-State respondents held this belief. Therefore, Out-of-State students, who are likely to incur more debt due to the higher Out-of-State Tuition and Fees, which are twice the In-State rates, perceive a greater amount of student loans until graduation.

Table 3. Paired Results of Questions 9 and 16

Q. 16. I pay my bills on time every month = Y / N.

Q.9. It is hard to stick to my spending plan when unexpected expenses arise.

p-value < 0.005

Yes/No	Exactly True (%)	Moderately True	Hardly True	Not at All True
N	52.88	34.62	8.65	3.85
Y	33.72	48.14	13.26	4.88

As seen in Table 3, only 33.72% of the students who promptly settled their bills affirmed that it is hard for them to stick to a spending plan when unexpected expenses arise. Conversely, a significantly higher number (52.88%) of the students who struggled with timely bill payments mentioned that they found it hard to stick to a spending plan when unexpected expenses arise.

Table 4. Paired Results of Questions 10 and 34

Q. 10. When unsuspected expenses occur, I usually have to use credit.

Q. 34. I plan ahead for larger purchases.

p-value < 0.005

I plan ahead for larger purchases					
When unsuspected expense occurs, I have to use credit	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
Exactly True	30.19	28.3	7.55	18.87	15.09
Moderately True	26.47	39.71	16.91	8.82	8.09
Hardly True	31.78	42.64	12.4	6.98	6.2
Not At All True	43.66	31.46	13.62	4.69	6.57

As presented in Table 4, the results on questions 10 and 34 demonstrate that 43.66% of the students do not use credit even when unexpected expenses occur. They ‘strongly agreed’ that they plan ahead for larger purchases. Thus, these results reveal that the students with better self-efficacy plan ahead and do not favor taking loans even when they are faced with unexpected expenses. Even among those who mentioned that it was exactly true that they use credit when unsuspected expenses occur, 30.19% affirmed that they plan ahead for larger purchases.

Table 5. Paired Results of Questions 11 and 34

Q. 11. When faced with a financial challenge, I have a hard time figuring out the solution.

Q. 34. I plan ahead for larger purchases.

p-value < 0.005

I plan ahead for larger purchases					
When faced with a financial challenge, I have a hard time figuring out the solution	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
Exactly True	23.19	36.23	14.49	8.7	17.39
Moderately True	30.96	35.03	17.26	10.15	6.6
Hardly True	35.75	40.93	11.92	6.74	4.66
Not At All True	50.62	28.4	8.64	3.7	8.64

These results certainly demonstrate a positive relationship between the financial self-efficacy of the students and their attitude toward debt. The results in Table 5 project a similar picture as seen in Table 4. Majority of students (50.62%) have demonstrated that better financial management is the key to financial challenges. When faced with a financial challenge, the

students who strongly agreed that they have difficulty figuring out the solution (23.19%) also strongly agreed that they plan ahead for larger purchases.

Table 6. Paired Results of Questions 12 and 30

Q. 12. I lack confidence in my ability to manage my finances.

Q. 30. Taking out a loan is a good thing because it allows you to enjoy life.

p-value < 0.005

Taking out a loan is a good thing because it allows you to enjoy life Measured by 5 points Likert Scale from Strongly Agree to Strongly Disagree					
I lack confidence in my ability to manage my finances Measured by 5 points Likert Scale from exactly true to not at all true	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree
Exactly True	3.45	5.17	13.79	29.31	48.28
Moderately True	1.83	7.93	37.8	26.83	25.61
Hardly True	1.15	4.6	32.76	38.51	22.99
Not At All True	2.01	6.04	32.21	23.49	36.24

The result in Table 6 (regarding Q. 12 & 30) indicate that 48.28% of the students who felt that they lack confidence in their ability to manage their finances also strongly disagreed with the suggestion (Q. 30) that taking out a loan is a good thing because it allows them to enjoy life. The result also points out that only 3.45% of the students expressed a positive view regarding the question that taking out a loan is a good thing because it allows you to enjoy life.

Table 7. Paired Results of Questions 8 and 26

Q. 8. Have you have received any scholarship, grant, work-study, or fellowship to support your college tuition and fees?

Q. 26. How confident are you that you will remain at the university without interruption until your graduation?

p-value < 0.005

Received Grant	Level of Confidence			
	Not Confident	Somewhat Confident	Mostly Confident	Very Confident
False	2.25	9.19	17.64	70.92
True	4.55	31.82	27.27	36.36

As presented in Table 7, The results of the paired questions 8 and 26 indicate that 70.92% of the students who had not received any scholarship,

grant, work-study, or fellowship to support their college tuition and fees felt very confident that they will remain at the university without interruption until their graduation. However, 2.25% were not confident that they will remain at the university without interruption until graduation.

Table 8. Paired Results of Questions 9 and 7

Q. 09. Is it hard to stick to my spending plan when unexpected expenses arise?

Q. 07. Are you a student-athlete?

p-value < 0.005

It is hard to stick to my spending plan when unexpected expenses arise	Student Athlete (Yes/No) (%)	
	No	Yes
Exactly True	92.34	7.66
Moderately True	86.85	13.15
Hardly True	80.88	19.12
Not At All True	72	28

The responses of student-athletes (Q. 7) and their ability to stick to their spending plan when unexpected expenses arise (Q. 9) were analyzed, and the results are presented in Table 8. The results reveal that it is easier for student-athletes to stick to their spending plans (caveat: the self-identification of students as athletes is not certain; maybe they were athletes during high school). The total number of athletes covered was 71, which seems unrealistically high. Alternatively, the athletes being residents and adhering to strict attendance requirements may have contributed to this symmetry. Therefore, the actual number of surveyed athletes may be correct. Out of the population who answered Q. 9, 92.34% of athletes answered "Exactly True", while 7.66% of non-athletes answered the same. Regarding the same questions, "Not at all true" was answered by 72% of the athletes vs. 28 percent of non-athletes.

Table 9. Paired Results of Questions 25 and 28

Q. 25. GPA?

Q. 28. How confident are you that you will be performing academically to the best of your academic potential, given the educational debt you are going to acquire until graduation?

p-value < 0.001

GPA Range	Confidence to perform to the best academic potential			
	Not Confident (%)	Somewhat Confident	Mostly Confident	Very Confident
<2	0	12.5	0	87.5
≥2, <2.5	3.12	25	31.25	40.62
≥2.5, <3	1.18	21.18	27.06	50.59
≥3, <3.5	3.06	5.1	15.31	76.53
≥3.5, ≤4	0	5	21.67	73.33

Table 9 reveals that students with a GPA below 2 exhibit the highest percentage of "very confident" responses on questions 25 and 28, while those

with a GPA between 2 and 3 show the lowest percentages. Thus, these group of students may require additional academic resources.

Table 10. Paired Results of Questions 2 and 3

Q. 2. What is your race?

*Q. 3. What amount of student loan will you acquire by the time you graduate?
 p-value < 0.00001*

Loan Amount (\$)	Race						Two or More Races	Unknown
	African American	Asian	White	Hispanic	Native American			
0	13.29	75	57.14	72.73	50	24.39	66.67	
1-10,000	13.53	0	9.52	15.15	0	9.76	0	
10,001-20,000	11.35	0	7.14	6.06	0	14.63	0	
20,001-30,000	16.67	25	14.29	0	50	12.2	0	
30,001-40,000	14.25	0	2.38	6.06	0	7.32	66.67	
40,001-50,000	9.9	0	4.76	0	0	19.51	0	
More than 50,000	21.01	0	4.76	0	0	12.2	0	

There is a correlation between race and the perceived level of debt upon graduation (Q. 2 and Q. 3). According to Table 10, the p-value is less than 0.00001. However, the sample population has a very small number of American Indian/Alaska Native, Unknown, and two or more races, while the “Dreamer” population may be included either as Hispanic or two or more races. Evidently, 72.73% of Hispanics are aware that they would not have any financial obligations upon graduation, as the Opportunity Scholarship covers their educational expenses. Therefore, the representative sample race populations are Black/African American and White.

The result shows that 21.01% of African Americans expect to owe more than \$50,000, and 4.76% of whites expect the same. Furthermore, 13.29% of African Americans expect to graduate debt free, while 57.14% of whites expect the same. These findings agree with previous studies that race is a predictor of loan amount. Baker and Montalto (2019) examined the relationships between student loans, financial stress, and academic achievement. They found that race is associated with loan, and first-generation students are more likely to rely on loans. Also, they found that “students of color anticipating a graduation debt of \$40,000 or more had significantly lower GPA one year later compared to their peers”.

Conclusion

The following findings were revealed in this study:

1. Female students face greater challenges in handling unexpected expenses compared to males. This result is in accordance with

Yankovich et al. (2019), which shows that female literacy and money habits significantly differ from males (p. 197-198). Therefore, female students require additional practice in money management skills to enhance their competence in handling finances.

2. Students at the institution where the research was conducted are aware of the In-State and Out-of-State costs of tuition and fees. Therefore, Out-of-State Students expect a higher loan till graduation.
3. When unexpected expenses arise, more students who were tardy in bill payments (almost 53%) found it difficult to stick to the spending plan as compared to those (nearly 34%) who promptly paid their bills. Consequently, those lagging in timely bill payments would benefit from enhancing their money management skills. Planning ahead for larger purchases demonstrates a high level of money management skills and is the key solution to financial challenges.
4. Majority of students, regardless of whether they use credit when unexpected expenses occur, plan ahead for larger purchases. Almost 44% of the students, who do not use credit even when unexpected expenses occur, plan ahead for larger purchases. Therefore, the former group presents a higher level of money management skills. Almost 58% of those who use credit for unexpected expenses plan ahead for large purchases. This demonstrates that they also have good money management skills. However, they need to improve their budget planning skills. There is a positive relationship between financial self-efficacy and attitude toward debt.
5. Majority of students who reported lack of financial capability (78%) have an aversion to borrowing money, with 48% strongly disliking it. Conversely, only 9% exhibit a preference for borrowing, and 3% express a high level of certainty about their inclination.
6. 71% of the students who reported that they did not receive any scholarship or grant aid are very confident about graduating from their current university. In comparison, only 2% are not confident about their persistence and graduation.
7. Student-athletes are more capable of sticking to the spending plan than non-athletes. This is contrary to the claims of Levin et al. (2014) that student-athletes academically underperform compared to other students. Beron and Piquero (2016) analyzed NCAA data and found no evidence that student-athletes in Division I are more focused on athletics than academics. Furthermore, they found that being a student-athlete does not influence their academic performance negatively. Considering the importance of the student athletes' individual and team practice, tutoring, class, and other schedules, their financial responsibilities schedule may be developed as well. The athletic and

other scholarships help to lower educational expenses, which aids their financial self-efficacy. Higher academic self-efficacy could stem from the tailored academic guidance and focused support offered to this demographic within the NCAA Division I-affiliated institution where the study took place. Consequently, in contrast to the findings of Levin et al. (2014), student-athletes might excel academically.

8. Given the students' perceived amount of educational loan, those with academic GPAs between 2.00 and 3.00 expressed the lowest confidence in performing at their best. Consequently, it is recommended that these students receive additional academic advising and other support resources.
9. The perceived amount of educational loans and the student race are correlated. Montalto et al. (2018) propose that enhancing students' ability to cope with financial stress through the implementation of new educational and financial policies can boost their financial self-efficacy and academic achievements (ps. 15-17). They claim that affordable student loans serve as good long-term financial vehicle in order to educate and develop reliable and financially responsible human capital with high financial capacity. Accordingly, more legislator improvement of the existing educational and financial policies is needed to achieve a better and more accessible education (p. 18). Nevertheless, the precise correlation between the optimal levels of student loan amounts, whether high or low, and their perceived impact on fostering healthy debt remains unclear. This relationship, if understood, could potentially enhance academic performance and broaden students' financial capacities. While the intention to take out a loan does not necessarily align with the loan amount, the results of this study indicate that as the loan amount increases, a greater number of students express reservations about the idea of borrowing money. Therefore, it is necessary to provide financial counseling to students as soon as they intend to enroll in college or university. Future research should compare the actual borrowed amount and the perceived amount in each academic year and at the time of graduation to determine the reason for the discrepancies (if any) between them.

In addition, future research may focus on first-generation students (the first in the family to attend college), financial aid type (scholarship, grants, donations), loan type, and the correlation between received aid and perceived amounts in comparison to similar trends across regional or national institutions. This approach aims to analyze and contrast patterns within individual institutions. Nevertheless, the findings of this study exclusively reflect the institution where the research was conducted. Hence, for

applicability across states, regions, nations, or other minority-serving institutions, it is essential to replicate the research using representative samples from the specific institutions where new investigations are to take place. Additionally, conducting longitudinal studies within the same institution can provide time-series trends, thus facilitating comparisons between actual and perceived ownership findings.

In order to proactively identify financially at-risk (FAR) students and support all students in achieving their academic, financial, and overall health goals, institutional leadership must foster effective communication and coordinated efforts among various stakeholders, including faculty, staff, counselors, academic and financial aid advisers, as well as students and parents. This necessitates the implementation of robust data analytics processes that continually monitor both academic and financial indicators for potential risks. Examining students' confidence in managing their finances, perceptions of debt, and attitudes towards borrowing could prove beneficial not just for their economic prosperity but also for their academic success. This involves providing prompt guidance, offering extra resources and financial safety nets for low-income students, incorporating services such as food banks, as well as delivering financial literacy courses and counseling. Continuous follow-up at each stage, instilling a positive mindset, and employing suitable counseling methods are crucial until each student achieves success. Implementing these strategies for all students, as recommended by Lipka (2019), is expected to contribute to institutional success.

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Declaration for Human Participants

The research conducted has been approved by the Delaware State University Institutional Review Board, and the principles of the Helsinki Declaration were followed.

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Examining Travel Habits During the Fourth and Fifth Waves Of The COVID-19 Pandemic

Dr. Rimoczi Csilla

Budapest Business School, Faculty of International Management and
Business, Department of Marketing, Hungary

Jager Viktor

Hungarian Central Statistical Office, Quality of Life Statistics Department

Dr. Lenkovics Beatrix

Budapest Business School, Faculty of Commerce,
Hospitality and Tourism, Department of Hospitality

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Abstract

Due to changes in the structure and system of the consumer society, the previously used consumer, geographical, and demographic characteristics did not prove sufficient for the exploration and analysis of the reasons behind consumer habits and tourism behaviour. The characterisation of traditional consumer behaviour was complemented by psychological and psychographic factors. These factors also include lifestyle and motivation. As part of a quantitative study based on an online survey, regular travelers were surveyed, alongside Hungarian people interested in traveling. This paper focuses on arranging the measured sample of travelers into homogeneous groups based on their tourism motivation, lifestyle, and travel behaviour as it relates to COVID-19 pandemic. It was also important to describe and characterize the resulting groups of travelers based on their well-identifiable characteristics. The study was conducted as a continuation of foundational research. Previous research analysed the impact of the first three waves of the COVID-19 pandemic on travel behaviour. The results of the present research refer to the

effects of the fourth and fifth waves

Keywords: Lifestyle, Tourist motivation, Travel habits, COVID-19

Introduction

Tourism demand is an activity generated by tourists through their participation in tourism. Since tourism demand is extremely complex and continuously changing, it can be interpreted in many ways (Buhalis, 2004). The demand for tourism can be distinguished into three types: actual, repressed, and latent. Actual demand is created by tourists who participate in tourism activities. The so-called repressed demand comes from the activities of two groups of tourists. The first group includes those who cannot participate in tourism for some reason. The second group consists of those who are forced to postpone their trips due to a difficult situation involving the supply environment. The category of latent demand covers certain types of demand which are directed at a specific long-desired destination or specific accommodation that is out of reach for some reason (Kalmárné, 2018).

Tourism is one of the most dynamically developing branches of economy in the world, as well as in Hungary. The tourism sector has been severely impacted by the coronavirus (COVID-19) pandemic. Reflecting on the coronavirus pandemic in April 2023, it could be stated that life fundamentally changed in early 2020 when the World Health Organisation classified the COVID-19 coronavirus infection that originated in China as a global pandemic (WHO, 2020). The situation caused a shock effect in business and private life, as well as in consumer behaviour (Soós, 2020).

The travel and tourism sectors suffered severe impacts during the health crisis, as countries all over the world imposed restrictions on non-essential travel to curb the spread of the virus. Revenues in the global travel and tourism market declined drastically. The COVID-19 pandemic presented unprecedented challenges to the global travel and tourism market in 2020 and 2021, as governments imposed lockdowns and travel restrictions to contain the number of infections.

However, the tourism sector has shown its commitment to putting people first. The UNWTO reacted quickly to the crisis caused by the coronavirus pandemic and set up the Global Tourism Crisis Committee, which continuously prepared evaluations and issued recommendations. The committee published its guidelines under the title 'Measures to Relaunch Tourism' in order to advance the recovery of the sector. The sector also played a leading role in facilitating the recovery of the economy (Ilyés, 2020). Certainly, the social and economic benefits provided by tourism could pave the way for sustainable development for individuals and countries. All global destinations had travel restrictions implemented (UNWTO, 2020).

In 2022, restrictions were lifted, which prompted the recovery of tourism and hospitality. Compared to the previous year, the number of international tourist arrivals roughly doubled worldwide, especially after the sharp decline it had with the onset of the coronavirus (COVID-19) pandemic. In addition, Europe reported the largest number of inbound travellers, with nearly 585 million arrivals. Although this number represented a significant annual increase, the number of international travellers' arrival to the region remained below the pre-pandemic levels.

While examining the regional breakdown of the growth of incoming tourist numbers worldwide in 2022, the Asia-Pacific region showed the most significant annual increase in the number of incoming tourists.

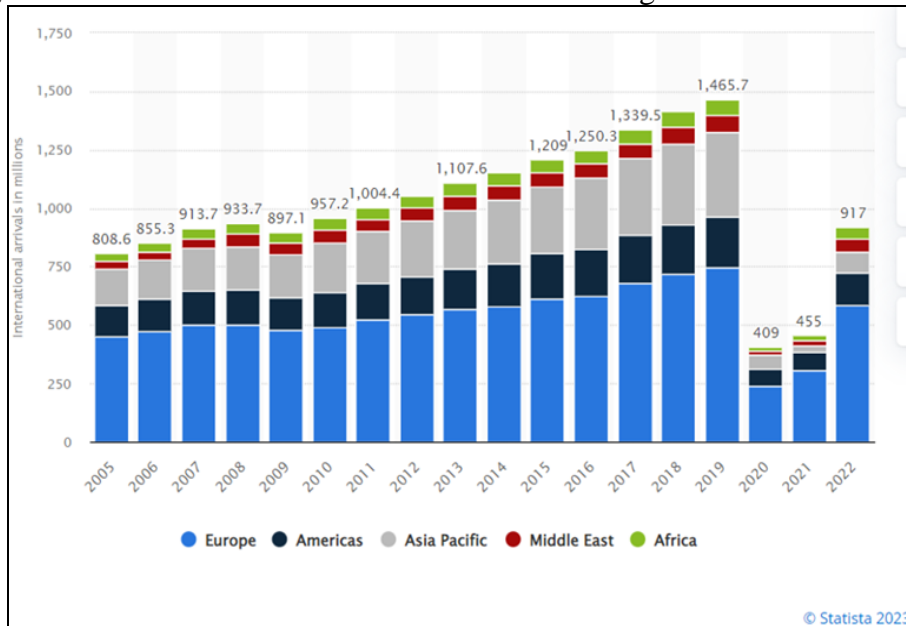


Figure 1. Number of International Tourist Arrivals Worldwide Between 2005 and 2022, According to Region (million)

Since 2005, Europe had been the global region attracting the highest number of international tourists. Compared to the previous year, the number of tourists arriving in Europe significantly increased in 2022. Nonetheless, it has still not reached the pre-pandemic level yet (Figure 1).

In February 2023, the Statista Research Department analysed the growth of the number of global visitors, both inbound and outbound, between 2020 and 2024. Accordingly, the number of inbound and outbound travellers will further increase in 2023 and 2024. Compared to the previous year, the number of global arrivals is expected to increase by 15.5 percent in 2023. Meanwhile, the number of outbound travellers worldwide is estimated to increase by nearly 16 percent during the same period (statista.com, 2023).

Literature Review

Understanding and analysing consumer behaviour is significantly important in scientific research and practical applications. The key to successful marketing strategy requires thorough knowledge of the expected behaviour of potential buyers and consumers living in domestic and international cultures. The first consumer behaviour theories evolved from economic theories, which identified the impact of consumption on the economy (Kopányi, 2002; Zalai, 2000; Kopátsy, 1992).

The purpose of consumption is to satisfy needs, which is the fundamental driving force behind all final consumption. It is a feeling of lack that triggers action to eliminate itself (Farkasné & Molnár, 2006, p.73).

Consumers are people who buy products or services for their own personal consumption. (Jobbler, 2002, p.89). Most of the time, buyers make the purchasing decisions on their own, but there are some purchases where the whole family gets involved as well. Typically, since most of the demand or need appears as motivation, it is necessary to learn why the consumer chooses the given product or service. In order to get to know this decision-maker better, segmentation needs to be performed because communication will not reach its goal without the identification of roles (Jobbler, 2002).

The examination of consumer behaviour is an interdisciplinary research and analysis activity carried out in order to determine the direction and nature of marketing activity, which characterizes, describes, and explains the mass phenomena of consumer behaviour, as well as the trends in consumer behaviour (Veres- Szilágyi, 2007). When researching actual decisions, other factors should also be considered (Kotler, 2006). The author emphasized that consumer behaviour is an extremely complex phenomenon and is divided into endogenous, individual-specific internal (personal and psychological characteristics), and exogenous or external (environmental, social) factors.

Travel decisions are determined by many factors. Tourism demand consists of three basic conditions: motivation, discretionary income, and free time. If one of these three conditions is not met, tourism demand cannot be achieved.

Due to the closure of borders, restrictive measures such as suspension of air transport and cancellation of flights and trips are put in place.

The COVID-19 pandemic has become a factor, which has fundamentally affected travel decisions. Subsequently, these decisions have changed travel habits.

The contribution of tourism to GDP is a key macroeconomic factor in the economic life of Hungary. Based on the results of recent years, it can be declared that its share in the national economy has continuously increased and has become determinant.

As earlier mentioned, life changed at the beginning of 2020 when the World Health Organisation (WHO) classified the COVID-19 coronavirus – which started in China – as a global pandemic. The illnesses caused by COVID-19 infection started at the end of 2019 in Wuhan, the capital of Hubei Province. The epidemic spread very quickly, which led to the introduction of restrictions on inbound and outbound travel in several countries in March 2020. All these measures also limited the services requiring personal contact (education, hospitality, leisure activities) (Debrececi, Fekete-Frojimovics, 2021).

The pandemic crisis has led to fundamental changes in the economic and social spheres. Furthermore, the adverse effects of the pandemic also affected the most important sectors of the national economy, namely tourism. This resulted to changes in the sense of security of consumers. The pandemic also had an impact on the inbound tourism of Hungary and the number of foreigners arriving in the country dropped drastically. A major source of domestic tourism revenue is generated from expenditure by international visitors. The external macroeconomic factors largely determine the composition and volume of incoming guests. The worldwide decline and subsequent shutdown of international tourism was one of the most decisive consequences of the COVID-19 pandemic. Restrictive measures such as the suspension of air traffic, the closure of borders, and the control of passenger traffic curbed the spread of the virus. However, the restrictions brought significant changes in the operation of commercial accommodation and catering units. In the second half of 2020, most of the accommodation providers were closed. In a presentation by the CEO of the Hungarian Tourism Agency, it was pointed out that in the year 2019, 93 percent of the guest nights in Budapest, the capital city, were spent by foreign tourists. This is a very high ratio compared to other European cities. For this reason, a model change needed to be implemented in order to save tourism in Budapest (Guller, 2020). According to the report by World Travel and Tourism Council, the European travel and tourism sector suffered the second largest economic collapse in 2019. The sector's contribution to GDP declined by a total of 51.4 percent (€987 billion). This considerable drop could partly be due to the continuous mobility restrictions and border closures aimed at curbing the spread of the virus. The European domestic spendings fell by 48.4 percent, while the international spending plummeted to an even greater extent, specifically 63.8 percent. Despite this, Europe remained the number one region in the world in terms of international travel spendings. Regardless, the level of employment in the continent's travel and tourism sector shrank considerably by 9.3 percent, which meant the loss of 3.6 million jobs (WTTC, 2020).

The lifestyle and social composition of the world's population, as well as the level of economic development of individual countries are constantly

changing. These changes, among other things, have an impact on tourism and its performance. Therefore, preparations for these processes should start long before the change happens. The tourism market and the service providers are also adapting to the constantly changing tourism demand (Kalmárné & Hering, 2019).

The impact of the pandemic is expected to result in more careful and cautious behaviour on behalf of travellers in the future. It is also possible that many people will prefer to stay safe at home or visit only relatives, friends, and acquaintances. "Cautious travellers will almost certainly demand new and more comprehensive insurance packages, and the responsible traveller will also scrutinize the general terms and conditions of the service providers in details. A travel insurance system adapted to COVID-19 is being developed and some insurance companies are already offering specific COVID-19 insurance" (Raffay, 2020, p.4).

Workers in the tourism industry also suffered from the uncertainty caused by the pandemic. Many consumers decided to postpone their trip or ultimately cancelled their already booked trips altogether. This led to loss of income for businesses and companies (Raffay, 2020).

Around the end of the 3rd wave of the coronavirus pandemic, in the summer of 2021, consumers were expectant that they will be able to plan their trips for leisure purposes more freely due to the improvement of the pandemic situation. The travellers were motivated not only by the need to break away, but changing the monotony of the near past, and finding meaningful ways to spend their free time also contributed to the increasing desire to travel. However, most of the tourist groups still preferred the domestic destinations due to their perceived higher level of safety.

Lifestyle

Due to the changes in the structure and system of the consumer society, the previously used consumer, geographical, and demographic characteristics proved to be insufficient for the exploration and analysis of the reasons behind consumer habits and tourism behaviour. Subsequently, the characteristics of traditional consumer behaviour have been supplemented by psychological and psychographic factors. In addition to several other aspects, lifestyle and motivation can also be added to these factors.

The examination of tourist behaviour, which is one of the focal points of this paper, continues with the analysis of lifestyle. Many researchers have tried to define lifestyle by considering various aspects and factors. The first lifestyle research and related conceptual definition can be attributed to Max Weber. Nevertheless, it is also important to mention other researchers who described lifestyle from different aspects and included it in the consumer behaviour system. Bell (1958), Rainwater, Coleman and Handel (1959),

Havighurst and Feigenbaum (1959) researched the area in the late 1950s. Bell focused on the examination of relations between consumption and consumer behaviour. Rainwater, Coleman, and Handel highlighted the importance of links between consumer behaviour and lifestyle. However, the work of the aforementioned researchers lacked the precise definition of the concept of lifestyle. In a paper by Lazer (1963, p.130), a detailed definition is found which has been widely accepted and adopted. In his opinion, lifestyle is a system. In other words, it is a distinctive and particular way of life which is typical for certain segments of society. The purchase and consumer behaviour truly reflect individual lifestyles.

Veblen (1975), Halbwegs (1971), Summer (1978), Hexter (1916), and Weber (1964) characterized the different lifestyles with differentiated ways of consumption per each group. These researchers defined lifestyle as the way of consumption and the way people pursue their lives, depending on the different life conditions.

In addition to the above, there have been many attempts to define, describe, and analyse the concept of lifestyle. Lifestyle cannot be described or characterized by a single word as it is a much more complex concept. Based on the multitude of definitions published by researchers and their contradictory wordings, it can be declared that neither the researchers of sociology nor marketing science represent a unified position regarding the definition of lifestyle and the methodology of analysing the research results. Nevertheless, the clarification and evaluation of the conceptual measurement and analysis procedures that have been created and scientifically implemented so far, as well as the recommendations of new approaches to the problem, contribute to the quality and creativity of lifestyle research (Wind & Green, 2011).

Lifestyle reflects public conduct, values, attitude, opinion, and personality, which determines consumer habits and behaviour. The VALS model is one of the most widespread methods in relation to lifestyle research. The initials of three English words gave the name of the method: Values, Attitudes, and Lifestyle. The research started in the United States, and, as the name also indicates, it was created for the analysis of correlations between values and lifestyle. Although there are two versions of the VALS method, both are widely called and used under the name VALS model. The first model, known as VALS 1, was developed in 1978 and is associated with Arnold Mitchell. The results of the method were published in a book by Mitchell in 1983. The survey was conducted by interviewing 1,600 people in the United States. However, the adequacy and theoretical accuracy of the research had been widely questioned.

Due to its difficulty and complexity, the method was revised by the Stanford Research Institute and VALS 2 was created. To this day, the

questionnaire has been primarily used for commercial purposes, and it is also a popular and well-known market research method in marketing planning. It is a psychometric method that is based on personality traits and analyses the individualistic characteristics and the correlations between consumer behaviour and habits. It examines the characteristics along two dimensions: motivation and resources. The method is less theoretical, more practical, and more efficient than the previous version. Part of the set of questions of the current empirical research is made up by the referenced questionnaire adapted to Hungarian language.

Tourist Motivation

The study continues with the analytical evaluation of tourism motivation. Human needs are inexhaustible and may become motivated under optimal intensity. An individual may have several needs at the same time. This is regarded as psychological characteristics and usually comes from some kind of psychological tension. According to Maslow's hierarchy of needs, the needs of belonging, esteem, and recognition also belong to this category. After some time, however, the needs turn into motivation due to external and internal factors. Motivation prompts the individual to act, which reduces or eliminates tension. Therefore, motivation can be interpreted as an internal state that drives people to achieve certain goals. Just as income and social status determine an individual's place in the hierarchy, motivation also determines the selection criteria (Veres, 2007).

The motivating factors influence the decision positively and result in a feeling of satisfaction. Lawler, Hackman, and Porter (1975) used motivation as a method, which was further developed. The resulting model was adequately used in tourism to increase the sales of products and services. Based on the model, it can be said that the motivational process starts with the size of the reward, which induces efforts. Subsequently, the launched process becomes performance by supplementing the abilities and character traits. The process ends in satisfaction after an external or internal reward. Certainly, recognition of effective performance is a reward in itself.

The present paper is part of a complex research, and it is the continuation of the analytical and evaluation research in relation to the first three waves of the pandemic. The aim of the questionnaire survey was to divide the samples of interviewed travellers into homogenous groups based on lifestyle, tourism motivation, and tourism behaviour related to the COVID-19 pandemic. Also, each homogenous group can be described with easily identifiable characteristics.

Methods

The empirical research was carried out using quantitative methodology, with a questionnaire consisting of the following five groups of questions:

- Travel habits during the examined period of the COVID-19 pandemic (July 2021 – December 2022)
- Lifestyle characteristics (adapted set of questions)
- Importance of tourism motivations before the COVID-19 pandemic and during the examined period (July 2021 – December 2022)
- Impact of COVID-19 on travel behaviour (July 2021 – December 2022)
- Demographic benchmarks

IBM SPSS and R statistical programme (R Core Team 2021) were used for the statistical processing. The calculations were made with the psych test package (Revelle, 2023). Descriptive and comparative statistics were prepared on the basis of the variables measured on the nominal scale and the demographic data.

Convenience sampling was employed to conduct comprehensive research during the timeframe of January to March 2023. 368 people filled out the questionnaire during the survey period, and 360 responses were used after data cleaning. Descriptive and comparative statistics were prepared based on the variables measured on the nominal scale and the demographic data. The respondents were grouped by hierarchical cluster analysis based on questions regarding travel motivations, using Ward's method (Ward, 1963) and squared Euclidean distance.

Results

Demographic Characteristics

40% of respondents were men and 60% were women. Approximately half of individuals held a secondary or higher education as their highest school qualification, demonstrating an even 50-50% distribution. The higher ratio of female respondents can be explained by the greater willingness of women to complete questionnaires and their increasing role in decision-making. According to Barletta (2002) and Popcorn Marigold (2001), women are the most likely to make travel decisions in the families. Nowadays, they make 80% of purchasing decisions directly or indirectly. Based on the impacts of tourism megatrends, it can be stated that more women travel in groups or individually. Examining the age distribution of respondents, 66% belong to Generation Z, 14% to Generation Y, 17% to Generation X, and 3% were Baby Boomers or veterans (Table 1).

Table 1. Distribution By Gender and Age Group

		Number of Respondents	Ratio of Respondents
Gender	Male	142	40%
	Female	218	60%
<i>Total</i>		<i>360</i>	<i>100%</i>
Age group	Born before 31 Dec 1945 (veterans)	2	0%
	Born between 1 Jan 1946 and 31 Dec 1964 (baby boomer)	10	3%
	Born between 1 Jan 1965 and 31 Dec 1979 (Generation X)	6	2%
	Born between 1 Jan 1980 and 31 Dec 1995 (Generation Y)	8	2%
	Born after 1 Jan 1996 (Generation Z)	330	92%
<i>Total</i>		<i>360</i>	<i>100%</i>

Source: Authors' Field Survey

According to their place of residence, 26% live in Budapest and 74% live in the countryside. Regarding the financial situation of respondents, more than 63% have a monthly income of over HUF 150,000 per person, as shown in Figure 2 below.



Figure 2. Financial Situation of Respondents According to Economic Activity
Source: Authors' Field Survey

Travel Habits in General

Apart from COVID-19 pandemic, 16% of respondents travel domestically once a year, 56% travel two to five times, and 9% travel six to ten times or more than ten times. On the other hand, 3% do not travel within the country at all, 17% declared that they never travel abroad, 29% travel once

a year, 39% travel two to five times, and the remaining 2% travel abroad for leisure purposes at least six times. The study also examined the destinations chosen during the fourth and fifth waves of the pandemic. One-fifth of the respondents made only domestic trips, and a relatively small 3% mentioned that they did not travel within Hungary for tourism purposes.

Domestic Travels During the Pandemic

Figure 3 illustrates the number of domestic trips in the period between July 2021 and December 2022. Among the 360 survey participants, 353 affirmed that they had engaged in domestic leisure travel during the fourth and fifth waves of the pandemic. The results show that among the people who usually travel two to five times, nearly 55% marked the same option. In addition, 17% stated that they travelled only once and almost 8% did not travel at all.

Regarding the question about the trips in general, the proportion of those who travelled two to five times is 69%, 5% had one trip, and nearly 2% did not travel at all. Less than 7% marked the option of six to ten times. Only 2 people ticked the ‘More than ten times’ option.

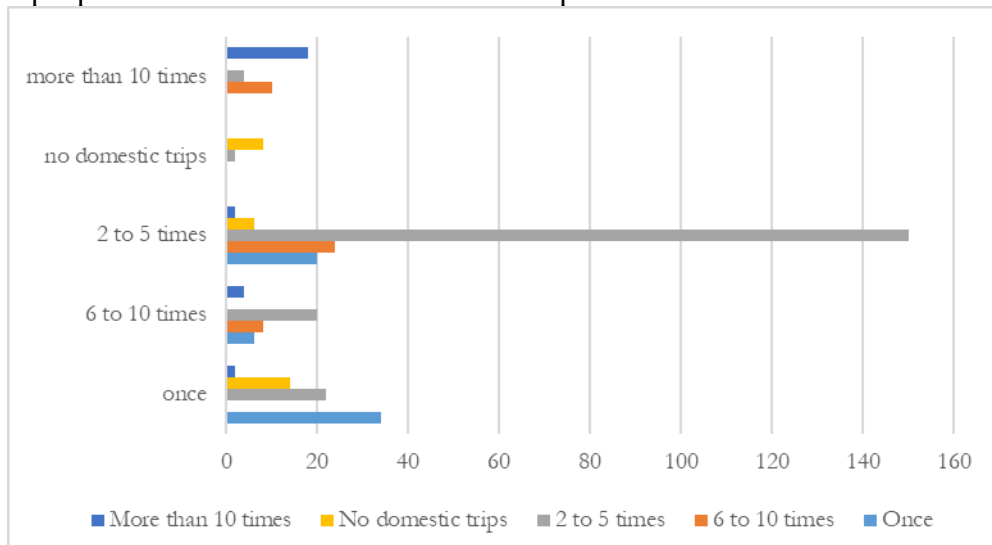


Figure 3. Number of Domestic Trips in General (Y axis) and During the Examined Period (X axis) (July 2021 – December 2022)

Source: Authors' Field Survey

Travelling Abroad During the Pandemic

The number of trips abroad during the fourth and fifth waves of the pandemic was also analysed and the results are summarised on **Figure 4**. Among the 360 respondents, 266 individuals affirmed that they had traveled abroad during the surveyed period. 28% of the respondents mentioned that they had travelled once, 59% travelled two to five times, and 13% travelled

six to ten times. None of the respondents indicated travelling abroad more than ten times.

According to the above interpretation, the following answers were obtained based on the question about trips in general. Apart from the COVID-19 period, 356 people indicated that they usually travel abroad. Analysing the answers, it can be concluded that 37% of the respondents usually travel abroad once a year, 40% travel two to five times, 2% travel six to ten times, and about 2% have international trips more than ten times.

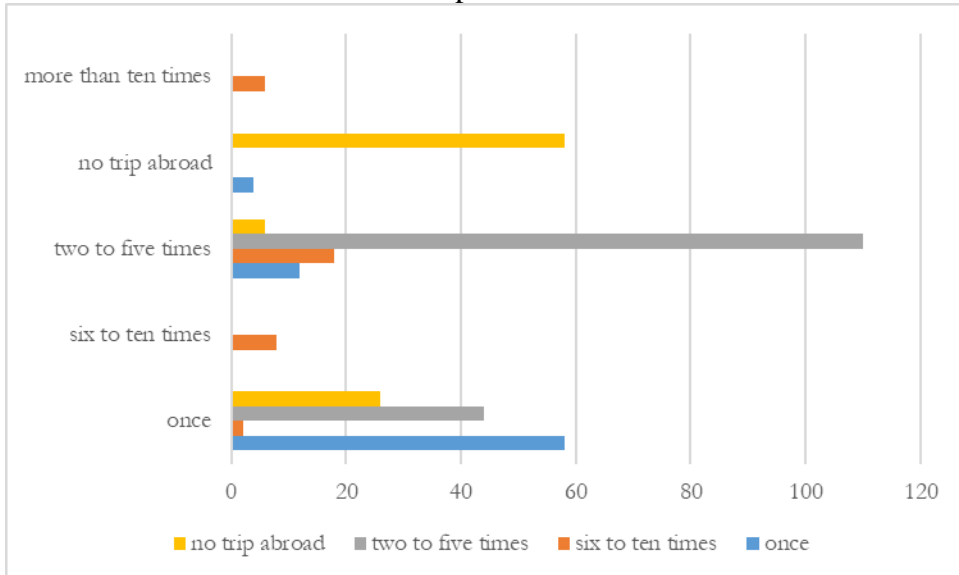


Figure 4. Number of Foreign Trips in General (Y axis) and During the Examined Period (X axis) (March 2020 – June 2021)
 Source: Authors' Field Survey

Reasons For Not Travelling

The reason for not traveling, as stated by 54% of respondents who chose to 'stay at home,' was attributed to concerns about the ongoing pandemic. 22% stayed at home for financial reasons, while 12% did not plan to travel due to border closures, restrictions, and quarantine regulations. 6% mentioned work commitments as further reason for not travelling, 4% brought up health issues, and 2% referred to other reasons.

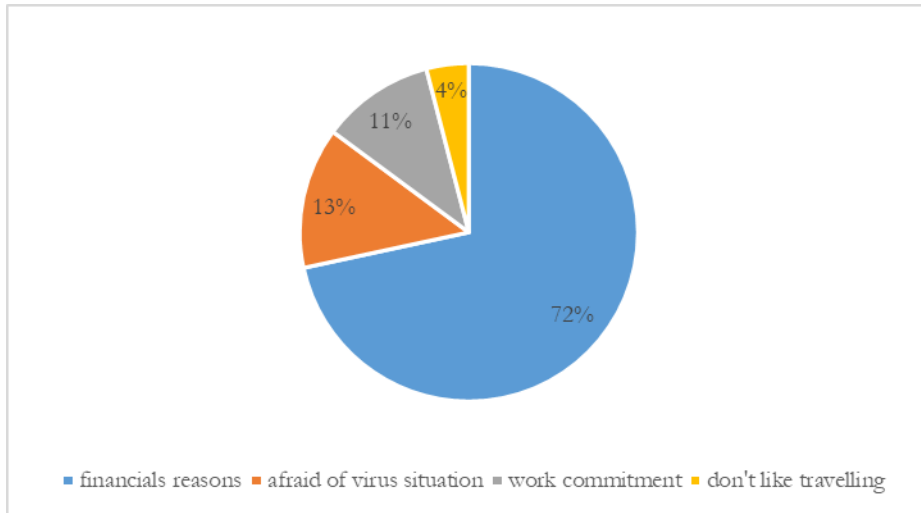


Figure 5. Reasons For Not Travelling
Source: Authors' Field Survey

Lifestyle

The lifestyle-related attitudes of the sample are summarized below: Respondents had to evaluate 34 lifestyle-related statements on a 5-point Likert scale (1 - strongly disagree, 5 – strongly agree). The most typical statements regarding lifestyle are summarized on **Figure 8**. The two highest values were given to the following statements: 'I like to try new things' and 'I like to do things that are also useful'.

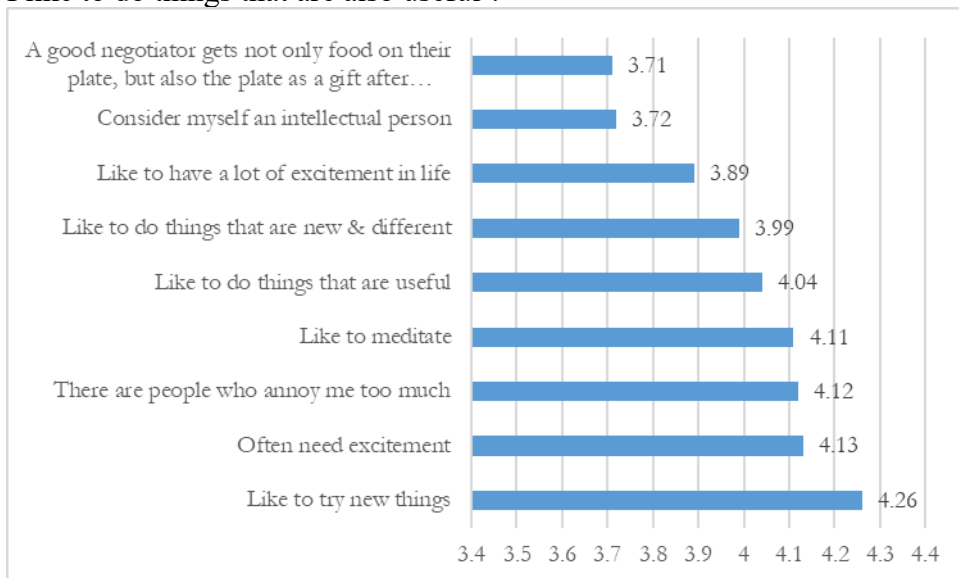


Figure 6. Statements Regarding the Most Typical Lifestyle
Source: Authors' Field Survey

The analysis also identified the word the respondents associated with travel. Most of them outlined that words such as ‘freedom’, ‘experience’, ‘relaxation’, and ‘rest’ popped into their minds (**Figure 7**).



Figure 7. What Comes To Your Mind About Travel – Word Cloud
Source: Own Edition

Tourism Motivation

Apart from the COVID-19 situation, the respondents considered the search of experiences as the main motivation among the factors they had in mind when choosing a trip. This was followed by the aspect that determined the main purpose of travel by the interviewee. The costs of the trip, the respondent’s income, and the attractions of the destination were among the main tourism motivations (**Table 2**).

Table 2. Main Tourism Motivations of Trips

Motivations	Average
Search of experiences	4.59
Main purpose of travel, e.g., relaxation, beach, hiking, etc.	4.53
Costs of travel	4.42
Income and the part of income that can be spent on tourism	4.27
Attractions of the destination	4.20
Accessibility of the selected destination	4.11
Duration of holiday	4.04
Time of the year when the trip is planned	4.02
Former experiences of a trip	4.03
Desires and wishes of fellow travellers	3.99
Means of transport	3.92
Type of accommodation	3.88

Source: Authors’ Field Survey

Impact of COVID-19 On Travel Behaviour

The study also investigated the significance assigned by respondents to taking into account COVID-19 precautions and other factors when planning their travel destinations and making purchases after July 2021, with

a rating scale ranging from 1 (not important at all) to 5 (very important). The average values of responses given to each aspect are shown on Table 3. The most important aspects were the value for money, the flexible cancellation, and payment terms.

Table 3. Importance of Aspects Related to the Planning of the Trip

Aspect	Average
Value for money	4,68
Flexible cancellation and payment conditions	4,34
Insurance conditions offering protection in case of emergency	4,08
More frequent cleaning in the selected destinations	3,56
Provision of individual, disposable protective equipment for guests	2,68
Individually packaged products (e.g., food products)	2,82
Possibility of contactless shopping	2,60

Source: Authors' Field Survey

Factor and Cluster Analysis

The basic condition of factor analysis is the correlation between the individual variables, which cannot be combined into factors without this correlation. The variables are suitable for factor analysis only when there is a strong correlation. The most important metrics of this are the Kaiser-Meyer-Olkin (KMO) and the Bartlett test (Kassai, 2009).

Tourism Motivation

The initial conditions of the factor analysis related to travel motivations are fulfilled (**Table 4**), since the value of the KMO test is 0.85. This implies that it almost reaches the 'excellent' value limit (the variables are correlated), and the Bartlett test is significant (the variables are uncorrelated).

Table 4. KMO and Bartlett Test

Kaiser-Meyer-Olkin test		0.85	$KMO \geq 0,9$	Excellent
			$KMO \geq 0,8$	Very good
Bartlett's test of sphericity	Approx. ChiSquare	16416.83	$KMO \geq 0,7$	Adequate
	Df	2016	$KMO \geq 0,6$	Moderate
	Sig	0	$KMO \geq 0,5$	Weak
			$KMO < 0,5$	Not acceptable

Source: Authors' Field Survey

The number of factors were determined by considering the Kaiser criterion and the scree plot. The use of eight factors proved to be ideal. These can be clearly interpreted as each of them has an eigen value higher than 1 (between the limits of 17.02 and 1.59). The total explained variance is 46.5%, which is satisfactory in terms of the nature of the research. This indicates that

the factors capture the underlying pattern inherent in the data. The generated motivational factors, with the number of variables and the smallest factor weight, are listed in Table 5 in descending order of explanatory power.

Table 5. Factors Produced on the Basis of Tourism Motivation

Factor	Number of Variables	Smallest Factor Weight
Nature lovers	10	0,62
Adventure seeking explorers	12	0,40
Safety seekers	8	0,42
Active gamblers	5	0,49
Frugal people	4	0,45
Gastro experience seekers	4	0,38
Culture seekers	15	0,20
Modern beach lovers	4	0,55

Source: Authors' Field Survey

The motivational factors encompassed within the measured variables involve individuals who identify as nature enthusiasts and prefer proximity to nature, while cultivating harmonious connections with their surroundings and actively avoiding mass tourism.

The adventure-seeking explorers are eager to discover thrilling experiences, and this means fun for them. This group has a considerable attitude for being bold and ready for action. While exploring different cultures and lifestyles, they easily make friends and enjoy exotic destinations. It is important for them to get to know the religion, culture, and customs of the given destination. Interestingly, this helps them to explore themselves better. For safety seekers, cleanliness is essential and their personal safety is also an important aspect. They seek reliable locations, with health preservation and regeneration being common travel motivations. Family togetherness and dependable weather are also key considerations in their trip planning.

Culture seekers often choose old historical cities, and they adapt their programmes to historical attractions. They like to trace their roots and often visit art galleries in the given destination. Their primary motivation is to learn and investigate fascinating subjects.

Active gamblers like to go to casinos and try out different types of games. When choosing a destination, fans are motivated by visiting the stadium of their teams and having exciting gambles. They search for destinations that they can brag about to their friends afterward. Visiting the designated place ahead of their acquaintances holds significance. Staying physically active throughout their vacation is crucial for engaging in sports, exercising, and regularly going hiking.

For the frugal group, money is the primary concern. As such, they aim for the lowest possible cost in terms of destination, accommodation, and gastronomy.

The group of individuals seeking a gastronomic adventure is primarily motivated by the desire to explore and savor unique culinary delights. They are also willing to travel for the sake of a fine dining restaurant. Modern beach enthusiasts primarily seek destinations with quality beaches and frequently make use of water sports facilities.

During the COVID-19 pandemic, the conditions of the factor analysis related to travel motivations are met (Table 6). Significantly, the value of the KMO test is 0.75. This implies that it exceeds the ‘very good’ value limit (the variable set is correlated), and the Bartlett test is significant (the variables are uncorrelated).

Table 6. KMO and Bartlett Test

Kaiser-Meyer-Olkin test		0,75	<i>KMO ≥ 0,9</i>	<i>Excellent</i>
			<i>KMO ≥ 0,8</i>	<i>Very good</i>
Bartlett’s test of sphericity	Approx. ChiSquare	691.6953	<i>KMO ≥ 0,7</i>	<i>Adequate</i>
	df	21	<i>KMO ≥ 0,6</i>	<i>Moderate</i>
	Sig	0	<i>KMO ≥ 0,5</i>	<i>Weak</i>
			<i>KMO < 0,5</i>	<i>Not acceptable</i>

Source: Authors’ Field Survey

In this case, the number of factors was determined by considering the Kaiser criterion and the scree plot. Based on both methods, the use of two factors is optimal and their eigen values are 2.81 and 1.44. The total explained variance is 46.8% and the findings made in the case of motivational factors are also valid here. Given the nature of the data and the research, the ratio is acceptable. The motivational factors for the period of COVID-19, together with the number of variables and the smallest factor weight, are included in **Table 7** in descending order according to the explanatory power.

Table 7. Factors Generated on the Basis of COVID-19 Related Travel Behaviour

Factor	Number of Variables	Smallest Factor Weight
Hygiene measures	4	0,35
Financial measures	3	0,39

Source: Authors’ Field Survey

The measured variables which belong to the tourism behaviour factors in relation to COVID-19 include the group of individuals that focus on hygienic measures. Certainly, possessing personal and disposable protective gear is crucial, and regular cleaning is necessary at designated sites. They opt for individually packaged food and products instead of buffet meals, and they show a preference for contactless delivery.

People who prioritize financial measures tend to seek products offering good value for money, with a focus on insurance conditions providing a safety net against financial risks during emergencies.

Cluster Formation

With the help of cluster analysis, it is possible to classify individual data blocks into groups that are relatively homogeneous and different from each other (the significance values of the ANOVA test are always below 0.05). However, the motivation and travel habits of the individuals are the same. The classification indicates groups where members are more similar to each other than members of other groups.

The motivation factor-forming characteristics are variables measured on an ordinal scale. Thus, the 8 factors derived from these are also suitable for classifying individuals into groups. Clustering is most effective when 4 clusters are created, and the factor weights in each cluster are as follows:

Table 8. Factor Coefficients in the ANOVA Model

Factors		Clusters				F	Sig.
		Mass Tourists	Adrenalin Tourists	Exotic Travellers	Explorers		
M o t i v a t i o n	Nature lovers	0,47035	-1,07366	-0,41426	-0,10902	41,59	2.2e-16
	Adventure seeking explorers	0,27308	-0,22743	0,09261	-1,01562	23,56	6.199e-14
	Safety seekers	0,26854	-0,03042	-0,55557	-1,13032	36,38	2.2e-16
	Active gamblers	-0,22642	0,02537	2,59338	0,07861	130,8	2.2e-16
	Frugal travellers	-0,28912	0,60153	0,56977	0,05758	11,32	4.137e-07
	Gastro experience seekers	0,44629	-0,71836	-0,21011	-0,79725	22,73	1.738e-13
	Culture seekers	0,31815	-0,54528	-0,32679	-0,42713	9,339	5.871e-06
	Modern beach lovers	0,19333	-0,19436	-0,54875	-0,39739	4,93	0,002285
C O V I D 1 9	hygienic measures	0,028	-0,276	0,052	-0,069	1,332	0,263
	financial measures	-0,112	0,110	0,070	-0,031	0,922	0,430

Source: Authors' Field Survey

Features of Clusters

Although mass tourists find pleasure in nature and adventures, they prioritize safety. In their case, the significance of hygiene measures heightened amid the COVID-19 pandemic due to their frequent visits to crowded areas, which put them at a higher risk of infection from the virus.

Adrenaline tourists prioritize gambling and seek reasonably priced lodging and dining choices. When traveling, culinary experiences and the exploration of cultural values do not serve as motivating factors. During the COVID-19 pandemic, in contrary to mass tourists, the financial measures were more prominent for gamblers since the programme of such trips can be

very expensive. Conversely, hygiene measures were less underlined, as large crowds are not typical at these types of locations.

Exotic travellers delight in journeys that intertwine with gambling, placing a significant emphasis on the enhancement of their social status. Their primary focus is not on engaging in various activities or indulging in gastronomic experiences. Typically, they seek an escape from the routine of daily life. Opting for destinations that avoid large crowds, they gravitate towards exclusive and prestigious trips, driven by a desire to preserve the substantial financial investments made in their travels.

Explorers, on the other hand, enjoy nature and like to discover new things. However, they are not interested in prestige. In connection with COVID-19, less frequented locations are their preference, with no regard for hygiene and financial measures. Avoiding crowded places, they rely on a relatively low budget and remain unaffected by insurance.

Conclusion

COVID-19 pandemic has completely transformed the tourism industry. Travel habits, both domestically and internationally, have changed significantly. The quantifiable losses following the pandemic cannot be realised yet. It is uncertain how travel opportunities will change in the future due to the impact of the possible next wave(s). Experts forecast the performance improvement in the tourism sector in different ways.

The aim of the study was to create homogenous groups of travellers and provide their descriptive analysis based on various characteristics during the fourth and fifth waves of COVID-19. Subsequently, the aim of the research has been achieved. Based on lifestyle, tourism motivation, and travel behaviour related to COVID-19, the interviewed sample of Hungarian travellers was divided into homogenous groups.

The results of the research are interpreted as a snapshot for the period from July 2021 to December 2022, thus providing a descriptive analysis of travel habits affected by the two waves of the pandemic. A study had been previously prepared on the investigation and analysis of travel habits related to the first wave of the pandemic. The results of this research can be understood and interpreted as a continuation of the referenced foundational research. Further research requires comparative study and analysis of travel habits during the two investigated waves in order to make more in-depth findings.

The following conclusions can be drawn from the quantitative research:

- 60% of the interviewed sample of travellers were women. In terms of education, 50-50% of the sample have secondary and higher education qualifications. Regarding the age distribution, 92% are members of

Generation Z. Most of them are self-employed and in stable financial situation.

- In the survey about lifestyle, the majority of the respondents agreed that they like to try new things and spend their time usefully.
- Among the respondents, the most frequent associations related to travel were ‘freedom’, ‘experience’, ‘relaxation’, and ‘rest’.
- Apart from the pandemic situation, the respondents considered the experience gained during the trips to be the most important of the factors related to the choice of the trip. Regarding the extra services following the COVID-19 outbreak, the flexible cancellation and payment conditions proved to be the most important for the members of the sample.
- Based on the motivational criteria, four clusters can be identified: mass tourists, adrenaline tourists, exotic travellers, and explorers. The travel habits of the defined homogenous clusters and their attitudes regarding the changes caused by COVID-19 are influenced by various factors, different tourist motivations, and demographic characteristics.

It is evident that the respondents did not travel significantly less in the examined period (July 2021 – December 2022) than in the previous years. This is true both in terms of domestic and foreign trips. Compared to the previous three waves, the enthusiasm to travel could be clearly perceived and recognised.

Fear of the virus situation and financial insecurity were identified as the two most common reasons among those who ‘stayed at home’. The pandemic has considerably transformed not just the travel habits, but everyday life as well. However, this can be an advantage for the sector and a positive yield can also be discovered. On the one hand, the existence and establishment of safer travel conditions will be one of the basic tasks of tourism service providers in the future. Nonetheless, the changes expected now and in the future require fast, well-founded, and well-prepared crisis management from the service providers.

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Learning Engagement of Adult Females in Remote Physical Fitness Program Through Mobile App Intervention

Dr. Ranita Ganguly

Doctoral Researcher, Education Graduate Programs
Delaware State University, DE, USA

Dr. N. K. Rathee

Professor & Director, Education Graduate Programs
Delaware State University, DE, USA

Dr. Vikramjit S. Rathee

Chief Scientific Advisor, Research & Development Department
Nine Star Initiative, DE, USA

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Abstract

The use of digital devices such as laptops, personal digital assistants, and mobile phones as learning tools has gained prominence in formal education, generating increased research interest in potential growth areas. According to Jeong and So (2020), there seems to be inadequate empirical evidence from extensive research to support its learning effectiveness in the fitness domain, especially among women who have been underrepresented in economically stressed areas. One of the several explanations for this disparity is the failure to consider women's intersecting cultural identities or potential for social impact. This paper focuses on addressing this issue by conducting a qualitative study. It involves a focus group comprising 15 adult females aged 24 and above. The primary objective is to assess how virtual learning influences the learning perception of adult female learners at a yoga and fitness studio. Interactive self-paced mobile-assisted learning modules were facilitated through the use of mobile phones. An open-ended questionnaire was designed using online resources for primary data collection. The findings were derived by cross-referencing data collected from recordings, interviews,

and questionnaires. The study revealed that participating in online fitness classes could enhance women's involvement in fitness-related activities.

Keywords: M-learning, Perception, Physical activities, Meditation, Yoga

Introduction

Due to the COVID-19 pandemic, schools shut down, and traditional classes were replaced by online sessions. Home isolation became mandatory, causing a widespread halt in various societal functions, with only grocery stores, medical facilities, and pharmacies remaining operational. In the midst of this crisis, educators reassured students about the effectiveness of virtual learning. The absence of fitness education classes became prevalent, given the impracticality of conducting physical workouts beyond a theory-based curriculum. Despite the interactivity of online lectures, engaging in sports like baseball, basketball, and soccer posed challenges. Questions arose about the feasibility of perfecting skills such as postural correction or modeling in a virtual setting. Similarly, queries were raised about whether swimmers must always practice in water and if basketball shots could only be refined when performed alongside teammates.

Through investigation, the feasibility of incorporating sport into online fitness education courses was revealed. The study anticipated that yoga, focused on enhancing posture, could be effectively utilized in virtual classes to assess the motor skill development of participants. However, numerous challenges were faced in gathering data and recruiting adult female learners from Delaware for the research. Across the globe in India, a yoga and fitness studio was identified, and its online YOGA classes and mobile learning participation were closely observed.

The virtual classroom has the capacity to generate a class performance equivalent to that of traditional face-to-face instruction. Peyman et al. (2018) showed a significant increase in physical activity of women who used educational multimedia and websites and received daily text messages compared to those in the control group. This indicates a positive impact of the media on health promotion as an educational intervention. The introduction of digital media resulted in elevated levels of physical activity, leading to reduced weight and improved Body Mass Index (BMI) within the experimental group. In this research, the use of "WhatsApp" could potentially enhance instructional methods and learning outcomes.

Andrade et al. (2018) examined the risk of infection (specifically influenza and tuberculosis) among individuals engaging in physical exercise at the gym. The analysis involved evaluating carbon dioxide (CO₂) concentrations through the Wells-Riley model and investigating the physical attributes of multiple gyms to establish potential correlations with CO₂ levels.

The research was conducted across three distinct gym environments, revealing consistently elevated infection risks for influenza in all scenarios due to the high quantum generation rate associated with CO₂ levels. This study indicates that inadequate ventilation in fitness facilities poses a notable concern. High levels of CO₂ contribute to compromised air quality, leading to heightened health risks for users, including increased susceptibility to infections like influenza and tuberculosis. The significance of a contagious environment should not be underestimated, especially considering the potential resurgence of pandemic diseases such as COVID-19. Pedro, Barbosa, and Santos (2018) specified that the integration of digital technology into formal education hinges significantly on the capability of instructors to introduce it seamlessly, thus preserving the richness of the classroom environment and ensuring the quality of the inquiry process.

Vlachopoulos (2019) explored how learner–tutor interaction, achieved through educational communication media (conferencing tools, e-mail, discussion forums), can foster a sense of connectedness. To cultivate a closer relationship with online learners, tutors are advised to employ verbal and non-verbal immediacy behaviors, establish a supportive social atmosphere, and deliver timely feedback. Tutor immediacy can be promoted through instructional modes such as instant messaging, emotions, personal profiles, prompt replies, clarification of assignments, timely feedback, and the integration of synchronous activities. As identified by Yu, Kulinna, and Lorenz (2018), instructors and learners can receive modeling and feedback on their mobile devices in realtime through mobile apps, which can be useful in fitness programs. Based on these major literature reviews, it was identified that women from financially stressed areas developed a better perception of mobile learning and electronic learning during the COVID-19 crisis.

Background of the Research Problem

The successful proliferation of M-learning and virtual learning community requires a sustained activity to examine the needs, wants, and preferences of adult female learners in areas of economic distress. Therefore, the seamless integration of online and mobile technology, coupled with interactive design processes, allows theoreticians and practitioners to establish meaningful connections in digital learning. This, in turn, fosters transformative and self-motivational learning experiences within the curriculum. This particularly applies to underrepresented adult female learners engaged in virtual physical fitness training, facilitated by a remotely located trainer or moderator.

A Justification of the Importance of the Problem

Due to the COVID-19 pandemic outbreak, schools and colleges across all nations had to pivot online on very short notice. In this current time of virtual reality classrooms, learners get fatigued and are quarantined indoors without any physical fitness or exercise. Since the outbreak of the novel coronavirus, more rules and regulations have been implemented by local authorities. The challenging times of a pandemic, disaster, or natural calamity, leading to the suspension of in-person classes, instill profound anxiety and unease among the public. As a result, social interactions are significantly limited during such periods. According to Delaware Emergency Management Agency (DEMA) and Delaware Division of Public Health (DPH), hosting private indoor gatherings or events with more than ten (10) persons presents a substantial risk during the pandemic, potentially leading to a rapid spread of the virus. Female learners in remote areas without access to easy transportation can benefit from the opportunity to maintain physical fitness and mental tranquility at a lower cost through virtual learning. The concept involves transferring traditional in-person fitness classes into a digital environment, which is accessible through portable devices such as iPads or tablets. This allows women to connect with their instructors and participate in online fitness training sessions at scheduled times.

Significance of Research

A valuable way of bridging the gap during unforeseen circumstances is to switch to offering virtual fitness classes supported by a trained instructor.

This provides an opportunity for trainers or instructors to continue supporting female learners in remote areas of economic stress throughout the quarantine period, ensuring consistent participation in online classes. The enriched participation of women learners in virtual fitness training provides a framework for analyzing the usability, intention, and acceptance of new virtual learning frameworks in fitness education. The objectives of this qualitative study are as follows:

1. To enhance better perception of mobile learning and virtual learning among women and improve engagement of adult females in remote physical fitness learning programs through the digital environment.
2. To identify how online yoga, fitness classes, and M-learning can enrich engagement opportunities for adult female learners from marginalized categories in economically distressed area.

Al Emran and Shaalan (2014) demonstrate that M-learning facilitates knowledge sharing among students and educators while interacting with each other. Chatel and Falk (2017) confirm that through convenient information acquisition and sharing, mobile computing not only facilitates traditional

lecture-style teaching but also promotes innovative teaching methods, such as geography education, through the SMARTGEO application. Ralston et al. (2019) demonstrated the feasibility of conducting student engagement and exploratory learning beyond the traditional classroom setting by incorporating remote field activities. Recent reviews have focused on inquiry-based learning supported by mobile technology. Zydney and Warner (2016) identified typical designs with mobile apps (technology-based scaffolding, location-aware functionality, and digital knowledge sharing and construction) but also suggested some recommendations for better alignment of the learning theories and the measured outcomes. M-learning (Mobile Learning) researchers attempt to maximize the utilities of mobile technologies for complementing the virtual classes in all streams of education, including physical exercise classes, while maintaining the learning mission.

This literature review determined that basic scientific knowledge or conceptual understanding were the main outcomes measured in the studies, and efforts from scholars was needed to assess high-level cognitive outcomes like problem-solving. Another analysis of the effects of mobile technology on inquiry-based learning by Sung, Chang, and Liu (2016) focused on the shortcomings linked to the duration of interventions, the methods of measurement of higher-level skills, and the weak orchestrations of mobile activities in generic learning activities. This supports the idea that learning outcomes cannot be solely attributed to a student's activity.

Future research should incorporate emerging technologies and formulate additional approaches to enhance student-teacher collaboration through the utilization of mobile apps. Researchers need to make more explicit connections between the instructional principles and the design features of their mobile learning environment to better integrate theory with practice. In addition, this review noted that more substantial alignment is needed between the underlying theories and measured outcomes.

According to Shi, Luo, and He (2017), Mobile Assisted Language Learning can occur using 'WeChat' Instant Messaging. Therefore, this research concept was significantly influenced by this finding. Pimmer et al. (2014) emphasized how nurses and midwives in remote South Africa used mobile technology through inaccessible and resource-poor areas in informal learning contexts. Xue, Zhang, and Luo (2017) investigated the impact of mobile learning on students' academic performance and learning attitude. The results revealed that mobile learning could produce identical learning results to traditional classroom instruction. Nevertheless, students had a mixed attitude towards different aspects of mobile learning. The result of the survey indicates that offering mobile learning could be a method for improving the retention of students by enhancing teaching/learning effectiveness.

Research Design

During live cast sessions, a trainer or volunteer participates in the exercises in front of the camera. This allows online participants to follow the fitness exercises and to understand the instructor well via the headset and visual mode. Fifteen adult female learners, comprising the sample population for this study, were informed on-site that the class would take the form of a live webinar. In addition, live chats were used to help learners with technical problems.

The self-paced mobile-assisted learning modules, which include narration, animation, and assessment questions, provided five educational benefits: versatility, personalized learning, ease of access, interactivity, and affordability. Four mobile app modules were developed using fitness instruction materials, which required 10 to 15 minutes for completion by learners. The instructional activities were facilitated through mobile phones, thus enabling interactive education via 'Whatsapp' mobile app in remote focus groups locations.

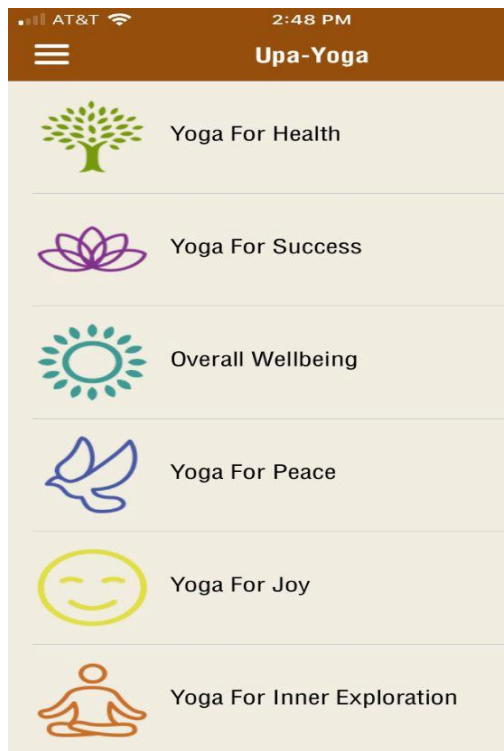


Figure 1. Mobile Assisted Learning Module **Figure 2.** Embedded Video in Mobile App

Participants utilized a yoga mat, a laptop equipped with a webcam, an audio recorder, and a high-speed internet connection. Each individual was responsible for positioning their video camera to enable the facilitator to

observe them as if they were in the same physical space. Furthermore, participants were instructed to mute their microphones while following the provided instructions.

Relevance to Organizational Leadership

This research, focused on student readiness, lays the rationale for accepting online and mobile technologies in virtual physical fitness training by educators, leaders, and fitness solution providers. The study employed a participative leadership style for this action research. The findings can serve as a reference point for future researchers, mobile developers, educators, practitioners, and policymakers for subsequent research endeavors. These findings proffer valuable contribution to the field of virtual digital learning and offer insights that can guide the design and development of yoga and fitness training interventions in a digital environment.

Data Collection

An open-ended questionnaire was designed using online resources for primary data collection. A total of 5 open-ended questions were distributed to the fifteen focus group participants through a survey website link in the 'Whatsapp' fitness group, which were returned for further evaluation. Information regarding the participants' age, medical condition, lifestyle, occupation, intention or purpose for attending the program, other sport skill or outdoor activities, and duration of association with yoga and fitness were obtained from the instructor's record book as a secondary data source. During online sessions, observations were conducted through individual structured interviews to gather relevant information. The consent for participation and usage of information in the research were obtained through the online platform. As an invited advisor and observer for the online fitness program by the Yoga and Fitness Studio, no additional permission was required to gather secondary data about the participants.

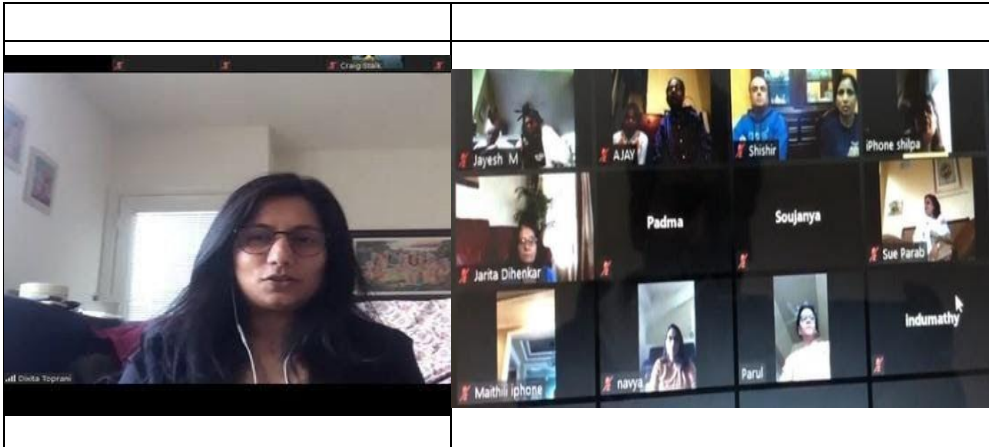


Figure 3. Participant Interview

Figure 4. Online Meeting With the Adult Learners

<p>3. With which mode of instruction delivery do you feel Mobile learning complement the best? (PICK ONE)</p> <p><input type="radio"/> Face-to-face</p> <p><input checked="" type="radio"/> Online Meeting</p> <p><input type="radio"/> Live Broadcast</p> <p><input type="radio"/> Blended</p> <p>Give valid reason (Limit: 100 Characters)</p> <p><input type="text"/></p>	<p>5. How satisfied are you with the virtual Yoga and fitness training program? (Pick ONE)</p> <p><input checked="" type="radio"/> Very satisfied</p> <p><input type="radio"/> Satisfied</p> <p><input type="radio"/> Dissatisfied</p> <p><input type="radio"/> Very dissatisfied</p> <p>Justify (Limit:100 Characters)</p> <p><input type="text"/></p>
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Figure 5. Sample Data Collected Through the Mobi-Site Link Circulated in ‘WhatsApp’ Fitness Group

Result Analysis and Discussion

Table 1 displays the questionnaire, while Figure 6 presents the results. The reasons for participants’ choices, captured through five open-ended questions, are stated as follows:

Table 1. *Open-Ended Questionnaire on Learner's Participation in Mobile and Online Fitness Training*

Questions	Response Categories				
	A	B	C	D	E
What is your main reason for joining the virtual yoga and fitness class?	Improve body, strength, and flexibility	Increase Well Being	Weight Management	Relaxation and Stress Relief	Career or Profession
What is your purpose of preference for switching to Online and M-Learning classes?	COVID-19	Distance & Time	Family Restrictions	Transportation Problem	More Economic
With which mode of instruction delivery do you feel mobile learning complement the best?	Face-to-face	Online Meeting	Webinar	Digital Medium	Blended
Did you face technical issues during the online class or virtual meeting?	Always	Usually	Sometime	Rarely	Never
How satisfied are you with the virtual yoga and fitness training program?	Very Satisfied	Satisfied	OK	Dissatisfied	Very Dissatisfied

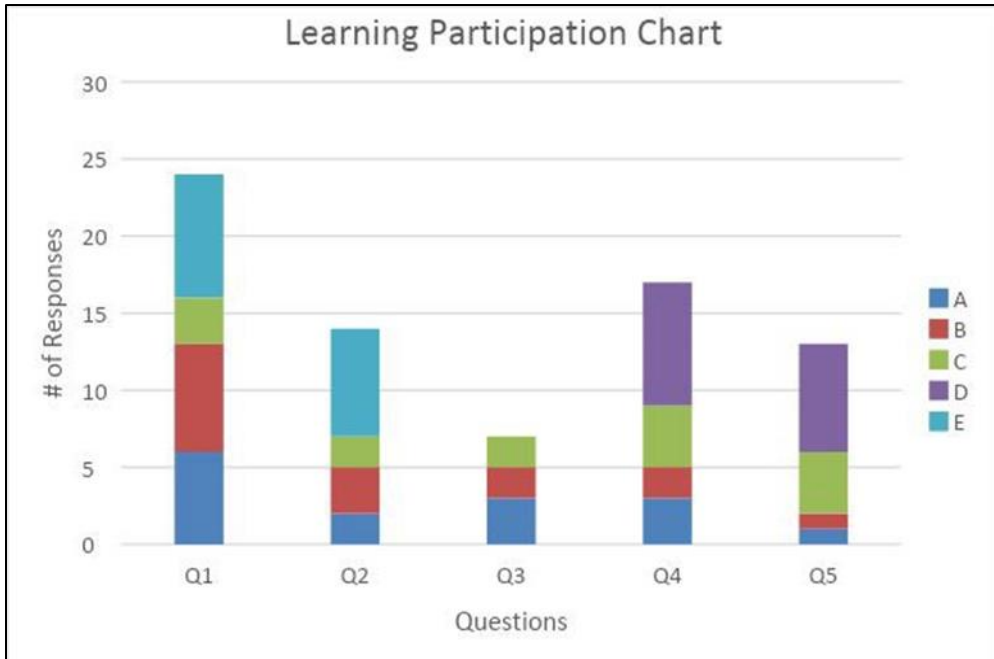


Figure 6. Results of the Questionnaire on Learner's Participation

During the structured interview and participant observation, participants were collectively asked to evaluate and suggest online and mobile-assisted learning improvements for their fitness training class. The subsequent group responses, recorded as fieldnotes to identify shared patterns, include the following:

1. The pace of the online meeting through Microsoft Team, Google Hangout, and Skype, coupled with micro-learning through mobile learning apps, was just right.
2. After attending this program, I feel online and mobile learning curricula for physical fitness classes should replace traditional face-to-face classes as it saves my time, money, and travel effort.
3. The interactive self-paced mobile learning app and daily themes posted on Facebook, Instagram, and other social media accounts motivated me for the forthcoming online workout session.
4. I attended the program the first time, and it changed my notion. Yoga and physical fitness had nothing to do with a person's spiritual or religious views.
5. The class live video chat and mobile conference with the instructor and other participants through the 'Whatsapp' group were helpful.
6. It is most likely that 'Online' instruction mode for the Yoga and Fitness Program can replace the traditional mode of face-to-face instruction post-COVID-19 as it makes life easy.

7. Despite not having a Smart TV, I could view the live cast by connecting my laptop to the TV using just an HDMI cable. I feel comfortable practicing the yoga exercises online without having to leave my baby to any creche.
8. It is said, “New and better digital technologies are being suppressed by people whose businesses would be challenged by them.” This Yoga and Fitness Studio proved it wrong.
9. Being an IT professional, I have had an extremely sedentary lifestyle for the last five years. However, the online and mobile yoga and fitness course improved my body strength and flexibility in just two weeks.
10. The online yoga and fitness program was relaxing and brought ultimate stress relief during COVID-19. As a doctor, I strongly recommend that all other doctors prescribe it.

Table 2. The Triangulation Matrix Depicts Below How Data Was Collected For Qualitative Analysis

Parameters	Data Source		
	Questionnaire	Interview	Observation
Improvement in learner’s perception		✓	✓
Improvement in participation	✓	✓	✓
Technical effectiveness in collaboration	✓	✓	
Improvement in ease of learning	✓	✓	✓
Enhanced portability		✓	✓

The study focused on participants with good physical health and without any medical conditions that could hinder their involvement in the online yoga and fitness program, due to time constraints. It was assumed that participants in the focus group consulted with a physician before engaging in yoga classes, fitness programs, or workshops led by a trained instructor. Many reported health issues such as obesity, thyroid problems, high blood pressure, colitis, knee joint, or back problems. The selection of participants for this study was constrained by budget and time considerations. Furthermore, the validity of the results relies on the responses provided by the participants.

Research Summary

The conducted research successfully achieved its objective by demonstrating that online fitness classes could enhance women's involvement in fitness activities. The study revealed that incorporating mobile learning (M-learning) further contributed to increasing the participation of adult females in online yoga and fitness classes. The required resources for this initiative included a three-week time frame, engagement with the fitness studio, and the

participation of fifteen adult females. However, further comprehensive research is required to explore the impact of technology in the classroom, with a particular focus on understanding how virtual classes enhance the role of teachers as media orchestrators and learning facilitators. In addition, the scope of this study could be expanded in the future to assess and compare the health benefits and improvements associated with various modes of instruction delivery for fitness training.

COVID-19 caused a significant pedagogical change in the instruction design of the fitness curriculum, which resulted in female learners accessing digital devices in place of traditional face-to-face fitness sessions. In the end, further research is required to explore how instructors can implement online exercises for women from various underprivileged communities.

Conflict of Interest: The authors reported no conflict of interest.

Data Availability: All of the data are included in the content of the paper.

Funding Statement: The authors did not obtain any funding for this research.

Declaration for Human Participants

The research conducted has been approved by the Delaware State University Institutional Review Board, and the principles of the Helsinki Declaration were followed.

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Does Investment Climate Matter for Firm Performance? Evidence from Kenyan Manufacturing Firms

Cyprian Amutabi

University of Nairobi, Kenya

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Abstract

The productivity of Kenyan manufacturing firms is way lower than that of many developed economies and has generally exhibited a consistent decline over the last decade. While this productivity trend has largely been attributed to the presence of a high distortionary institutional and business regulatory environment, existing studies on the role of the investment climate in determining firm performance are ostensibly scanty. This study, thus, employed the World Bank panel enterprise data for the period 2007-2013-2018 in assessing whether investment climate mattered for firm performance in Kenyan manufacturing firms. More particularly, the study sought to establish the role of the court system and property rights ownership in determining firm performance; a feat that remains unexplored in the Kenyan context. The random effects model was estimated while controlling for the year, industry, and firm-specific control variables. The findings revealed that while court inefficiencies significantly impeded labor productivity, property rights ownership significantly increased productivity. Further, human capital positively determines labor productivity. Concerning governance and institutional factors, ISO-certified firms were found to be significantly more productive. Conversely, business licenses and permits constrain firm productivity. Therefore, to ensure unrelenting firm productivity, speedy and just delivery of court rulings on firm-related matters is critical. Secondly, the acquisition of patents relating to product or process innovation by firms enhances product competitiveness. Thirdly, manufacturing firms should invest more in human capital. Finally, the imposition of favorable business licenses

and permits by the governments globally coupled with the ISO Certification requirement by firms is integral in optimizing labor productivity.

Keywords: Investment climate; labor productivity; manufacturing firms; Kenya

1. Introduction

The majority of the manufacturing firms in developing economies are characterized by a highly distortionary institutional and business regulatory environment as well as overreach by local government officials in their day-to-day interactions with firm managers. These factors negatively influence firm performance (Dollar et al., 2005). More predominantly, as pointed out by Dollar et al., (2005), a highly bureaucratic and corrupt government depicts low and uncertain returns on potential investments. Further, Qureshi and Te Velde (2012) observe that since transaction costs are associated with regulations, bureaucracy, and corruption, the diversion of resources from production would certainly ensue, something that yields significant implications on firm performance.

Investment climate has, thus, been identified as one of the prime determinants of firm performance in developing economies (Lu et al., 2013; Raj and Sen, 2017). Notable empirical studies from manufacturing firm surveys associate poor firm performance with bureaucracy, corruption, and institutional & business regulatory factors (Bigsten and Kimuyu, 2002; Meon and Sekkat, 2005; Hodge et al., 2011). This study, therefore, sought to examine the impact of investment climate on the performance of manufacturing firms in Kenya using the World Bank panel enterprise data for the periods 2007, 2013, and 2018. Broader indices of investment climate at the micro-level namely regulatory governance & institutional factors, human capital factors, and infrastructural-related variables are incorporated in this study. More principally and adding novelty to the literature, this study evaluates the role of property rights (patents in particular) and the court system in influencing firm productivity; a feat that remains unexplored in the Kenyan manufacturing context.

According to the World Bank (2020), Kenya ranks position 56 in the ease of doing business out of the 190 countries ranked globally. Even though this is an improvement over the 61st position recorded in 2019, it is not satisfactory. It potentially highlights the factor behind Kenya's low investment and subsequently lower manufacturing productivity output in recent years. More primarily, the share of contribution of the manufacturing sector to Kenya's Gross Domestic Product (GDP) has consistently waned over the last decade from the 11.26% recorded in 2010 to 7.54% in 2019 (World Bank, 2020). If the declining trend in this sector's contribution to Kenya's GDP

persists, then it will definitely undermine the government’s Big 4 Agenda priority prospect of increasing its share of manufacturing contribution to at least 15% of the GDP [Kenya Association of Manufacturers (KAM) and Kenya Business Guide (KBG), 2018]. Further, it will also hamper the realization of Kenya’s Vision 2030 prospect of becoming the leading regional (East and Central Africa) provider of basic manufactured goods by the year 2030 (Kenya Vision 2030, 2008). Given that the manufacturing sector plays a central role in the Kenyan economy by contributing to the GDP as well as creating employment opportunities, there is a need to enhance the business climate to harness optimal output from the sector. This will not only boost the GDP but also foster the continuity prospects of the manufacturing enterprises and more so to the Small and Medium-sized Enterprises (SMEs).

It is also noted that Kenya ranks poorly in the corruption perception index with the latest global ranking of 180 countries by Transparency International pitting Kenya at position 124. On a score scale of 0 to 100 where 0 signals highly corrupt and 100 very clean, Kenya scored a paltry 31 (Transparency International Kenya, 2020). Albeit this seems to be an improvement over the 137th position ranking obtained in 2019, the Kenyan corruption global ranking has been unimpressive over the last decade (see Table 1).

Table 1. Kenya’s Corruption Perception Index Ranking by the Transparency International

Year/Rank	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Global Rank: $\frac{x}{180}$	154	139	136	145	139	145	143	144	137	124
Score: $\frac{0}{100}$	22	27	27	25	25	26	28	27	28	31

Source: Transparency International Kenya (2020)

This ranking in Table 1 portrays an uncertain business environment and does not auger well for Kenya as it is likely to drive away potential foreign investments. As a result, domestic manufacturing firms are likely to miss out on the vital foreign capital inflows and human capital development which are critical to enhancing firm performance.

Despite the continuously rising inefficiencies stemming from the investment climate-related factors such as regulatory governance & institutional factors, human capital factors, and infrastructural-related factors, empirical evidence on the impact of investment climate on the manufacturing firms’ productivity in Kenya at the micro-level is limited. Most studies are macro-based as they tend to align investment climate to economic growth. Nevertheless, the few studies that attempt a micro-analysis i.e., Kimuyu (2007), focus only on corruption and bureaucracy while Bigsten et al., (2010) examine the manufacturing sector in Kenya from the descriptive analysis perspective. This study acknowledges that investment climate is a broader

term and encompasses many factors such as the quality of infrastructural facilities, human capital variables, and the institutional & regulatory governance factors. As such, this study incorporates some of the previously omitted investment climate variables. Furthermore, this study also analyzes the role of property rights and court inefficiencies in determining the firm-level productivity of Kenyan manufacturing firms.

Following the introduction, section 2 of this paper reviews the relevant literature while section 3 discusses the methodology and data used. Section 4 discusses the empirical findings and the last section 5 provides conclusions and policy recommendations.

2. Literature review

Investment climate encompasses numerous firm performance determining factors namely; human capital variables, governance & institutional factors, the quality of infrastructural facilities, finance-related factors, and the firm-specific control variables. This section reviews the relevant literature on those investment climate factors that are considered most astute in determining the productivity of manufacturing enterprises at the micro-level.

Regarding the human capital factors, the human capital theory of labor productivity finds employee training, the level of education, managerial experience, and Research and Development (R & D) as principal drivers of firm performance (Schultz, 1961; Becker, 1964; Mincer, 1974). Various empirical studies also support the theoretical findings. For instance, more educated employees and experienced managers are found to be significantly associated with increased firm performance in Kenya (Amutabi and Wambugu, 2020). Further, Goedhuys et al., (2008) found employees' work experience and formal training as significant and positive drivers of labor productivity among Tanzanian manufacturing firms.

In evaluating the role of R & D on firm performance, this study proxies the aforementioned variable with property rights ownership. According to Fernandes and Kraay (2007), institutional performance can be defined by two critical dimensions namely, property rights institutions and contracting institutions. They proceeded to show that property rights institutions mattered more for firm performance across countries compared to contracting institutions. According to Lu et al., (2013), property rights protection significantly increased the productivity of Chinese manufacturing firms. Yasar et al., (2011) further revealed that effective property rights significantly influenced firm competitiveness and performance. They posited that high-quality institutions are most likely to be Iso-certified; something that creates a market quality signal that enhances investment through building confidence and trust. In a related study, Goedhuys et al., (2008) associated

ISO certification with high firm productivity among Tanzanian enterprises. According to their study, ISO–Certification acts as a signal for product quality, thus, enabling firms to charge higher prices on their products.

Regulatory governance and institutional factors are found to be pivotal determinants of firm–level productivity. According to Bigsten et al., (2010), a conducive business environment is a prerequisite to optimal productivity. From an analysis of the 2007 World Bank Investment Climate Survey data, the study cited customs and trade regulations coupled with red tape as well as political instability as major constraints to firm performance in Kenya. Faruq et al., (2013) also pinpoint poor bureaucratic quality as an obstacle to firm performance as it reduces productivity by creating delays in shipments & approvals; taxes & licenses disbursements, and more so the time costs for managers engaged in paperwork and networking as well as waiting in lines.

According to a theoretical analysis provided by Batabyal and Yoo (2007), there are opportunity costs associated with poor bureaucratic quality. They argue that it does not only substantially decrease firm efficiency but also threatens the very existence of potential business start–ups and more so the small business entities. Furthermore, resource–shifting effects become inevitable since executive time and attention are channeled away from productive work toward developing and maintaining contacts and networks.

According to Nagler and Naude (2014), easy access to credit significantly increases firm productivity as it enables firms to expand their operations. Furthermore, firms that reported high tax rates coupled with administrative constraints as a major obstacle recorded a decline in their labor productivity levels (Amutabi and Wambugu, 2020; Maweje and Okumu, 2016). Hosny (2017) investigated the impact of political instability on firm performance using firm–level data across private firms in eight countries in the Middle East and North Africa. The study employed the Ordinary Least Squares (OLS) and an endogenous treatment linear regression model. The findings revealed the presence of a negative relationship between political instability and firm performance.

According to a study by Gaviria (2002), corruption and crime negatively impacted a firm’s sales growth in Latin America. In analyzing the link between corruption and firm productivity in African countries using firm–level data, McArthur and Teal (2002) found that firms in countries with rampant corruption were 70% less efficient compared to those firms in corruption–free countries. While assessing the impact of corruption on firm performance in Kenya, Kimuyu (2007) found an inverse relationship between the proportion of revenue reported for tax purposes and the proportion of annual sales spent on unofficial payments. In analyzing the effect of institutional quality on firm performance in India, Raj and Sen (2017) found that corruption mattered much more than other institutional variables. The

study, thus, suggested a redirection of government focus in addressing the corrupt practices at various government levels as opposed to focusing only on the measures of doing business.

In considering the infrastructural-related drivers of firm performance, Mensah (2016) and Amutabi and Wambugu (2020) found a significant and robust negative effect of power outages on the firm productivity level. Equally, insufficient water supply and internet connectivity problems were found to decrease labor productivity among the Kenyan manufacturing and service firms (Heshmati and Rashidghalam, 2018).

A vast array of literature also finds firm-specific control variables as significant in explaining firm productivity. According to Raj and Sen (2017), labor productivity increases with the size of the firm since large firms are much more capital-intensive than smaller firms. As a result, large firms enjoy the benefits of economies of scale. In evaluating the impact of legal status on firm performance, the same study found a significant reduction in labor productivity for sole proprietorship-owned firms compared to other jointly-owned business entities. According to Raj and Sen (2017), sole proprietorships have a limited capital or assets base and a diversified pool of skills and knowledge. As such, they are less productive compared to other jointly owned entities. Concerning firm location, Nagler and Naude (2014) found a decrease in labor productivity for those firms located in rural areas. This highlighted the significance of closeness to infrastructural amenities in increasing productivity. Regarding age, older firms tend to be significantly more productive than younger firms due to their first-mover advantage. This stems from learning-by-doing that arises from gained past vast experience (Escribano and Guasch, 2005). Moreover, export intensity is found to significantly and positively influence firm productivity. Exporting firms are normally associated with high levels of productivity compared to the purely domestically operating firms due to the accrued benefits of foreign revenue, capital, and technology inflows (Schwarzer, 2017).

The reviewed literature highlights the fundamental role of the investment climate in determining firm performance. While several factors have been empirically investigated at the global level, this study reiterates that investment climate is a broader term that encompasses many factors ranging from; human capital variables, governance & institutional factors, the quality of infrastructural facilities, and the control variables. As such, this study incorporates some of the previously omitted investment climate variables. More particularly, this study also analyzes the impact of property rights (patents in particular) and the court system in determining the performance of manufacturing firms in Kenya, a feat that remains unexplored in the Kenyan context.

3. Methodology

3.1 Data

This study employed panel data from World Bank enterprise surveys for the periods 2007, 2013, and 2018. A total of 2,439 firms were selected across the three waves using a stratified sampling technique. There were 1,265 manufacturing firms from this total sample. This data was collected from 11 regions in the country namely; Mombasa, Kilifi, Machakos, Kirinyaga, Kiambu, Trans Nzoia, Uasin Gishu, Nakuru, Kisumu, Nairobi, and the Central region. After data clean-up, 827 manufacturing firms were obtained for final analysis over the three waves. This data comprised survey questions related to demographics, investment climate, and the business environment in general. Most investment climate-related questions were perception-based in this survey data.

3.2 Model Specification

Theoretically, this study borrows heavily from the neoclassical production function which specifies labor, capital, and technological progress as crucial determinants of productivity (see Cobb and Douglas, 1928). This neoclassical theory of production is blended with the human capital theory which attributes productivity growth to human capital factors namely education level, managers' experience, formal training, and R & D (see Schultz, 1961; Becker, 1964; Mincer, 1974). In the model derivation, we first capture our main variables of interest which are the investment climate factors, and then augment them with the theoretically determined indicators of firm performance. A number of control variables are also integrated in the model to capture the unobserved time-varying firm characteristics.

In this study, firm performance is measured using labor productivity which relates to a firm's gross value-added per employee. The study sought to analyze the impact of investment climate on firm performance in Kenya. More specifically, it examines the impact of the court system inefficiencies and property rights ownership on firm performance. The labor productivity equation is thus expressed as follows:

$$\ln\left(\frac{Y}{L}\right)_{it} = \beta_0 + \beta_1(CSI)_{it} + \beta_2(PRT)_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (1)$$

Where $\left(\frac{Y}{L}\right)_{it}$ denotes labor productivity of firm i at time t while $(CSI)_{it}$ and $(PRT)_{it}$ refer to the court inefficiencies experienced and the property rights ownership of firm i at time t respectively. μ_i and ε_{it} are assumed to be random error terms.

These variables can be broadly defined as follows:

3.2.1 Labor productivity ($\frac{Y}{L}$): The firm’s gross value-added per employee, in Kenya Shillings (KES). Value-added relates to the total annual revenues of a firm less the cost of raw materials and intermediate inputs. The Labor productivity variable is expressed in a natural log and is the dependent variable.

3.2.2 Court system Inefficiencies (CSI): The degree of obstacle imposed by the court system inefficiencies on firm-level productivity. It’s binary i.e. 1 if a firm reported court system inefficiencies as a major obstacle to its operations and 0 otherwise. Due to the operational delays occasioned by court inefficiencies, it is expected to impact negatively labor productivity.

3.2.3 Property rights (PRT): Whether a manufacturing firm applied for a patent concerning any product or process innovation (1 if yes and 0 otherwise). It is used as a proxy for innovation. Patent ownership is expected to increase a firm’s labor productivity level by creating a market quality signal that enhances investment through building confidence and trust (Fernandes and Kraay, 2007; Yasar et al., 2011; Lu et al., 2013).

Since investment climate encompasses a broader perspective, this study also analyzes the impact of the human capital factors (**HCF**), governance & institutional factors (**GOVINST**), and the infrastructural-related factors (**INFR**) on firm performance. Equation (1) is, thus, augmented with the aforementioned variables as follows:

$$\ln\left(\frac{Y}{L}\right)_{it} = \beta_0 + \beta_1(CSI)_{it} + \beta_2(PRT)_{it} + \sum_{i=1}^m \beta_{i>1}(HCF)_{it} + \sum_{i=1}^m \beta_{i>1}(GOVINST)_{it} + \sum_{i=1}^m \beta_{i>1}(INFR)_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (2)$$

These variables can be broadly defined as follows:

3.2.4 Education: The average years of schooling of a permanent full-time production laborer. The more the years of schooling, the more knowledgeable, skillful, and experienced a laborer is, hence, the expected increased productivity level (Amutabi and Wambugu, 2020).

3.2.5 Formal Training: Whether a firm provides formal training programs for its laborers (1 if yes and 0 otherwise). Training enhances workers’ skills, knowledge, and expertise hence expected to positively influence productivity (Goedhuys et al., 2008).

3.2.6 Manager's experience: The years of experience of a firm's top manager. The more the years, the higher the expected productivity level (Amutabi and Wambugu, 2020).

3.2.7 ISO-certification: Whether an establishment has got an Internationally-Recognized Quality Certification (1 if yes, 0 otherwise). ISO-Certification is expected to positively influence labor productivity since it acts as a signal for product quality, thus, allowing firms to charge higher prices (Goedhuys et al., 2008).

3.2.8 Political instability: Whether a firm reported political instability as a major obstacle to its operations (1 if yes, 0 otherwise). Political instability creates uncertainty and panic in the business environment hence expected to deter investment and, subsequently, firm productivity levels (Hosny, 2017).

3.2.9 Corruption: The degree of constraint imposed by corruption on labor productivity. It's binary i.e., 1 if corruption was reported by a firm to be a major obstacle & 0 otherwise. Corruption is expected to impede firm performance as it creates a diversion of resources hence less or none of them are devoted towards productive firm investment (McArthur and Teal, 2002; Kimuyu, 2007; Raj and Sen, 2017).

3.2.10 Licenses and permits: Whether a firm reported business licenses and permits as a major obstacle to its operations (1 if yes; 0 otherwise). They are expected to constrain firm productivity (Bigsten et al., 2010).

3.2.11 Customs and trade regulations: The perception of the degree of constraint imposed by customs and trade regulations on labor productivity. It's binary i.e., 1 if a firm reports customs and trade regulations as a major obstacle and 0 otherwise. They are expected to negatively impact firm performance (Bigsten et al., 2010).

3.2.12 Tax administration: Whether a firm reported tax administration as a major obstacle to its performance (1 if yes; 0 otherwise). Tax administrative constraints are expected to constrain firm productivity (Batabyal and Yoo, 2007; Faruq et al., 2013; Mawejje and Okumu, 2016).

3.2.13 Finance obstacle: The degree of constraint imposed by limited access to credit on labor productivity (1 if major obstacle; 0 otherwise). Firms with easier access to credit facilities are significantly more productive (Nagler and Naude, 2014).

3.2.14 Power outages: The average duration of power outages experienced by a firm and is measured by the monthly duration of the outages in hours. Power outages serve as a negative shock to firms by constraining the productivity of factor inputs and consequently the production process hence expected to negatively influence labor productivity (Amutabi and Wambugu, 2020; Mensah, 2016).

3.2.15 Water shortages obstacle: Whether a firm experienced insufficient water supply for production over the last fiscal year (1 if yes; 0 otherwise). It's

expected to constrain the production process (Heshmati and Rashidghalam, 2018).

However, it is important to note that the econometric estimates obtained from equation (2) may suffer from endogeneity issues due to the presence of an unobserved firm characteristic—a third variable that may simultaneously affect the explanatory variables and labor productivity. As such, there is a need to explicitly control for the effects of this third variable. If not, the error term may absorb the impact of this variable hence resulting in the error term being correlated with the explanatory variables, thus, yielding inconsistent and biased estimates (Li, 2016). Therefore, to address the endogeneity problems, the year and industry–fixed effects are added to equation (2). This yields equation (3) which is then expressed as follows:

$$\ln\left(\frac{Y}{L}\right)_{it} = \beta_0 + \beta_1(CSI)_{it} + \beta_2(PRT)_{it} + \sum_{i=1}^m \beta_{i>1}(HCF)_{it} + \sum_{i=1}^m \beta_{i>1}(GOVINST)_{it} + \sum_{i=1}^m \beta_{i>1}(INFR)_{it} + YR_{it} + IND_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (3)$$

Where YR_{it} denotes the year–fixed effects while IND_{it} denotes the industry–fixed effects. The industry–fixed effects are also vital in controlling for unobserved heterogeneity, that is, productivity differences across various manufacturing sub–sectors.

However, it is still argued that the proposed fixed effects are only vital in controlling for the time–invariant firm characteristics. As such, the unobserved time–varying firm characteristics that simultaneously influence the investment climate and labor productivity variables may still suffice. Consequently, another approach entails including potential control variables that jointly affect the aforementioned variables and labor productivity (see equation 4).

$$\begin{aligned}
 & \ln\left(\frac{Y}{L}\right)_{it} \\
 &= \beta_0 + \beta_1(CSI)_{it} + \beta_2(PRT)_{it} + \sum_{i=1}^m \beta_{i>1}(HCF)_{it} \\
 &+ \sum_{i=1}^m \beta_{i>1}(GOVINST)_{it} + \sum_{i=1}^m \beta_{i>1}(INFR)_{it} + YR_{it} + IND_{it} \\
 &+ \sum_{i=1}^n \beta_{i>1}(CTRL)_{it} + \mu_i \\
 &+ \varepsilon_{it} \dots \dots \dots (4)
 \end{aligned}$$

Where *CTRL* represents the control variables which can be broadly defined as follows:

3.2.16 Export intensity: The ratio of exports to a firm’s total sales and is expressed as a percentage. Export intensity is expected to significantly and positively influence firm productivity due to the accrued benefits of foreign revenue, capital & technology inflows (Schwarzer, 2017).

3.2.17 Age of the firm: The number of years the firm has been operational since it began its operations. Older firms tend to be significantly more productive than younger firms due to their first-mover advantage and, consequently, gained past vast experience (Escribano and Guasch, 2005).

3.2.18 Firm size: The number of employees in a firm. It is categorical & coded as 1 for small firms (5–19 employees), 2 for medium-sized firms (20–99 employees), and 3 for large firms (100 or more employees). Productivity is expected to increase with the size of the firm since large firms are much more capital intensive than smaller firms. As a result, large firms enjoy the benefits of economies of scale (Raj and Sen, 2017).

3.2.19 Firm Location: The location of a firm’s operations and takes the value of 1 if a firm is located in Nairobi and 0 otherwise. Enterprises located in urban areas have got proximity to the market, infrastructural, and telecommunication amenities hence more productive than their rural counterparts (Nagler and Naude, 2014).

3.2.20 Firm ownership: Defines the legal status of the firm and takes the value of 1 if a firm is a sole proprietorship and 0 otherwise. Due to a limited capital or assets base and diversified pool of skills and knowledge, sole proprietorships are expected to be less productive when compared to other jointly owned entities (Raj and Sen, 2017).

The proposed approaches are potential remedies for dealing with endogeneity problems. Despite controlling for the year-fixed effects, industry fixed effects as well as unobserved time varying firm characteristics; the

residual endogeneity may still yield inconsistencies in productivity estimation (Li, 2016). Alternative methods namely, the Instrumental Variable (IV) approach and the dynamic models estimated by the Generalized Method of Moments (GMM) have been proposed in the literature to achieve the estimation consistency. These approaches were, however, not employed in this study due to data limitations and the presence of a vast array of investment climate factors in this study. Additionally, it should also be noted that using a great number of weak instruments may turn out to be counterproductive (Donald and Newey, 2001). Further, Li (2016) showed that despite the lack of a valid instrumental variable, the addition of fixed effects and control variables appeared to work efficiently.

3.3 Summary Statistics

This is presented in Table 2

Table 2. Summary Statistics of key variables (N=827)

Variable	Mean	Std. Dev.	Minimum	Maximum
Labor productivity	4095053	3.12e+07	3200	8.32e+08
Court inefficiencies	0.1378	0.3449	0	1
Property rights	0.0266	0.1610	0	1
Education	11.9444	1.5252	1	20
Formal training	0.4135	0.4928	0	1
Managers' experience	17.3470	11.0823	0	60
ISO-Certification	0.2455	0.4306	0	1
Political instability	0.2140	0.4104	0	1
Corruption	0.2152	0.4112	0	1
Licenses and permits	0.1391	0.3462	0	1
Customs and trade regulations	0.1560	0.3631	0	1
Tax administration	0.2164	0.4121	0	1
Finance obstacle	0.1802	0.3846	0	1
Power outages	6.1076	11.5810	0	224
Water shortages obstacle	0.3712	0.4834	0	1
Export intensity	11.0127	23.1635	0	100
Age of the firm	25.5187	17.7268	1	103
Firm size	1.9903	0.7857	1	3
Firm location	0.5236	0.4997	0	1
Firm ownership	0.1874	0.3905	0	1

Source: Stata Computation

Table 2 revealed that labor productivity in Kenyan manufacturing firms averaged 4095053 Kenya Shillings (KES) and varied within the intervals of KES. 3200 and KES. 832 million. The variable also exhibited a high standard deviation of 31200000. On average, 13.78% of the manufacturing

firms reported court inefficiencies as a major obstacle to their operations. Further, a paltry 2.66% of the firms applied for a patent concerning any product or process innovation. This low proportion is worrisome considering the fact that property rights ownership is a proxy for innovation and boosts the competitiveness of manufacturing products in both the local and international markets.

The years of schooling of a permanent full-time production employee for the Kenyan manufacturing firms averaged about 12 years with the least number reported at 1 and the maximum reported as 20. This implied that most laborers within this sector only possessed secondary school education qualifications. The variable had a dispersion of 1.5252. On average, 41.35% of the laborers were accorded formal training programs in a given fiscal year. This leaves a whopping 58.65% of untrained employees yet formal training is a requisite for increased productivity as it enhances workers' skills, knowledge, and expertise. The number of years of experience for the firm's top manager averaged about 17 years with the highest number reported as 60. The variable had a standard deviation of 11.082.

On average, 24.55% of the manufacturing firms possessed an Internationally-Recognized Quality Certification. Further, 21.40% of the firms reported political instability as a major obstacle to their productivity. On average, 21.52%, 13.91%, 15.60%, 21.64%, and 18.02% of the Kenyan manufacturing firms reported corruption, licenses & permits, customs & trade regulations, tax administration, and limited credit access as major obstacles to their productivity respectively.

Concerning the infrastructural-related factors, the average length of power outages in hours in a given fiscal year was reported as 6 hours. Power outages exhibited a spread of 11.5810 and varied within the intervals of 0 and 224 hours. On average, 37.12% of the firms reported water shortages as a major obstacle to their operations.

Regarding the control variables, the ratio of exports to a firm's total sales in Kenyan manufacturing firms averaged about 11.01%. The variable exhibited a standard deviation of 23.1635 around the mean value and varied within the intervals of 0 and 100%. The age of 13 manufacturing firms in Kenya averaged about 26 years with the youngest firm reported being 1 year old and the oldest reported to be 103 years old. The variable had a standard deviation of 17.7268. The firm size variable was defined as categorical will small firms treated as the benchmark category. On average, 52.36% of the manufacturing firms were located in Nairobi City which is the capital city; highlighting the significance of closeness to infrastructural amenities in the determination of a suitable location for a firm. Furthermore, an average of 18.74% of the manufacturing firms in Kenya were sole proprietorships. The rest were jointly owned entities.

3.4 Robustness Checks

The Hausman specification test was performed in determining the correct model to be estimated between the fixed effects and the random-effects model. The probability value of Chi-squared was found to be 0.4596 which is greater than the 0.05 level of significance. The null hypothesis was, thus, not rejected implying that the random-effects model was the most suitable model to be estimated in this study (see Table 3).

Table 3. Hausman Specification Test Results

Chi2 (36)	36.19
Prob>chi2	0.4596
Ho: Difference in coefficients not systematic	

Source: Stata computation

The correlation analysis was also conducted using the pairwise correlation matrix to determine the degree of association among the regressors. The low correlation values signaled the presence of a weak degree of correlation among the variables hence suggesting that multicollinearity was not a problem in this study (see Appendix Table A1).

4. Empirical findings

This study investigated the impact of investment climate factors on the labor productivity of Kenyan manufacturing firms by estimating a panel random-effects model. The findings are presented in Table 4.

Table 4. Labor Productivity Estimates

VARIABLES	Dependent variable lnLabor Productivity
Core variables	
Court inefficiencies	-0.300** (0.144)
Property rights	0.568* (0.305)
Human capital factors	
Education	-0.0461 (0.0313)
Formal training	0.215** (0.104)
Manager's experience	0.00998** (0.00483)
Regulatory governance & institutional factors	
ISO Certification	0.451*** (0.123)
Political instability	0.00201 (0.120)
Corruption	-0.165 (0.118)

Licenses and permits	-0.307**
	(0.139)
Customs & trade regulations	-0.0387
	(0.135)
Tax administration	0.0733
	(0.122)
Finance obstacle	-0.140
	(0.126)
Infrastructural factors	
Power outages	-0.000679
	(0.00411)
Water shortages obstacle	-0.156
	(0.102)
Year fixed effects	
2013	0.170
	(0.144)
2018	0.106
	(0.127)
Industry fixed effects	
Textiles	-0.282
	(0.189)
Garments	-0.333**
	(0.168)
Leather	-0.187
	(0.360)
Wood	-0.362
	(0.331)
Paper	-0.0891
	(0.363)
Publishing, printing & recorded media	-0.322
	(0.256)
Chemicals	0.265
	(0.198)
Plastics and rubber	-0.0443
	(0.229)
Non-metallic mineral products	0.492*
	(0.287)
Basic metals	1.460***
	(0.435)
Fabricated metal products	0.208
	(0.211)
Machinery and equipment	0.0474
	(0.298)
Electronics	1.193***
	(0.359)
Precision Instruments	1.265
	(1.344)
Transport machines	-0.265
	(0.273)
Furniture	-0.397*

	(0.207)
Recycling	1.594** (0.791)
Control variables	
Export intensity	0.000673 (0.00220)
Firm age	0.00285 (0.00307)
Firm size	
Medium	0.228* (0.122)
Large	0.326** (0.138)
Firm location	0.0128 (0.110)
Firm ownership	-0.405*** (0.133)
Constant	13.91*** (0.399)
Observations	827
Number of panelid	756

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: *The results in Table 4 provide the random effects model estimates. Potential endogeneity was controlled for by incorporating the year & industry fixed effects and the firm-specific control variables.*

The findings in Table 4 revealed that court system inefficiencies and property rights (patents) significantly determined the productivity of Kenyan manufacturing firms. Firms that reported court system inefficiencies as a major obstacle to their operations registered a significant decrease in their labor productivity. This is when compared to those firms which did not consider court inefficiencies as a barrier to their performance. Court inefficiencies; more particularly stemming from court orders and or injustices yield operational delays that negatively impact firm performance. Such orders may not only threaten potential business startups but also provide obstacles to the already thriving business entities. These findings suggest that optimizing firm performance requires enhanced efficiency of court operations in relation to justice and speed in the delivery of firm-related rulings.

Conversely, manufacturing firms that applied for a patent concerning any product or process innovation were found to be significantly more productive than the non-patent firms. Patent ownership acts as a proxy for innovation and is, thus, expected to increase a firm's labor productivity level. It creates a product market quality signal which enhances investment through

building confidence and trust. These findings are consistent with those by Fernandes and Kraay (2007), Yasar et al., (2011), and Lu et al., (2013) which also found a positive significant link between property rights ownership and the productivity of manufacturing firms.

Regarding the human capital factors, formal training and the managers' experience variables were found to significantly increase the productivity of Kenyan manufacturing firms. Firms that provided formal training programs for their permanent full-time employees were found to be significantly more productive than their non-training counterparts. Consistent with findings by Goedhuys et al., (2008) for the Tanzanian manufacturing firms, training enhances workers' skills, knowledge, and expertise hence expected to significantly increase firm productivity. Similarly, one more year of experience for the firm's top manager was found to be significantly associated with higher labor productivity. This is consistent with previous study findings by Amutabi and Wambugu (2020) for the Kenyan service firms which linked managerial experience to optimized labor productivity. This is primarily due to accumulated knowledge, expertise, and technical know-how that is often accompanied by vast experience in firm management.

Concerning the regulatory governance and institutional factors, ISO Certification and business licenses and permits significantly influenced firm performance. ISO Certified firms were found to be significantly more productive than their non-ISO Certified counterpart firms. ISO Certification acts as a signal for product quality, thus, allowing firms to charge higher prices on their products (Goedhuys et al., 2008). Conversely, manufacturing firms that reported business licenses and permits as a major obstacle to their operations registered a significant decline in their labor productivity. Too many or excessive business licensing and permit requirements may not only reduce the profitability prospects of a firm but also threaten its start-up prospects. As such, they are likely to constrain firm productivity (Bigsten et al., 2010).

Though insignificant, the infrastructural-related factors (power outages and water shortages obstacles) were found to constrain the productivity of Kenyan manufacturing firms. Regarding the control variables, we found the firm size and firm ownership to be significant drivers of firm performance. Both large and medium-sized firms were found to be significantly more productive than small firms. By considering the medium and large firms only, we found evidence of significantly higher productivity among the large firms when compared to the medium firms (by virtue of comparison of the magnitude of their respective coefficients). This is expected and supports findings by Raj and Sen (2017) which also found that productivity increased with the size of the firm. This is due to the fact that large firms are much more capital-intensive than medium and smaller firms.

As a result, large firms not only boast of a higher capital-to-labor ratio but also enjoy the benefits of economies of scale.

Furthermore, this study revealed the presence of considerable heterogeneity among Kenyan manufacturing firms. Labor productivity varied depending on the type of manufacturing firm. Labor productivity was found to be significant and positive for non-metallic mineral products, basic metals, electronics, and recycling manufacturing firms. Among these sectors, recycling firms registered the highest level of labor productivity closely followed by the basic metals manufacturing firms. Conversely, productivity levels were found to be significantly lower among the garments and furniture-producing firms.

Conclusion and policy implication

This study employed the World Bank panel enterprise data for the period 2007-2013-2018 in assessing whether investment climate mattered for firm performance in Kenyan manufacturing firms. More principally, the study sought to establish the role of the court system and property rights ownership in determining firm performance; a feat that is yet to be explored in the Kenyan context. The random effects model was estimated while controlling for the year, industry, and firm-specific control variables.

The study findings indicated that investment climate indeed mattered for firm performance among the Kenyan manufacturing firms. Whereas court inefficiencies were associated with a significant decline in labor productivity, property rights ownership significantly increased the labor productivity of Kenyan manufacturing firms. Due to the operational delays occasioned by court inefficiencies, this study recommended a speedy and just delivery of court rulings on firm-related matters as a way of ensuring progressive and continued firm productivity. With property rights ownership acting as a proxy to innovation, manufacturing firms are encouraged to acquire patents relating to product and or process innovation. This not only enhances firm investment through building confidence and trust but also creates a quality market signal for manufacturing output.

From a human capital factors perspective, formal training and managers' experience significantly increased labor productivity. This implied that manufacturing firms needed to invest more in human capital investment since it is a vital channel for optimizing firm performance. Concerning the regulatory governance and institutional factors, we concluded that while ISO Certification increased labor productivity, business licenses, and permits decreased the productivity of Kenyan manufacturing firms. Manufacturing firms, therefore, ought to acquire Internationally-Recognized Quality Certification requirements as a way of increasing the international competitiveness of their manufactured products. Further, the government

needs to provide a conducive business environment to firms by imposing favorable business licensing and permit requirements. This will not only enhance their survival prospects but also boost their profitability levels.

This study estimated the random effects model while controlling for the year-fixed effects, industry-fixed effects as well as unobserved time-varying firm characteristics to deal with the potential endogeneity problems. However, it is possible that the residual endogeneity issue may still yield inconsistencies in productivity estimation. We were unable to adopt the Instrumental Variable approach due to the lack of a valid instrumental variable and more importantly the presence of a vast array of investment climate factors in this study. Future studies should attempt at analyzing the labor productivity differences across different quantiles from the investment climate factors perspective.

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Data availability statement : The data used in this study is readily available upon request. Further, it can be accessed online from the World Bank Microdata portal through the link:

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Appendix

Table A1. Pairwise Correlation Matrix

Firm ownership					
Firm location					
Firm size					
Firm age					
Export intensity					
Water shortage					
Power outages					
Finance obstacle					
Tax admin					
Customs & trade					
Licenses & permits					
Corruption					
Political instability					
ISO Certified					
Managers experience					1
Formal training				1	0.0420
Education			1	-0.0402	-0.0077
Property rights		1	0.0060	0.1053	0.0633
Court system	1	-0.0225	-0.0222	0.0275	0.0419

						1
					1	0.0114
			1	0.0900	-0.2782	
		1	0.2330	-0.0699	-0.1949	
	1	0.1077	0.2708	-0.0874	-0.0950	
1	0.0630	-0.0133	0.1274	0.0414	-0.0548	
-0.0281	-0.0018	0.0972	0.0442	-0.0217	0.0014	
-0.0346	-0.0477	-0.0867	-0.0784	0.0629	0.0651	
0.0398	-0.0382	-0.0154	0.0177	0.0310	-0.0192	
0.0698	0.0265	0.0371	0.0435	0.0898	-0.0357	
0.0167	0.0043	-0.0702	-0.0040	0.0895	-0.0766	
0.0178	0.0401	-0.0404	-0.0123	0.0990	-0.0027	
-0.0653	-0.0415	0.0536	0.0027	-0.0512	0.0138	
0.0328	0.1779	0.2332	0.2110	-0.0185	-0.1299	
0.0322	0.0800	0.3811	0.1849	0.0292	-0.1138	
0.1324	0.1269	0.1582	0.2198	-0.0347	-0.1768	
0.0461	-0.0960	0.0391	0.0612	0.0923	0.0358	
0.0130	-0.0085	0.0753	0.1073	0.0373	-0.0024	
0.0703	0.1022	0.0746	0.1389	0.0865	-0.1291	
Water shortage	Export intensity	Firm age	Firm size	Firm location	Firm ownership	

Source: Compiled from Stata

Logiques Sociales du Deficit de Gouvernance Sanitaire des Produits Vivriers au Sein des Marchés Gouro d'Adjame Roxy et de Cocovico (Cote d'Ivoire)

Zamble Lou Tinan Paule Emile Bénédicte

Doctorante en-Institut d'Ethno-Sociologie

Université Félix Houphouët-Boigny Cocody-Abidjan, Côte d'Ivoire

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Résumé

Le présent article traite du déficit de gouvernance sanitaire des produits vivriers au sein des espaces sociaux de Roxy et de Cocovico en dépit des actions de salubrité et d'assainissement menées par les différentes coopératives et structures de gestion de ces espaces sociaux. Il apporte des éléments de réponse à la compréhension des logiques sociales liées à la gestion sanitaire de ces marchés. L'analyse des données a été réalisée à partir de la méthode d'analyse de contenu thématique. Cette méthode a été soutenue par la recherche documentaire, l'observation et les entretiens individuels et collectifs. La constitution de l'échantillonnage qualitatif s'est faite à travers l'utilisation de la méthode de choix raisonné. La gestion sanitaire de ces marchés met en lumière les acteurs (commerçantes, institutions coopératives et municipales) qui dans la défense de leurs intérêts économiques contradictoires s'opposent. Il ressort de ce travail que le déficit de gouvernance sanitaire de ces espaces sociaux s'explique par les contraintes sociales et les rapports sociaux entre commerçantes et institutions sociales.

Mots-clés : Logique sociale, Gouvernance sanitaire, Marché, rapport social, Contrainte sociale

Social Logistics of the Lack of Health Governance of Food Products within the Gouro Markets of Adjame Roxy and Cocovico (Ivory Coast)

Zamble Lou Tinan Paule Emile Bénédicte

Doctorante en-Institut d’Ethno-Sociologie

Université Félix Houphouët-Boigny Cocody-Abidjan, Côte d’Ivoire

Abstract

This article deals with the the lack of health governance within social spaces of Roxy and Cocovico despite the health and sanitation actions carried out by the various cooperatives and waste management structures of these social spaces. It provides elements of responses to the understanding of the social logics linked to the health management of these markets. This analysis was carried out using the thematic content analysis method. This method was supported by documentary research, observation and interviews. The health management of these markets highlights the actors (traders, cooperative and municipal institutions) who, in the defense of their contradictory economic interests, oppose. It emerges from this work that the lack of health governance of these social spaces is explained by the social constraints and the social relations between traders and social institutions.

Keywords: Social logic, Health governance, Market, Social report, Social constraint

Introduction

La nourriture est le premier bien de consommation servant à la satisfaction des besoins primaires de tout humain. La qualité de celle-ci est primordiale pour la santé des consommateurs. La sécurité sanitaire des aliments est primordiale pour la santé de l’homme et constitue un indice important pour évaluer la qualité de vie d’un pays et son niveau de développement économique (OMS et FAO, 2002 ; N’Doly, 2022). Les aliments constituent le premier élément de transmission des microorganismes lorsqu’ils ne sont pas sains. (Koffi-Nevry et Gohou, 2012). En Côte d’Ivoire, on assiste à une recrudescence de la toxi-infection alimentaire et à l’émergence de certaines maladies telles que la grippe aviaire, la fièvre aphteuse, les troubles digestifs et surtout le choléra (Tra et Konan, 2018). Depuis Janvier 2011, le pays connaît plusieurs épidémies de choléra. En septembre 2011, on dénombrait 933 cas de choléra dont 22 décès. La résurgence de ces maladies est due à l’insalubrité, et aux difficultés de gestion des pratiques

d'hygiène alimentaires phagocytant des facteurs de risques sanitaires (Rapport de politique nationale de santé, 2011). L'Etat de la Côte d'Ivoire a mis en place plusieurs institutions et mesures pour remédier et prévenir tout risque susceptible de nuire à la santé des consommateurs. A cet effet, plusieurs structures d'inspection sanitaire des aliments ont été mises en place à travers des Ministères et des laboratoires pour l'analyse de la qualité des aliments soumis à la consommation. En 2010, l'Etat a adopté un plan d'action national de sécurité sanitaire des aliments. Celui-ci consiste à définir des stratégies dont l'élaboration de lois, politiques et règlements, le renforcement des capacités et le renforcement du système de l'Information-Education-Communication. (PANSSA, 2010, p.98). En 2015, un comité national « Codex Alimentarius » est créé pour la mise en place d'une autorité compétente en charge de la coordination entre les différents acteurs du système de sécurité sanitaire des aliments auxquels l'on associe les produits vivriers. Considérée comme des denrées directement consommables et sans aucune transformation préalable, la commercialisation des produits vivriers est un maillon essentiel au développement économique de la Côte d'Ivoire (Dakouri et al, 2015). Elle participe à la création d'emplois et à l'amélioration des conditions de vie des populations, celle des acteurs (cultivateurs, transporteurs, commerçants, transformateurs) (Kouassi, 2020).

A Abidjan, les marchés Gouro sont spécialisés dans la commercialisation de ces différents produits et sont devenus d'importantes sources d'approvisionnement en denrées alimentaires pour les consommateurs (N'Doly, Op.cit.). Ce sont les sources de ravitaillement et de distribution des produits vivriers pour tous types de couches sociales. Ils occupent une place primordiale dans l'alimentation des populations, l'écoulement de la production. Au sein des marchés Gouro d'Abidjan, les produits vivriers représentent les produits les plus commercialisés et sont vendus dans un environnement insalubre. Ces différents marchés sont administrés par des coopératives. La principale coopérative de gestion de ces marchés est la Fédération Nationale des Coopératives de vivriers en Côte d'Ivoire (FENACOVICI). Elle a pour rôle d'être l'intermédiaire entre les coopératives de productions et les coopératives de commercialisations. Elle accompagne ces structures financièrement, afin de faciliter le transport des produits des acteurs. Cependant, il appartient à chaque marché Gouro d'assurer la propriété et l'hygiène de son marché.

Toutefois, en dépit des actions de salubrité et d'assainissement menées par les différentes coopératives et structures de gestion de ces espaces sociaux, on assiste à un déficit de la gouvernance sanitaire des marchés Gouro d'Adjamé Roxy et de Cocovico.

L'objectif de cet article est d'analyser les logiques sociales qui sous-tendent le déficit de gouvernance sanitaire des produits vivriers au sein des

marchés Gouro de Roxy et de Cocovico. De façon spécifique, il s'agit d'examiner les différents rapports sociaux ainsi que les contraintes sociales qui expliquent ce déficit d'hygiène de ces marchés.

Méthodes

Présentation des sites d'enquête

L'étude est circonscrite au sud de la Côte d'Ivoire, précisément dans la ville d'Abidjan. Nous avons voulu limiter l'étude dans les marchés Gouro de la commune d'Adjamé et de Cocody. Le marché Gouro de Roxy est situé dans la commune d'Adjamé dans le prolongement de la voie menant à la gare UTB. Le marché de Cocovico est situé dans la commune de Cocody au nord-est d'Abidjan indique le marché de quartier Cocovico au centre de la commune. Il est d'une superficie de 10 406 m², sis à Cocody Angré 8ème tranche, face à la cité BCEAO. Le choix des localités se justifie par le fait que ces espaces sociaux sont la matérialisation du déficit au niveau de la sécurité sanitaire des produits vivriers. Ces différents espaces sociaux sont représentatifs du phénomène de l'insécurité sanitaire des produits vivriers qui influence les différentes pratiques et perceptions des catégories sociales qui gravitent autour de ce phénomène social.

Carte : Identification des localités d'étude

Présentation du système de salubrité des marchés étudiés

Le marché Gouro d'Adjamé Roxy, il est géré par la COMAGOA-ROXY (Coopérative des marchés Gouros d'Adjamé Roxy). En effet, à la COMAGOA il existe des ressources humaines et matérielles à charge de la salubrité sur le marché qui sont gérées par le Directeur Général. A cet effet, en plus du service d'hygiène du marché qui ramasse les ordures, il existe une société privée de ramassage d'ordure qui nettoie et balaie le marché. Les agents privés de nettoyage passent dans les rangées entre les commerçants pour enlever la saleté entassée et ensuite l'acheminer vers le bac à ordure. Pour ce qui est de l'hygiène des aliments, les produits vivriers qui proviennent de l'intérieur du pays sont conservés à l'air libre et nettoyés par les détaillantes avant de les exposer. Cependant, la coopérative n'a jamais pris part à un programme de formation sur l'hygiène et sur la salubrité. Mais, elle demande aux vendeuses de rassembler les ordures à un lieu indiqué que les agents doivent passer ramasser.

Le marché Gouro de Cocody, quant à lui, est administré par la COCOVICO (coopérative des commerçants de produits vivriers de la commune de Cocody). Le marché est un marché de détaillant, les aliments proviennent de l'intérieur du pays, d'Adjamé et d'Abobo, et ils sont mis dans des bâchés ou taxi et sont ensuite exposés après avoir été nettoyés. Il n'existe pas de lieu de stockage des aliments. Elle est chargée de l'hygiène du marché.

En effet, la gestion des ordures est à la charge du service hygiène du marché. Ils sont organisés en trois sessions : les balayeurs, les ramasseurs, et les pousseurs. Le service d'hygiène du marché, aidé par les commerçants balaiant, entassent et ramassent les ordures pour les mettre dans des coffres (Wotro). Ces coffres sont acheminés vers les deux bacs déposés par la mairie à la demande du marché. La période de balayage n'est pas définie, mais le marché est balayé chaque jour sauf les dimanches. Une sensibilisation est faite auprès des commerçants pour qu'ils balayent et ramassent les ordures et les acheminent vers les bacs qui y sont destinés.

Collecte de données et échantillonnage

Cette étude est orientée vers des personnes ressources susceptibles de nous fournir des informations pertinentes. Ce sont entre autres les acteurs notamment les responsables des coopératives, les commerçantes, les consommateurs, les autorités municipales. En clair, il s'agit donc de choisir parmi cette population des acteurs clés. La constitution de l'échantillonnage qualitatif s'est faite à travers l'utilisation de la méthode dite non probabiliste. L'orientation socio-anthropologique de cette étude et la contrainte liée au fait que nous ne disposons pas d'une base de sondage, d'une liste exhaustive des individus composant la population ciblée, nous avons opté pour la technique de l'échantillonnage par choix raisonné. Ainsi, nous avons interrogé 32 acteurs répartis comme suit : membres de la coopérative 05 ; commerçants 15 ; institutions municipales 02 consommateurs 10.

Au niveau des outils de collecte des données, nous avons recours à la grille d'observation, la grille documentaire, le guide d'entretien et le questionnaire. Au niveau des techniques de collectes des données, la recherche documentaire, à l'observation directe, à l'entretien individuel et de groupe (focus groupe) ont été mobilisées. Les données collectées ont tourné autour des questions relatives à l'historique des différents marchés Gouro, à l'organisation sociale et fonctionnement des marchés ainsi que des coopératives ; aux infrastructures des marchés, à la commercialisation des produits vivriers ; la gestion de la salubrité des marchés ainsi que formation et la sensibilisation des catégories sociales. Au niveau des méthodes d'analyses, nous avons mobilisé la méthode systémique qui permet de définir les limites du système à étudier, situer le système dans son environnement, comprendre la nature et la raison des échanges que le système entretient avec son environnement. Ainsi que la méthode compréhensive qui a permis de découvrir la complexité des relations entre toutes ces catégories sociales et de comprendre les logiques qui motivent les pratiques de tous les acteurs qui gravitent autour du phénomène à l'étude.

Résultats

L'enquête de terrain a permis de dégager les résultats suivants :

Contraintes sociales du déficit de gouvernance sanitaire des produits vivriers

Forte pression démographique et occupation anarchique du marché

Les marchés de Roxy et de Cocovico connaissent une forte pression démographique due au flux massif des consommateurs qui affluent tous les jours des différents espaces de la ville d'Abidjan. Ces marchés, plus précisément celui de Roxy ne répond pas aux normes structurelles et les acteurs qui s'y retrouvent de façon journalière ont du mal à se frayer un chemin. Ces différents espaces sont exigus et la pression démographique des consommateurs crée une désorganisation de la structure de ces marchés. En plus de cette situation, on observe une occupation anarchique de la part des commerçants qui sortent pour s'installer aux abords du marché. Le discours recueilli auprès de C.L., consommateur et ménagère au marché de Roxy vient étayer nos propos en ces termes :

« Vous-même regardez, il n'y a même pas de place pour circuler, on se bouscule comme ça dans le marché. Ceux qui sont chargés de gérer le marché ne font rien également et nous les clients on se marche dessus et c'est comme ça à chaque fois. En tout cas depuis que moi je viens ici ça été toujours comme ça. Vivement que cela change. Et puis en plus les conditions sanitaires ne sont pas réunies... ».

L'occupation anarchique des marchés Gouro qui fait l'objet de cette étude, traduit le niveau d'intervention des gestionnaires du marché ainsi que des autorités municipales qui ont du mal à réguler ces espaces sociaux. Cette situation met en évidence un désordre institutionnel qui conduit à une dégradation progressive de ce cadre et de l'environnement. En effet, l'empiètement des commerçantes sur les passages piétons expose les aliments près des bennes à ordures au niveau du marché de Roxy. Nous observons également que l'idéologie de l'accessibilité est mobilisée tant par les commerçantes que par les consommateurs afin de justifier l'installation de ces acteurs en dehors des espaces qui leur sont réservés et ce au mépris des règles d'hygiène et des conditions insalubres dans lesquelles elles sont installées et pratiquent leurs activités commerciales.

Défaillance des infrastructures du marché

Les infrastructures d'accueil du marché de Roxy sont dans un état de délabrement et les différentes canalisations installées sont bouchées car, recouverte par les ordures ménagères. En cas de sinistre, il est quasiment difficile pour les secours de circuler dans le marché. Les infrastructures de ce marché ne répondent plus aux normes. L'absence de passage entre les étales crée un désagrément au niveau des consommateurs, qui pour la plupart

préfèrent rester aux abords du marché afin d'effectuer leurs différents achats. C'est dans cette même lancée que Z.C, cliente du marché de Roxy tient les propos suivants :

« A vrai dire là, le marché n'est pas en bonne état et on a du mal à se frayer un marché ; Moi quand je viens et qu'on fait la queue pour pouvoir entrer dans le marché parce qu'il n'y a pratiquement pas de passage, je me retourne et je fais mon marché aux abords avec les bennes à ordures à proximité ».

La vétusté des infrastructures, l'inadéquation des pratiques de certains acteurs dans la gestion sanitaire de ces marchés, conduisent des acteurs à mettre sur pieds des stratégies de contournement des différentes installations qui ne répondent plus aux normes de sécurité afin d'effectuer leurs activités en dehors du cadre légal. Les longues files d'attente afin d'accéder à l'intérieur et les désagréments en rapport avec cette situation telles que les frustrations et le manque de respect constituent une contrainte et sont autant de raisons qui démotivent les différents consommateurs à se diriger dans l'enceinte du marché et les poussent à effectuer leurs différentes courses à l'extérieur du marché. Comme nous le constatons, la vétusté des infrastructures au niveau de ces marchés crée des tensions entre les commerçantes et participe à la perte progressive de la clientèle au profit d'autres commerçantes. En choisissant de faire leurs achats aux abords des marchés, les consommateurs montrent leur appartenance et l'approbation aux commerçantes installés aux abords des marchés. Ce comportement expose les consommateurs ainsi que les produits vivriers commercialisés aux abords de ces marchés à des risques sanitaires du fait du cadre insalubre dans lequel est vendu ses produits.

Contrairement au marché de Roxy, celui de Cocovico construit il y a moins de 20 ans en 2008, quant à lui dispose des commodités et des normes réglementaires en matière d'infrastructures. Cependant, on observe le non-respect des mesures en matière de gestion sanitaire de la part de tous les acteurs en charge de cette pratique sociale. En effet, on a pu remarquer que les commerçants sont installés aux abords du marché, certains même ont élu domicile sur la voie menant à l'entrée du marché. Ils sont proches des bennes à ordures et s'accommodent avec cet environnement insalubre et cet avec l'aval des gestionnaires du marché. Au vue de ce constat, nous observons que la recherche de profit au détriment de la gestion environnementale est la priorité tant pour les commerçantes du marché que pour les gestionnaires de cet espace social. L'occupation de ces espaces en vue de rentabiliser le plus possible ces espaces qui sont hors du cadre social et légal du marché traduit une gestion affinitaire de la part des responsables du marché de Cocovico et qui exposent les commerçantes et les consommateurs à des risques sanitaires.

Après avoir relevé et analysé le niveau d'intervention des acteurs dans la gestion sanitaire des produits sanitaires, il est important à présent de faire

ressortir les insuffisances des actions de gestion des produits vivriers. Le second aspect de cette partie est consacré aux contraintes sociales du déficit de gouvernance sanitaire des produits vivriers au sein des marchés Gouro de Roxy et de Cocovico.

Irrégularité des ramassages et incapacité des autorités municipales dans la gestion sanitaire du marché

Au sein de ces différents marchés, l'administration de ces coopératives est celle qui intervient en premier lieu dans la gouvernance sanitaire de ces espaces. Face à l'impuissance de ces coopératives à réguler de façon efficace ces marchés, la présence des autorités municipales s'impose comme une évidence. Ainsi avant même l'intervention des autorités municipales, les activités de gestion des ordures et de salubrité sont coordonnées par l'administration de la coopérative.

En effet, elle représente le principal acteur pour ces activités. Elle est chargée d'action stratégique en matière d'intervention directe pour assurer la propriété, de veiller à la qualité de service offert aux usagers de ce site, de la planification des tâches. Cependant, nous observons une irrégularité dans le ramassage des ordures de la part des pré-collecteurs sous le regard des superviseurs. Cette situation se traduit par le non-respect du calendrier de ramassage, l'amateurisme dans les tâches de ramassage. Comme le confirme les propos de S.F. gestionnaire du marché de Cocovico :

« Les pré-collecteurs que nous avons engagé pour nettoyer le marché souvent ne font pas leur travail correctement et cela crée des désagréments pour tout le monde. On les a déjà avertis et nous sommes en train de voir car si ça persiste on peut mettre fin à notre collaboration car c'est nous qui les payons. ».

A travers ces propos, on constate que cette pratique de ramassage des ordures qui implique les femmes du marché, traduit l'impuissance de ces acteurs à réguler convenablement ces espaces. Elle constitue également une stratégie qui leur permet de trouver une alternative à l'incompétence des acteurs censés réguler cet espace social. Pour les gestionnaires du marché de Cocovico, cette institution bien qu'étant située dans un champ qui prône l'excellence en matière de salubrité urbaine, qui prône le modernisme se sent incompétent pour la résolution de cette problématique sanitaire. Elle fait appel aux autorités municipales.

Cependant, l'intervention des institutions municipales dans la régulation de la gouvernance sanitaire en rapport avec la gestion du marché ne va pas dans le sens de la régulation de cette problématique. En effet, la mairie a pour rôle essentiel de coordination, du contrôle des normes élaborées et du mode d'intervention des différents acteurs impliqués dans ce processus social. Elle perçoit les ordures sur le marché mais laisse la responsabilité du

ramassage de ces ordures à la coopérative. En effet il n'y a pas de participation active des acteurs de la marie dans les tâches assignées.

Face à la sollicitation des gestionnaires du marché, les autorités municipales renvoient la responsabilité de la gestion sanitaire du marché à ces acteurs. Ces acteurs quant à eux confient aux pré-collecteurs ainsi qu'aux femmes du marché la responsabilité de cette gouvernance sanitaire. Cette situation met en évidence des rapports conflictuels entre ces différentes institutions et des compromis satisfaisant pour toutes les parties. Les contestations sont de plus en plus récurrentes ce qui conduit à la lourdeur du processus de régulation sanitaire de ces différents espaces et de ce fait à la latence de ces tensions entre toutes ces catégories impliquées dans la gestion sanitaire. L'irrégularité des ramassages et incapacité des autorités municipales dans la gestion sanitaire du marché a-t-elle un lien avec l'insuffisance des formations des commerçants et la méconnaissance des mesures d'hygiène ?

Insuffisance des formations des commerçants et méconnaissance des mesures d'hygiène

Les institutions coopératives en charge de la gestion sanitaire des marchés de Roxy et de Cocovico dans le processus de gestion de ces espaces sociaux fonciers, ont le devoir de former leurs membres quant à la mise en œuvre de mesures efficaces dans l'entretien de leurs espaces. Dans le cas de ces marchés qui sont les points focaux de cette recherche, on constate la faiblesse, l'insuffisance des campagnes de formation des différents acteurs impliqués dans la gestion sanitaire de ces espaces sociaux. La coopérative de gestion du marché de Roxy demande aux vendeurs de rassembler les ordures à un lieu indiqué ou les agents doivent passer ramasser. Aussi, elle convoque les femmes souvent pour leur communiquer quelques règles d'hygiènes (sur la propreté du marché). Les commerçantes sont marginalisées dans ce processus social. Elles adoptent une prise de position qui s'entremêle à la remise en cause du peu de formation qui leur ait proposé. Cette pratique perturbe le processus de gestion sanitaire de ces marchés. Ces contestations et les remises en cause de ces formations fragilisent ces institutions coopératives dans la gouvernance sanitaire. De ce fait, ces institutions n'arrivent pas à trouver des réponses adéquates pour régler de façon définitive cette problématique. Cette prise de position de la part des commerçantes institutions de gestion foncière est soulignée par G.L. administrateur du marché de Roxy :

« Les organisations et certaines ONG dont je ne citerai pas le nom organisent des formations sur la propreté et l'hygiène des marchés auxquelles les responsables du marché que nous sommes sont invités. Et certains d'entre nous ne viennent pas car ils ont d'autres priorités est ce que tu vois. Nous sensibilisons nos femmes à respecter les règles d'hygiènes que nous avons apprises dans ces formations la FAO. Nous convoquons les femmes pour les

former selon les normes de propreté mais la plupart des femmes font le contraire de ce qu'on leur demande ».

A travers ce discours, nous retenons qu'il existe une différenciation au niveau de la formation des acteurs impliqués dans la gouvernance sanitaire des produits vivriers commercialisés dans ces marchés. Cette différenciation, symbolisée par la formation qui est délivrée uniquement aux gestionnaires des marchés et absente quand il s'agit des commerçantes constitue une entrave à la bonne marche de ce processus de formation. En outre, l'incompétence des gestionnaires de ces marchés dans la formation des commerçants se traduit notamment par la non prise en compte des besoins réels et des priorités des commerçantes.

En effet, ces commerçantes dans l'amélioration de leur condition de vie au détriment de la gouvernance sanitaire de leur espace social privilégient la recherche de profit et perçoivent ces formations comme étant en adéquation avec leurs objectifs. Cette pratique au niveau de la formation de ces différents acteurs participe à accroître les inégalités et les insuffisances au niveau de la gouvernance sanitaire de ces marchés. Un autre aspect vient rendre difficile l'efficacité de ces formations. L'analphabétisme de la plupart des commerçantes des marchés de Roxy et de Cocovico constitue une contrainte dans la mise en œuvre de politique efficace en matière de gestion sanitaire efficiente de ces institutions. L'adhésion et l'acceptation des commerçantes à ces formations, quand elles sont existantes sont conditionnées par ces valeurs socioéducatives que sont l'apprentissage à la lecture et à l'écriture. Ainsi, cette identité est mobilisée par ces commerçantes institutions pour maintenir leur position de retrait et de passivité par rapport aux politiques de formation dont elles sont la cible. Chaque acteur mobilise des stratégies afin de dominer le champ de leur rapport. Les commerçantes se sentent défavorisées de par leur analphabétisme et développent-elles même des mécanismes de gestion de leur espace. Cependant ces pratiques s'avèrent dans la plupart des cas inefficaces dans la mesure où elles les exposent ainsi que les consommateurs à des risques sanitaires.

Cependant, la persistance du déficit de gouvernance sanitaire des produits vivriers au sein des marchés Gouro de Roxy et de Cocovico met en évidence l'influence des rapports sociaux sur les pratiques des différentes catégories sociales.

Rapports sociaux entre catégories sociales dans la gouvernance sanitaire des produits vivriers

Rapports entre commerçantes et coopératives

Les rapports entre les commerçants et les coopératives permettent de comprendre les contraintes en rapport avec la gestion sanitaire des produits vivriers.

Rapport de marchandisation

Au sein des marchés de Roxy et de Cocovico, entre les acteurs des coopératives et les commerçantes, on observe une marchandisation au niveau des différentes pratiques sociales. La ressource économique est un enjeu principal pour tous ces acteurs. Dans le contexte actuel marqué par la cherté, les difficultés économiques des commerçantes et l'objectif de rentabilisation économique de l'espace recherché par les gestionnaires de ces marchés contraignent ces derniers à privilégier les rapports de clientélisme avec les différentes commerçantes.

Ce rapport de clientélisme est confirmé par les propos de G.R. jeune femme exerçant au marché de Roxy :

« Ceux qui gèrent le marché ici là, c'est l'argent qui les intéresse. Au lieu de chercher comment on va faire pour enlever les poubelles ici pour envoyer ça ailleurs pour ne plus que ça contamine nos produits avec ces mouches-là, eux c'est venir encaisser leur argent qui les intéresse. C'est pourquoi quand ils parlent de leur formation là on ne vient pas parce que ce n'est pas ça la solution... ».

Ce choix de ces acteurs, fondé sur l'abandon du respect des normes sanitaires afin de privilégier les rapports marchands symbolisé par la mise en location du trottoir de la part des responsables de la coopérative et ceux au sus des risques tant sécuritaire, environnemental et sanitaire encouru par les occupants de ces espaces. Dans l'accès à ces espaces, les commerçantes quant à elles, étant réduites au simple rôle de faire valoir, contournent les prérogatives de ce système et mettent en place leur propre mécanisme de gestion. Pour ces commerçantes, la marchandisation de ces rapports entre ces catégories sociales participe à la dégradation de leur rapport et explique la faiblesse du niveau d'intervention de ces institutions dans la gouvernance des marchés. Cette analyse présuppose le fait que dans une organisation le pouvoir n'est pas absolu et que les acteurs disposent d'une zone de liberté, ou ils peuvent accroître leur influence et réduire la marge de liberté de leur concurrent.

Les rapports de clientélisme à l'intérieur des marchés de Cocovico et de Roxy et ceux en négligeant la gestion sanitaire de ces espaces montrent ici, la vulnérabilité des institutions coopératives et des commerçantes dans la régulation sanitaire. Cette situation constitue un écart entre les discours et les pratiques de ces acteurs. Ces espaces, lieux de la préservation des intérêts de la collectivité au profit des intérêts individuels deviennent un espace où s'affrontent les catégories sociales pour le contrôle de la ressource économique. Le contrôle de la ressource économique entre les différents acteurs impliqués dans la gouvernance des marchés met en évidence une interdépendance entre ces acteurs.

Rapport de collaboration

Dans le fonctionnement des coopératives, les commerçantes ont une place importante à travers les différents projets dont elles sont la cible prioritaire. Grâce à ces commerçantes, les coopératives peuvent dynamiser le commerce des produits agro-alimentaires et défendre leurs intérêts en vue de contribuer à la sécurité alimentaire et à la réduction de la pauvreté. Elles sont les mères nourricières de la population. De ce fait, le système de gestion des coopératives accorde à ces commerçantes une valeur sociale indissociable à leur activité. Dans la gestion économique de la coopérative, les gestionnaires de ces institutions associent ces femmes dans la coordination des différentes activités économiques. Ce fait est mis en exergue par les propos d'un responsable de la Coop-Ca Cocovico en ces termes :

« Nous travaillons en étroite collaboration avec nos commerçantes. Comme j'ai l'habitude de le leur dire on est ensemble vous c'est nous et nous c'est vous. C'est à cause d'elles que nous sommes. Et nous travaillons pour elle, pour l'amélioration de leurs conditions de vie. C'est un partenariat gagnant-gagnant. Les projets que nous initiions afin de leur permettre d'être autonome financièrement, elles y participent entièrement et ont leurs mots à dire quand ce n'est pas bon ».

Dans le développement des projets à but lucratifs, nous observons l'interdépendance entre l'institution coopérative et les commerçantes. A cet effet, les commerçantes sont valorisées et la priorité leur est accordée. La réussite de ces différents projets nécessite, l'association de ces acteurs depuis la phase de conception jusqu'à la mise en œuvre des différentes activités économiques. En effet, dans la logique de recherche de profit à travers les activités commerciales le maintien des commerçantes sous le joug des coopératives est primordial car elles sont le moteur de ces différentes activités. Celles-ci mobilisent l'attachement aux mêmes habitus et le même mode de penser et d'action symbolisé par valeurs de fraternité, de solidarité et d'entraide. Cette relation est fondée sur l'idéologie de la solidarité et de l'amélioration des conditions de vie.

Cependant, quand il s'agit de la gestion sanitaire des espaces sociaux, ces rapports de complémentarité se transforment en des rapports de différenciation et de mise à l'écart des commerçantes. La captation de la ressource économique est une priorité pour les gestionnaires des différents marchés. Dans le processus de formation des commerçantes sur les normes sanitaires, on assiste à une infériorisation des commerçantes qui la plupart des cas sont analphabètes. Ce rapport social se traduit par un manque de responsabilité accordé à ces dernières qui sont marginalisées par les responsables qui les considèrent comme des incapables car n'étant pas en mesure de mettre de façon efficiente les mécanismes de gestion sanitaire. On observe une infantilisation des commerçantes par les gestionnaires du marché

qui répond au souci de les assujettir à travers la mise à l'écart de ces acteurs dans la gestion sanitaire de ces espaces dont ils ont la charge. Ce type de rapport ne permet pas de réguler de manière efficace ces espaces et ainsi permettre de faire régner une cohésion entre ces acteurs.

Les différents rapports sociaux entre ces acteurs mettent en ligne de mire les rapports de contestation entre ces catégories sociales.

Contestation de l'autorité du service de salubrité

Dans la gouvernance sanitaire des produits vivriers, le service de salubrité constitue la pierre angulaire de cette gestion. Cependant, l'autorité de cette institution est contestée par les commerçantes qui réclament beaucoup plus d'actions dans la gestion sanitaire des marchés. Ces contestations sont symbolisées par la remise en cause du système de gestion sanitaire à travers la régularité des ramassages des ordures, l'adaptation des formations des commerçants à leur réalité sociale. La remise en cause et l'effritement de l'autorité de cette institution est soutenue par I.G commerçante au marché de Roxy en ces termes :

« Nous sommes décourager d'eux et on n'a plus vraiment confiance. C'est parce qu'on ne sait pas où on va partir à cause de ça on est là. C'est ici que nos clients nous connaissent et c'est ici qu'ils aiment venir faire leur marché parce qu'on s'arrange. En tout cas ils ne font pas bien leur travail pourtant ils sont payés pour ça. A un moment donné aussi nous on perd des clients parce que je sais qu'il y a des clients qui ne viennent plus et moi je sais que c'est à cause de tout ça là ».

A l'analyse de ce discours, on constate que les différentes contestations du pouvoir du service sanitaire provoquent l'effritement de leur autorité en matière de gestion sanitaire. Ces institutions peinent à trouver une réponse institutionnelle capable de faire mettre un terme à la dégradation de l'environnement. L'effritement des rapports entre ces catégories sociales impliquées dans la gestion sanitaire des marchés participe à l'inversion de l'autorité en faveur des commerçantes qui face au refus des clients d'acheter leurs produits développent des mécanismes de nettoyage de leurs espaces. La remise en cause de l'autorité de ces institutions permet de redéfinir de nouvelles règles dans la gestion sanitaire de leur environnement menacée par les ordures.

Les rapports sociaux noués autour de la gouvernance sanitaire foncière ont mis en évidence la lutte entre la catégorie des commerçantes et des celles des coopératives pour l'accès, le contrôle et la gestion de l'espace. Ce rapport de force entre ces catégories sociales traduit la confrontation entre la logique de chaque acteur dans un contexte marqué par la marchandisation des rapports. Cependant, ces différents rapports autour de la gestion foncière ne nous permettent pas d'épuiser toutes les données relatives à la compréhension du phénomène d'étude. Il serait judicieux pour nous d'apporter un éclairage sur

les rapports sociaux entre les autorités municipales et tous les acteurs impliqués dans cette gestion sanitaire.

Rapports sociaux entre acteurs dans la gestion sanitaire des produits vivriers

Les logiques sociales qui expliquent le déficit de gouvernance sanitaire au sein des marchés Gouro de Roxy et de Cococvico trouvent leurs sources dans les rapports noués entre différentes institutions.

Rapport de rejet et de domination

L'intervention des agents de la mairie au sein du marché de Roxy crée des tensions entre agents de la mairie les commerçantes. Les agents de la mairie exercent un contrôle concernant l'occupation de l'espace par les commerçantes. Les commerçantes qui ne respectent pas les normes d'installations voient leurs commerces embarqués dans les véhicules de la mairie. Le rejet des commerçantes aux abords des marchés crée des tensions entre ces acteurs et la mairie. Cette situation constitue pour ces acteurs une perte de leurs activités commerciales et se sentent marginalisés par cette institution.

Ces différents rapports désorganisent la mise en œuvre de l'activité commerciale des femmes qui se sentent marginalisées dans les pratiques de la part de l'institution municipale. Ces pratiques observées dans la gestion de ces espaces par la mairie privilégient la collectivité, l'équilibre environnemental plutôt que la mise en avant des besoins économiques des commerçantes. Ce sentiment de rejet de ces commerçantes à travers leur déguerpissement vient désorganiser les fondements de leurs activités commerciales. En manque de repère géographique, ces femmes trouvent des arrangements avec d'autres commerçantes ou négocient leur position au sein des marchés auprès de certains agents de cette institution. B.M. une commerçante du marché de Roxy dans son discours fait l'état des lieux de la situation en ces termes :

« Les gens de la mairie nous fatiguent vraiment, ils nous fatiguent trop ici au marché. Toi-même tu as vu devant toi ils sont venus nous chasser et ramasser nos bagages pour mettre dans leur bâcher là. Toujours c'est comme ça. Quand ils ont besoin d'argent ils viennent ramasser nos affaires là comme ça on va donner l'argent pour aller récupérer. Nous on vient se débrouiller ici mais vous ne voulez pas ».

Cette rupture de rapport entre commerçantes et institution municipale participe au déficit sanitaire des produits vivriers ainsi que des marchés. Ces femmes construisent des stratégies sociales afin de recoloniser les espaces où elles ont été rejetées et ce, au détriment du respect des normes en matière de gouvernance sanitaire de ces différents espaces sociaux. Cette rupture entre commerçantes et institutions municipales, cadets et aînés a des conséquences sur la gestion sanitaire de ces espaces qui est perçue par cette catégorie sociale comme étant un espace de diffusion des inégalités sociales et économiques.

Dans cette lutte de pouvoir, chacun perd ses repères et les contacts se soldent par des oppositions rangées et la persistance des rapports conflictuels et le déficit de gestion sanitaire qui perturbent le champ environnemental.

C'est justement fidèle à cette situation qu'un des responsables de la mairie affirme :

« Ces femmes là on les chasse, mais elles finissent par revenir. On n'a pas un effectif conséquent et on doit gérer d'autres zones il y a beaucoup de marché dans la commune et puis c'est un groupuscule de femme. Nous sommes en train de réfléchir à une stratégie efficace afin de solutionner de façon définitive ce problème ».

Au-delà de ses propos, il est important de retenir que la course à la captation de ressources économiques, la pratique d'activités commerciales, la gouvernance des marchés suscitent des intérêts divergents entre les différentes catégories sociales. Ainsi, chaque acteur mobilise ses ressources, ses stratégies, son capital social pour réduire l'influence de l'autre dans une société où tous les acteurs aspirent à la valorisation de leur statut social et économique.

Rapport de défiance et de méfiance

Les marchés de Roxy et de Cocovico, situés dans la commune d'Abidjan, connaissent des difficultés dans la gouvernance sanitaire et ce, malgré la présence des autorités municipales, des institutions coopératives ainsi que des catégories sociales composées par les commerçantes. Dans ce contexte dominé par les rapports marchands, de concurrence, de domination autour de la gestion sanitaire, les autorités municipales tentent de préserver leur intérêt économique au détriment de l'aménagement et de la gestion efficiente des ordures qui jonchent ces marchés. L'objectif pour ces acteurs est de maintenir ce système traditionnel malgré l'état des lieux qui laisse à désirer pour la pratique des différentes activités commerciales. Cette situation est soutenue par E.K., une commerçante en ces termes :

« Les gens de la mairie ce qui les intéresse ce sont leurs tickets, leur taxe là. Ils passent pour nous donner des tickets et encaisser leur argent. Si on n'est en bonne santé à cause des ordures, ce n'est pas leur problème c'est l'argent seulement. Si nous même on ne fait pas ou si la coopérative ne paye pas quelqu'un pour venir ramasser ces ordures là ça reste là et on vend les aubergines, piment dedans. ».

Le système de gestion lucratif institué par la mairie à travers les pratiques économiques au détriment de la gestion sanitaire des espaces sociaux dont ils ont la charge est mis en œuvre à travers ce discours. Cette pratique constitue un obstacle à la rentabilité économique des commerçantes. Elle met en évidence la défiance des commerçantes à l'égard des institutions municipales qui se manifeste à travers le refus de payer les taxes et le

contournement des règles sanitaires de la part des commerçantes afin de réduire l'influence de la mairie. Comme l'illustre les propos recueillis auprès d'une commerçante du marché de Roxy :

« Ah Quand c'est comme ça nous on refuse payer leur ticket là parce qu'ils ne font rien ici même, ils ne font rien même les gens de la mairie. Quand c'est pour venir ramasser nos bagages pour avoir l'argent, là ils sont fort dedans. Mais quand c'est pour nettoyer le coin on ne les voit pas ».

L'analyse de ce discours montre les raisons qui expliquent le déficit de gouvernance dans ces espaces et la survenue des tensions entre ces différentes catégories sociales dans cette gestion. Les commerçantes veulent tirer profit de cette situation conflictuelle pour négocier leur présence dans ces espaces droit en remettant en cause les pratiques des institutions municipales. De cette défiance de l'autorité des institutions municipales règles, marquée par le refus de payer les taxes émergent le comportement opportuniste des commerçantes. Ces femmes pour marquer leur mécontentement du système de gestion sanitaire de la part des institutions municipales, vont à l'encontre de ces règles en boycottant les réunions et les rencontres en vue de structurer la gouvernance de ces espaces.

En outre, la défiance des commerçantes à l'égard des pratiques des agents de la mairie met en lumière la méfiance de cette catégorie sociale à l'égard des institutions de gouvernance.

Les rapports entre commerçantes et institutions municipales sont marqués par la crainte des commerçantes à l'égard de ces institutions. Cette crainte se traduit par le manque de confiance à l'égard de la mairie. En effet, cette institution est soupçonnée par les commerçantes jeunes d'entretenir des rapports privilégiés notamment des rapports de complicité avec les institutions coopératives au détriment des commerçantes. Les institutions municipales dans la gestion sanitaire des marchés ont perdu leur crédibilité à l'endroit des commerçantes. Pour ces commerçantes, ces institutions représentées comme des organisations qui ont pour rôle principale de parvenir à l'assujettissement et la soumission des commerçantes à leur système de gestion. Ce rapport observé dans la régulation sanitaire participe à la pérennisation des tensions entre ces catégories sociales. En effet, ces commerçantes évoquent les cas de corruption des différentes institutions et qui poussent ces acteurs à avoir un comportement déviant. Ces pratiques nous situent sur le rejet des institutions de gestion des espaces sociaux par les commerçantes qui représente une barrière idéologique à la gouvernance sanitaire des produits vivriers. En effet, ces commerçantes pour l'amélioration de leur niveau de vie et leur reconnaissance sociale au niveau de leurs activités commerciales mobilisent des stratégies pour inverser le rapport de force et bénéficier des mannes issues de cette gestion. Ce rapport de méfiance favorise la dégradation des relations

entre acteurs et institutions, fragilise la gestion sanitaire et participe au déficit de gouvernance sanitaire des produits vivriers.

Les rapports de défiance et de méfiance des cadets à l'égard des institutions municipales mettent en évidence l'opposition de logique entre ces catégories sociales.

Opposition entre logiques des acteurs

Les rapports conflictuels entre catégories sociales font intervenir différentes logiques en confrontation. Les commerçantes sont étirées entre gestion sanitaire et recherche de profit. A Cocovico, l'accès à l'espace social est structuré et hiérarchisé par les rapports de pouvoir. De ce fait, la gestion et l'occupation de l'espace de la part des commerçantes s'opposent à celle des institutions coopératives et municipales. Le système de gestion des différents marchés de la part des institutions municipales dans sa logique de privilégier la recherche de profit favorise les dissensions entre les catégories sociales. En effet, un dualisme s'observe dans les rapports sociaux. Cette contrainte qui empêche tous ces acteurs à une bonne gestion sanitaire des marchés favorise la mobilisation par ces acteurs des ressources pour contourner ces règles sanitaires. Cette situation est confirmée par un agent de la mairie de Roxy en ces termes :

« Les commerçantes ne respectent absolument rien ici, on passe des informations, on essaie de les former et informer afin qu'elles puissent bien entretenir le marché, mais rien elles ne veulent rien. Elles sont dans leur logique et font ce qui leur plait. A un moment donné, nous mairie on n'est obligée de les sanctionner parce qu'on doit montrer notre autorité. Si on veut bien regarder, chacun suit sa logique ».

A travers ce discours, on constate que la position de régulateur occupée par l'institution municipale régit par des règles défavorise les commerçantes dans l'accès aux espaces sociaux. Ces règles constituent une barrière pour les commerçantes qui manifestent le désir de prendre possession de ces espaces en dépit de l'environnement sanitaire insalubre. On assiste des lors à une complétion, une opposition au niveau des comportements et des logiques pour la captation des ressources car chaque acteur mobilisant ces stratégies pour réduire la marge de manœuvre. La confrontation entre logique des acteurs est structurée autour des rapports de pouvoir dominés par la logique économique.

Discussion

L'analyse des logiques sociales liée au déficit de gouvernance sanitaire des produits vivriers au sein des marchés Gouro de la COMAGOA et de COCOVICO montre que ces insuffisances observées dans la gestion sanitaire de ces espaces sociaux apparaissent comme des stratégies allant en contradiction avec les normes établies, dans le but de la satisfaction de leur intérêt personnel au détriment du groupe familial et de la protection de

l'environnement. Les commerçantes, à la recherche de profit et de satisfaction des besoins des consommateurs, négligent les règles d'hygiène afin de bénéficier de la visibilité de leurs produits. Pour cette catégorie sociale, ces espaces sociaux à travers la commercialisation des produits vivriers se présentent comme un moyen de réduction de leur vulnérabilité dans la mesure où ils leur permettent d'avoir des ressources économiques afin d'améliorer leur condition de vie.

Contraintes sociales liées à la gouvernance sanitaire des produits vivriers

La présente étude, nous a permis de mettre en exergue les pratiques qui favorisent le déficit dans la gestion sanitaire des produits vivriers commercialisés au sein des différents sites d'enquête. Analysée sous cet angle, l'étude situe notamment que l'intervention des pouvoirs locaux dans la régulation sanitaire de ces espaces conduit à l'irrégularité des ramassages et à l'incapacité des autorités municipales dans la gestion sanitaire du marché et à l'insuffisance des formations des commerçants et méconnaissance des mesures d'hygiène.

A cet effet, ces résultats vont dans le même sens que ceux de Kouadio (2021) qui, à travers son analyse de l'occupation anarchique des espaces urbain, montre que les commerçants du vivrier, grossistes et détaillants et les engins de transport de marchandises occupent l'espace urbain de façon désordonnée. Si les camions ont des lieux de stationnement fixes, il n'en est pas de même des motos taxis et des tricycles qui stationnent dans l'anarchie : sur les carrefours, en bordure de la voie principale, devant les supermarchés et aux abords des marchés pour attendre d'éventuels clients. Ainsi, la présence remarquée des vendeurs ambulants sur les gares routières traduit leur impatience à réaliser des bénéfices à la va vite, au mépris de la santé des acheteurs. Pressés, les voyageurs ne se rendent pas compte, bien souvent, de la mauvaise qualité des fruits qui leur sont vendus que longtemps après leur départ. Abordant la forte pression démographique et l'occupation anarchique des espaces sociaux qui constitue un frein au développement de ces espaces, Diabagaté et Konan (2018), soutiennent que la croissance spatiale de la ville de Bouaké est liée à une pression de l'évolution démographique de la ville. De nombreuses populations des zones rurales en quête d'une vie meilleure s'y installent également. Ces deux facteurs sont à l'origine de l'étalement urbain peu contrôlé et le développement de quartiers composés d'habitats sommaires, surpeuplés et non reliés aux réseaux d'eau potable et d'assainissement. De ce fait, la coordination des comités d'assainissement est la seule structure qui assure la pré-collecte des ordures ménagères à Bouaké.

La défaillance des infrastructures de gestion sanitaire des produits vivriers explique le déficit de gouvernance sanitaire des aliments. A cet effet, l'étude de Paulais (1998) confirme cette analyse. En effet, l'auteur souligne

l'importance du système d'approvisionnement des marchés urbains d'Afrique noire en montrant que les marchés de gros jouent un rôle central dans la chaîne de distribution des denrées. Cependant, dans de nombreuses villes d'Afrique subsaharienne à l'image du marché de gros « Dantokpa » de Cotonou, on note l'absence d'équipements spécialisés pour la conservation des produits, le manque de services d'entretiens et de conditionnement des produits. Cela a un impact sur l'approvisionnement des produits qui, conservés dans la promiscuité, ne tardent pas à se détériorer. Concernant les difficultés des producteurs dans la gestion des produits commercialisés dans les marchés, N'Doly (2022), explique que cette situation est due aux mauvaises conditions de transport des marchandises. En effet, du fait de moyens logistiques inadaptés (camions ou autres engins non spécialisés) à ces types d'activités, les commerçantes subissent des dommages en termes de pertes en gains financiers liées aux avaries ou détérioration des produits. La pratique de groupage des produits comporte des risques d'insécurité alimentaire dans la mesure où les circuits de distribution sont parcourus par les transporteurs dont le comportement laisse transparaître des doutes. Selon des détaillantes enquêtées, certains convoyeurs de marchandises sont de moralité douteuse car simulent des pertes de marchandises. En réalité, il s'agit de détournements de marchandises au préjudice des commerçantes. Plusieurs fois, certaines d'entre elles ont subi d'importantes pertes de marchandises les contraignant ainsi à abandonner leurs activités de commerce.

Rapports sociaux entre acteurs impliqués dans la gouvernance sanitaire

De ce point de vue, ces résultats de l'étude convergent avec les travaux de Harré (2001) qui font référence aux rapports conflictuels en dénonçant l'installation anarchique des commerçants au sein des marchés de gros d'Abobo et qui crée des tensions avec les autorités municipales de la commune. L'auteur affirme que la création de ces espaces est essentielle pour non seulement assurer la maîtrise des flux des denrées alimentaires provenant des différentes régions mais, surtout pour l'approvisionnement des marchés de quartier. Cependant, en poursuivant son analyse, il dénote que la plupart de ces sites de gros ont été créés de façon spontanée par des commerçantes grossistes en dehors de tout schéma directeur ou plan d'urbanisation des communes.

Dans la mise en évidence des rapports entre acteurs et institutions publiques, Villers (2005) met l'accent sur la fragilité des relations entre les producteurs d'aliments et les pouvoirs publics pour expliquer la faible sécurité sanitaire des aliments. Car pour elle, parvenir à garantir la sécurité sanitaire des aliments passe par la responsabilité des professionnels et celle des services de contrôle et leurs rôles doivent être clairement séparés. Premièrement en ce qui concerne les pouvoirs publics, la coordination et la collaboration entre trois

ministères en France dont les ministères en charge de l'agriculture, de la santé et de la consommation en est l'exemple. Pour ce faire les professionnels concernés et les représentants de la société civile (association de consommateur et environnemental) sont entendus par les ministres lors de l'élaboration des stratégies sanitaires des aliments.

Echui (2012) pense que le rapport de collaboration entre détaillants et transporteurs participe à la préservation de la qualité de l'hygiène des produits transportés dans la mesure où pour l'approvisionnement des marchés de quartier en denrées alimentaires, le transport constitue un maillon essentiel dans la chaîne de distribution. Appréhender l'organisation du transport des denrées suppose la mise en place d'une logistique opérationnelle et efficace. Celle-ci renvoie aux rapports qu'entretiennent les transporteurs avec les détaillantes. En effet, les premiers déploient les moyens à leur disposition pour assurer le convoyage des produits. Les secondes sont animées par le désir de voir transporter leurs marchandises dans des conditions optimales, sans que les produits ne subissent aucune dégradation.

Conclusion

L'étude a permis de mettre en relation les rapports et les pratiques à l'œuvre dans la gestion sanitaire des produits vivriers et qui justifient le déficit d'hygiène de ces espaces sociaux. Dans le contexte social de gestion sanitaire efficiente de ces espaces, les pratiques sociales développées par ces acteurs qui ne respectent pas les différentes normes en matière de gestion sanitaire participent à la dégradation de la qualité des produits vivriers. La recherche de profit au niveau des rapports entre ces acteurs au sein de ces marchés favorise des rapports de pouvoir, de domination, de concurrence entre différentes catégories sociales. La lutte pour l'accès, le contrôle et la gestion des marchés Gouro de Roxy et de Cocovico entre commerçantes et institutions coopératives et municipales suscite des conflits qui déstructurent les rapports entre ces différentes catégories sociales. Cependant, dans la gestion sanitaire de ces espaces sociaux, les institutions coopératives et municipales ont tendance à privilégier les ressources économiques à travers la légitimation des taxes au détriment de la gouvernance sanitaire. Cette pratique participe au déficit de gouvernance sanitaire des marchés Gouro de Roxy et de Cocovico. Ces différentes pratiques ont un impact sur la gestion sanitaire de ces espaces sociaux et participent à l'effritement des rapports entre ces différentes catégories sociales. Par conséquent, ces espaces deviennent l'objet de convoitise et de dispute qui est lié à des enjeux économiques dans un contexte marqué par la cherté de la vie.

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Firm Productivity and Matching Frictions in th Labor Markets: Is This an Unending Curse to Employers?

David Katuta Ndolo
Tufts University, USA
Victor Kidake Senelwa
World Bank

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Abstract

The productivity behavior of firms is significantly influenced by labor market frictions in both emerging and established economies. Kenya persistently advocates for enhanced strategies to bolster productivity. The precise impact of labor market friction remains ambiguous. This paper focuses on assessing the influence of qualification and skills mismatch on firm productivity within the context of Kenya. The study utilized secondary cross-sectional data obtained from the World Bank database, specifically from the 2016-2017 Skills Toward Employment Productivity (STEP) Household Survey conducted in Kenya. The full specification of the maximum likelihood model under the endogenous switching regression (ESR) was estimated. The results of the study indicate that insufficient education and a mismatch between skills and job requirements have a significantly negative impact on firm productivity. The impact of excessive education on firm production was found to be minimal. The essential finding regarding the marginal treatment effect, which holds significant implications for policymaking, indicates a strong positive association between over-education and firm productivity. A negative association is observed between education and skills mismatch and firm productivity. The policy implications underscore the necessity of aligning graduates with employment opportunities that correspond to their educational background and level of expertise.

Keywords: Firm productivity, labor market, friction, over-education, under-education, mismatch

Introduction

The discrepancy in cross-country labor productivity can be attributed to the allocation of skills, which accounts for a substantial portion of this difference. In addition, it has been found that the allocation of skills explains approximately 30-40 percent of the variation in aggregate labor productivity across countries, as reported by the OECD in 2013. Haltiwanger, Hyatt, and McEntarfer (2017) posit that individuals with higher levels of education exhibit a greater propensity to engage in employment with firms that demonstrate higher levels of productivity. Nevertheless, it is worth noting that individuals with higher levels of education are less inclined to be matched with firms characterized by low productivity. However, it is improbable for these individuals to disassociate themselves from such firms. Organizations employing workforce with lower levels of education exhibited a higher propensity to experience employee turnover during periods of expansion. There is also a greater likelihood of encountering challenges in maintaining upward mobility within the organizational hierarchy. According to Braconier et al. (2014), the presence of a higher percentage of employees with advanced education levels has a substantial positive impact on labor productivity. However, it is anticipated that the rate of growth in the accumulation of human capital will decrease. Braconier et al. (2014) asserts that the increasing economic significance of knowledge will lead to higher rewards for individuals with advanced skills. Consequently, this will result to a rise in income disparities within nations in the forthcoming years.

While examining the impact of skill and qualification mismatch on productivity, Allen and Van der Velden (2001) proposed that qualification and skill mismatch leads to low productivity and lack of efficiency in resource allocation. The more qualifications and skills are efficiently matched, the higher the increased productivity. Also, over-education is associated with the incentive to move to a job that better reflects one's education and skills. Subsequently, this reduces job satisfaction and job effort, thus leading to lower productivity (Green & Zhu, 2010). According to Quintini (2011), over-qualification diminishes satisfaction relative to those who are well-matched workers with the same level of qualification. However, he found that the effect is insignificantly relative to the perfectly matched workers in their jobs.

Educational attainment has a higher premium in the formal sector. This was revealed by Kenya's workforce, which exhibited a consistent pattern in the levels of technical skills among individuals with post-secondary training, both in formal and informal sectors. 51 percent of the formal employees and 40 percent of the informal employees had either a diploma or a certificate as

the highest level in training professionally. The earnings mismatch in the formal and informal sector are high. 74 percent of entry working in the formal sector earned between USD 100 to 500 per month, while 81 percent in the informal sector earn a monthly income between USD 50 to 250.

Consequently, employees in the informal sector, relative to their counterparts in the formal sector, are not only deprived of the right to earn a competitive wage, they are also subjected to employment insecurity, work insecurity, and social insecurity.

Studies carried out in the United Kingdom (Dolton & Silles, 2003) reveals that the existence of educational mismatch in over-education and over-educated workers have lower wage relative to the matched ones with the same educational attainment. In the views of Ra, Chin, and Liu (2015), wages are normally considered as an indirect measure of productivity and the value addition of human capital to the respective firms since an increase in wages implies higher productivity. Relatively, small wages imply that the supplied skills are of no economic value. This may be as a result of skills mismatch or the skills requirement fall short in the labor market. According to Hartog (2000), Werfhorst, and Mijs (2010), the return of education for the over-educated was approximately half to two-thirds compared to those who were well-matched.

Over-skilling and under-skilling are examples of skill mismatch (CEDEFOP, 2010). Over-skilled employees tend to usually incur a pay penalty in comparison to those who are well-matched in their employment (Quintini, 2011; Mavromaras et al., 2009). This implies that skill mismatch has a significant influence on income inequality. This is because there is a gap between the range of abilities needed and those that are financially rewarded. Workers that are under-qualified receive a greater salary and must draw on a wider range of their abilities to meet the demands of their jobs (Perry et al., 2014).

Labor Market Situation in Kenya

There has been a steady rise in the number of university graduates entering the Kenyan labor market. The overall labor force participation rate was 66.7%, which is an interesting number. At 90.6%, individuals between the ages of 40 and 44 had the greatest percentage, while those between the ages of 15 and 19 had the lowest rate (KNBS, 2019). Labor underutilization is defined in the study as gaps between labor supply and demand, thus indicating an unfulfilled demand for workers. The labor underutilization rate was 53.70 percent among young people aged 15 to 29 (Figure 1) and this represents a sizable fraction of the population. The overall unemployment and underemployment rate was 11.9%.

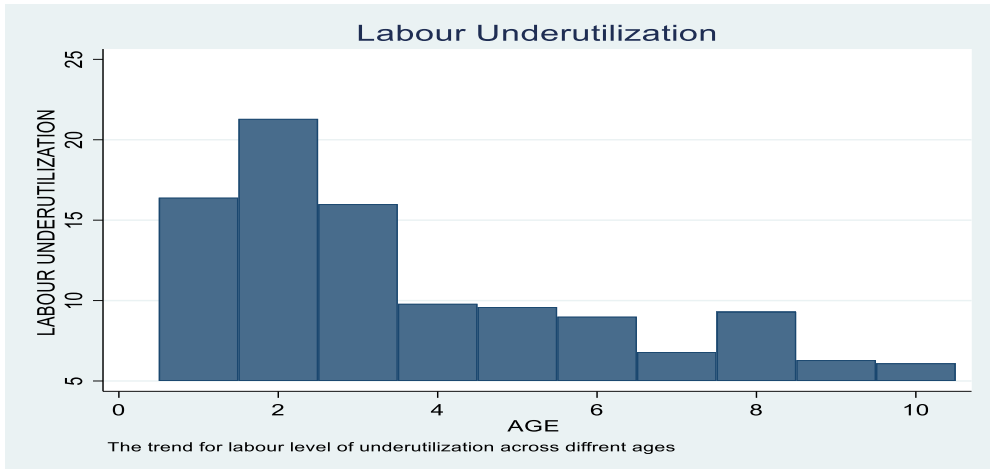


Figure 1. *Unemployment Time - Related Under Employment and Labor Underutilization by Age Cohorts*

Source: KNBS (2019)

According to the OECD (2013), between 30 and 40 percent of the variance in aggregate labor productivity may be attributed to differences in the distribution of skills between countries. In addition, research by Haltiwanger, Hyatt, and McEntarfer (2017) demonstrates that employees with higher levels of education tend to be hired by more successful businesses. Assessing the effective allocation of funds in education, as well as determining whether the investment has been excessive or insufficient, can be accomplished by examining the prevalence of over-education and under-education. Education has been at the center of development plans in Sub-Saharan African countries. Therefore, it is imperative for policymakers to have accurate information to make informed decisions. Surprisingly, over-education has been recorded in nations with educational rationing, such as South Africa (Pauw, Oosthuizen, & Van der Westhuizen, 2008), due to the opportunity cost of participation. For example, cross-country research (Erosa et al. 2010) shows a sizable income disparity in aggregate labor productivity levels between nations on opposing extremes of the wealth spectrum.

According to the human capital theory developed by Becker (1995) and Mincer (1974), earnings are directly proportional to an individual's level of education and work experience. On the other hand, Thurow's (1976) job rivalry model places greater emphasis on the demand side of the labor market. This suggests that productivity is attributable to the work itself, as opposed to individuals who possess more productive personal attributes. It is uncertain how transferable the findings from the literature on the correlation between mismatch and productivity are to other nations, especially to African setting which has its own set of economic challenges.

It is worth noting that a significant portion of research on skill mismatch has predominantly concentrated on developed nations. Furthermore, there is a relative scarcity of studies examining skill mismatch in developing countries, particularly in the African context. This study investigates the correlation between labor market mismatch frictions and firm productivity in the context of Kenya. Specifically, the focus is to identify the impact of qualification frictions in the workplace and how it affects firm productivity. Furthermore, this study examines the influence of the discrepancy between qualifications and skills on the productivity of firms.

Literature review

Human Capital Theory (HCT) posits that in a perfectly competitive market, wages serve as a reflection of the marginal productivity of workers. The skill mismatch is quantified by analyzing its impact on wages, as demonstrated in studies by Mavromaras and McGuinness (2012) and Levels et al. (2014). According to Romer (1989), the accumulation of human capital is identified as the fundamental driver of sustained economic growth. Allen and Van der Velden (2001) assert that the optimal allocation in the labor market occurs when there is a match between the skills and capabilities of workers and the skills desired by jobs. The demand for employees with high educational levels is increasing due to the need for general skills and multi-tasking capabilities (Robinson & Vecchi, 2008). In contrast to the findings of Sicherman and Galor (1990), Becker (1964) argued that wages are influenced by a worker's investment in education. Sicherman and Galor concluded that individuals voluntarily allocate a portion of their working career to firms. Although the direct return on schooling may be lower, the probability of promotion is higher. Additionally, Sicherman and Galor (1990) observed that promotion involves over-education, which is indirectly considered as the initial investment in human capital.

Duncan and Hoffman (1981) conducted research on the effects of over-education and concluded that, for a given employment, greater levels of education lead to better productivity and fixed salaries, especially for persons with over-skilled producing and earning similarly to those with less schooling in the particular field. Therefore, mismatches include over-education. Freeman (1976) argues that labor market theories have examined salary and skill mismatches, as well as the pattern of projected returns to schooling. Rather than being a function of the nature of the work itself, marginal productivity is determined by factors such as education, training, experience, and abilities (Mincer, 1974; Becker, 1975). Workers' inability to land jobs commensurate with their education levels is often attributable to a lack of human capital. However, including ability as an explanatory variable in education research has the potential to alter the typical results.

According to human capital theory, workers with lower levels of education tend to be less productive and consequently receive lower wages compared to workers with similar education levels in the same job. This, in turn, has an impact on the overall productivity of the firm. Green, McIntosh, and Vignoles (1999) found that workers with lower levels of education tend to earn less than their counterparts with similar job roles but higher levels of education. However, these under-educated workers still earn more than their peers who have similar education levels but are not matched to their job. Firms may assign individuals to positions for which they have insufficient education due to a scarcity of labor with the appropriate level of education.

According to Thurow (1975), the job competition model (JCM) suggests that being over-qualified for a job may not result in higher wages. However, having more qualifications can increase the chances of being selected for a job. In addition, it is important to note that wages are influenced by the specific requirements of a job and are determined by the production processes in place. This relationship between production processes and wage levels has been discussed by Duncan and Hoffman in their 1981 study. According to Thurow's (1975) perspective, educational investment by workers is seen as unproductive. Thurow argues that employees are primarily motivated by job requirements, which they perceive as rewarding. According to Mavromaras and McGuinness (2012), workers who possess higher levels of education than what is necessary for a particular job tend to receive higher compensation than what is typically expected for that job. In this scenario, over-education can be seen as a situation where there is a mismatch between an individual's level of education and the requirements of their job or occupation. From a different perspective, companies might choose to employ workers who are over-qualified if the cost of training is low and they demonstrate higher levels of productivity (Weiss, 1995).

Similarly, over-educated workers are paid less than their employed peers with similar levels of education, which can have a negative impact on a company's productivity (Chevalier, 2003). According to research by Chevalier (2003), over-educated graduates in the United Kingdom face a 14 percent salary penalty. Similarly, Leuven and Oosterbeek (2011) draw the conclusion that highly educated workers obtain a salary premium compatible with human capital theory in comparison to their less educated coworkers. This indicates that some of their investment in education is worthwhile.

McGowan and Andrews (2015) used two methods to investigate the connection between labor market mismatch and labor productivity. The first method examined qualification and skill mismatches separately by identifying the factors that contribute to each, and considering the overlap between the types of mismatches. Accordingly, under-qualification and under-skilling cause lower productivity within the affected firms due to the allocative

inefficiency associated with skills mismatch in the labor market. Although a higher level of qualification and skill mismatch can lead to lower labor productivity, this varies across the different types of mismatches. Given the greater potential for reducing mismatches in sectors with higher reallocation, this article fails to evaluate its direct influence on productivity.

Based on the dynamic system-GMM estimator developed by Blundell and Bond (1998), an empirical study of the role of skills mismatch was conducted by Mahy, Rycx, and Vermeylen (2015). It was found that over-education affects firm productivity positively, while under-education was associated negatively. This was contrary to their theory that highly educated people are less productive because they are dissatisfied with their jobs. Over-education had a favorable and substantial influence on productivity in any business context. However, the effect was bigger in companies that employed a higher proportion of highly qualified workers.

Fanti, Guarascio, and Tubiana (2021) found that the capacity to immediately match skills requirements was crucial to improving company efficiency in Spain by analyzing data from Turkish household surveys, which was conducted between 2004 and 2015. Skills matching was one element that contributed to Italian companies' productivity. Nonetheless, age, size, innovation, internationalization, and recruiting tactics were also important.

Turrell, Speigner, Djumalieva, Copple, and Thurgood (2018) conducted a study to examine the effects of mismatch on productivity and production in the UK. Their findings indicate that, despite operating in an output-optimizing counterfactual scenario with a negligible unemployment rate, the influence of mismatch on productivity and production is minimal and does not account for the observed productivity disparities. Hence, the observed trend may be attributed to the diversity present in the labor market. In the context of the United Kingdom, it has been observed that the phenomenon of mismatch is affected by factors such as regional or occupational productivity variations, market tightness, and matching efficiency.

Using firm and individual level data from Statistics Sweden from 1990-2013, Halvarsson and Tingvall (2017) found that over-education led to productivity improvements in firms that employed mismatched people in terms of productivity, earnings, and output. Reduced productivity can be directly linked to lack of knowledge. However, the potential dynamic impacts of educational mismatches were not investigated in this study. According to Reynolds et al. (2016), with GMM and a sample size of 23,052 establishment-year observations, the percentage of over-educated workers in a given establishment is 6.1%, while the percentage of under-educated workers is 10.0%. The study also found that the GMMs approach had a negative effect on the productivity of establishments with educationally mismatched employees, particularly those with many under-educated workers.

Using the Household, Income, and Labour Dynamics in Australia (HILDA) dataset, Mavromaras, McGuinness, O'Leary, Sloane, and Wei (2013) found that mismatch had no appreciable impact on occupational mobility. In addition, there was a significant pay penalty for those who were over-skilled and over-educated. Certainly, focusing on the negative impact on male workers' well-being and the elimination of this issue may have benefits for both businesses and employees. Sandulli, Baker, and López-Sánchez (2014) found that in a sample of Spanish companies with at least one employee and fewer than 250 employees working in services industries in IT firms, efficiency and productivity increased when employees had similar levels of education.

According to Andrews and Cingano (2014), there is evidence in the literature suggesting that skills mismatches have a significant impact on firm productivity. According to Wolbers (2003), the impact of labor market mismatch is influenced by various factors, including gender, educational level, and age. Job tenure in Europe has a negative impact on the likelihood of a job mismatch. Several studies have been conducted on the education mismatch and productivity in different regions such as Europe and the USA. However, there is limited research available on this topic, specifically in the African context (Yanikkaya et al., 2022; Mahy, Rycx, & Vermeulen, 2015). Given the dearth of research in developing countries, which has previously made it difficult to draw general conclusions due to the distinct economic dynamics between developed and developing nations, this study will serve as the basis for developing a policy framework and conducting further research in this field.

Methodology

The human capital theory proposes that different forms of input (Capital and Labor) may be combined to produce the same output (Y). The theoretical approach is grounded in Mueller's (1972) life cycle theory and the human capital theory. Both theories view education and skill set as inputs to the production process. During the early phases of growth, when labor market frictions are at their greatest, companies start with no employees and gradually begin employing both the jobless and the employed. The companies' goal during the recruiting process is to increase productivity. Researchers are inquisitive to identify how search and matching frictions affect business output. A basic open-economy model is presented in this research to test the hypothesis that the time and money spent on employing new employees reduces a company's production. The underlying question for researchers examines how search and matching frictions impact the firm's productivity. This paper presents a simple open-economy model, which hypothesizes that

firms incur costs in the hiring process. Nevertheless, delayed hiring process affects productivity.

The model starts by assuming that time is continuous and there is no aggregate improbability (Bilal et al., 2022). Labor markets follows a Poisson process where people learn of available jobs through searching. Employed persons contact firms at Poisson rates defined as γ_e . On the other hand, it is defined as γ_u for the unemployed person. Job matches outcomes is dependent on the effectiveness of the workers and the searching process of the firms, and the entire process exhibits constant returns to scale function. \bar{s} is defined as the exertion by the firms to get employees, and M is the measure of the firms. The rate at which employed and unemployed workers contact potential employers is defined as:

$$\gamma_i = \tilde{\gamma}_i \left(\frac{\bar{s}M}{\tilde{\gamma}_u\mu + \tilde{\gamma}_e(1-\mu)} \right) \quad \text{for } i = u, e \dots\dots\dots 1$$

Where $\tilde{\gamma}_u$ and $\tilde{\gamma}_e$ are the matching efficiencies of unemployed and employed. Higher values of $\tilde{\gamma}_u$ and $\tilde{\gamma}_e$ implies reduced unemployment rates or high rates of job-to-job transitions. Hence, a preferred stiff labor market is defined by reduced values of these parameters. The revenues of a firm in such a rigid labor market is defined as:

$$y = [(1 - \mu)y]^{1/\sigma} \dots\dots\dots 2$$

Where y is the income produced per employed worker. Generally, matching efficiencies increases firm productivity by increasing the income generated per worker.

Empirical Model

The objective of this study was to assess the influence of qualification and skills mismatch on firm productivity within the context of Kenya. Specifically, the study focused on investigating the impact of over-education, under-education, and education and skills mismatches on firm productivity. The following model was estimated:

$$Prod_i = \alpha_i + \beta_i Mismatch_{i,k} + \beta_i \delta + \varepsilon_i \dots\dots\dots 3$$

Where $Prod$ represents firm productivity and is expressed as the value added to the firm per worker. $Mismatch$ refers to the measures of qualification, including skill mismatch and their components, such as under-education, education, and skills mismatches. The δ represents other factors included in the model such as years of work experience, matched qualifications, and industrial sector.

The baseline regression relies on the OLS estimator, which is prone to heteroscedasticity and serial correlation issues that could lead to spurious

results (Aubert & Crépon, 2003). One further issue associated with the estimation of ordinary least squares (OLS) is the potential presence of endogeneity problems. According to Gautier et al. (2002), the phenomenon of endogeneity can arise when employers take advantage of cyclical downturns to enhance the skill level of their workforce. This assertion aligns with empirical research conducted by Cockx and Dejemeppe (2002) and Dolado et al. (2000), which indicate that the average duration of over-education within organizations may increase as a result of diminished labor productivity.

Arellano and Bover (1995) and Blundell and Bond (1998) proposed the utilization of Generalized Method of Moments (GMM) model estimates as a means to address various issues in research, including the study conducted by Dudek et al. (2016). In order to facilitate the process of model identification, the GMM estimators utilize instrumental variables. Nevertheless, Gaussian Mixture Models (GMM) exhibit a fundamental limitation in their ability to ascertain the most appropriate instruments for endogenous regressors (Chevalier, 2003).

In this context, the endogenous switching regression (ESR) approach was employed using a fully specified maximum likelihood model. This methodology effectively addresses the issues of endogeneity and sample selection bias, as discussed by Kirimi and Olunga (2013) and Shiferaw et al. (2014). In this particular model, the estimation process involves the assessment of two distinct selection equations. These equations pertain to firms that encounter frictions or mismatches, as well as firms that do not encounter such frictions or mismatches.

$$\text{Establishment 1 : } (Prod_1 | R_i = 1) = \alpha_1 \delta_i' + E(\varepsilon_1 | \mu_i) > -\gamma y \dots\dots\dots 4$$

$$\text{Establishment 2 : } (Prod_0 | R_i = 0) = \alpha_0 \delta_i' + E(\varepsilon_0 | \mu_i) \leq -\gamma y \dots\dots\dots 5$$

$Prod_1$ and $Prod_0$ are the firm's productivity, which varies depending on whether there are education and skills mismatches or not. δ_i' is a vector of explanatory variables that explain the firm's productivity. γ, α_1 , and α_0 are parameters to be estimated for the selection outcome with and without mismatches respectively. Three random errors are generated from the estimation method, namely: $\varepsilon_0, \varepsilon_1$ and μ_i .

Instrumental variables were generated for all the mismatches (education and skills) in order for the model to be identified. The variables generated are highly correlated with mismatches, but it is unlikely to influence the outcome variable directly with the unobserved errors. Based on this, the conditional expectation of the outcome variable is defined as:

$$E(Prod_1 | Y_i' R_i = 1) = \alpha_1 \delta_i' + \delta_{1u} \vartheta_1 \dots\dots\dots 6$$

$$E(Prod_0 | Y_i' R_i = 0) = \alpha_0 \delta_i' + \delta_{0u} \vartheta_0 \dots\dots\dots 7$$

Where ϑ_1 and ϑ_0 are the Inverse Millis Ratio generated from the outcome equations. The mean outcome variable resulting from the impact mismatches is estimated as:

$$E(Prod_1|Y_i' R_i = 1) - E(Prod_0|Y_i' R_i = 0) = Y_i'(\alpha_1 - \alpha_0) + \delta_{1u}\vartheta_1 - \delta_{0u}\vartheta_0 \dots\dots\dots 8$$

The second term on the left-hand side of Eq. (8) is the expected value of impact on the firm's productivity if the firm had not experienced mismatches.

Through the full specification, it was possible to assess the impact of mismatches, specifically for the treated and untreated populations. Accordingly, the treatment effect is estimated. This study adopted the methodology employed by Brave and Walstrum (2014) to calculate the marginal treatment effects (MTEs) of mismatches on productivity. A comparable methodology was employed by Carneiro, Heckman, and Carneiro et al. (2011) to assess the varying benefits of education for individuals who exhibited an increased propensity to pursue higher education. Through the MTE (Marginal Treatment Effect) approach, it is possible to quantify the extent to which an individual's productivity is affected by a slight variation in the propensity score. This is in conjunction with an additional alteration in mismatch. The study examines the impact of mismatch on productivity as the outcome variable, specifically for over-education, under-education, and education-skills mismatch.

The research utilized secondary data from Skills toward Employment Productivity (STEP) Household Survey (2016-2017) in Kenya, which was obtained from the World Bank database. The data used in this study was cross-sectional in nature. The measurement of mismatch is conducted by utilizing the International Standard Classification of Education (ISCED) to define qualification mismatch. This involves establishing a benchmark of qualifications that are deemed "appropriate" for a given job. Individuals who possess a qualification level that surpasses (falls short of) the benchmark corresponding to their highest qualification are categorized as over-qualified (under-qualified).

Table 1. Definition and Measurement of Variables

Variable	Definition and Measurement
Firm Productivity	This is defined as the ratio of sales in the latest fiscal year to the number of permanent full-time employees.
Over- Education	A binary variable defined as 1 if a person has a qualification level corresponding to their highest qualification (ISCED) above the benchmark and 0 otherwise.

Under -Education	A binary variable defined as 1 if a person has a qualification level corresponding to their highest qualification (ISCED) below the benchmark and 0 otherwise.
Education & Skills Mismatch	A binary variable defined as 1 if a person has a qualification level corresponding to their highest qualification (ISCED) in addition to having skills and vocational training above or below the benchmark and 0 otherwise.
Firm Size	This is a binary variable defined as 1 if the firm is large and 0 if the firm is small. A firm is considered large if it has more than 5 permanently employed workers and zero otherwise
Working Experience	This is a binary measurement. Individuals with over 3 years of experience are considered proficient, while others are less experienced.

Empirical findings and discussions

The dataset presented encompasses comprehensive information pertaining to both the demand and supply dynamics within the labor market. The demand side of the analysis places emphasis on factors such as firm productivity and firm size. However, the supply side takes into account labor market frictions such as over-education, under-education, and the mismatch between education and skills. The analysis incorporates working experience as a control variable. Only a small proportion, specifically 3 percent, of the graduating cohort met the criteria for being classified as experienced, which required having a minimum of 3 years professional work experience. The findings indicate that 54.8 percent of the employees surveyed possessed educational qualifications that exceeded the minimum requirements for their current positions. Conversely, 25.1 percent of the employees were found to have educational qualifications that fell below the minimum requirements. Furthermore, it was found that 11.9 percent of the employees exhibited a disparity between their educational qualifications and the skill set demanded by their respective positions as indicated in Table 2. In aggregate, the interviewed firms exhibited a productivity rate of 11 percent. The skewness shows the distribution of the data in relation to the normal distribution, with -1 and +1 showing extreme levels of distribution. Kurtosis measures how tailed the distribution of a variable is in relation to the normal distribution with a kurtosis of 3. The rule of thumb indicates that any distribution with kurtosis value greater than +2 is considered to be more tailed.

Table 2. Descriptive Statistics

Variable	Mean	SD	Skewness	Kurtosis
Firm Productivity	11.3799	1.4070	-0.9671	2.9203
Firm Size	0.1644	0.3706	1.8114	4.2811
Working Experience	0.0336	0.1803	5.1730	27.7600
Over-Education	0.5488	0.4977	-0.1961	1.0385
Under-Education	0.2509	0.4336	1.1492	2.3206
Education & Skills Mismatch	0.1186	0.3234	2.3586	6.5632

Source: Author computation (2023)

Semi-Parametric ESR Model Results- Treatment Effect of Mismatches on Productivity

To mitigate the concerns related to endogeneity, the endogenous switching regression model was employed to estimate the impact of mismatches on productivity across various measures. Subsequently, the treatment effects were computed. Heckman and Vytlačil (2005) introduced the notion of policy-relevant treatment effects, which refers to the average effect on the outcome of interest due to a transition from the baseline policy to an alternative policy.

Specifically, Table 3 displays the estimations of the Local Average Treatment effects by examining the variations in these effects across various levels of firm productivity. Based on the findings, the marginal policy-relevant treatment effect for over-education exhibited a positive trend. On the other hand, a negative trend was identified for under-education, education, and skills mismatches,. These findings suggest that an excessive level of education among employees led to a significant increase in firm productivity, thereby amounting to 33.2 percent. Conversely, lack of education and skills, as well as mismatches between education and skills, resulted in decrease in firm productivity, with reductions of 0.9 percent and 19.3 percent, respectively. The findings align with the conclusions made by Vandeplas and Thum-Thysen (2019), who reported a rising trend in skills shortages and over-qualification within the European Union. They also highlighted the negative correlation between job mismatches and productivity in labor markets, as well as the positive relationship between skills supply and productivity. According to Mahy, Rycx, and Vermeyleen (2015), there is a notable and positive correlation between the level of education required for a job and firm productivity. Specifically, an increase in the level of over-education, where employees possess qualifications exceeding the requirements of their positions, enhances firm productivity. Conversely, a decrease in the level of education, resulting in under-education among employees, diminishes firm productivity.

Table 3. Semi-Parametric ESR Model Results- Treatment Effect

	Over- Education	Under- Education	Education & Skills Mismatch
	Firm Productivity	Firm Productivity	Firm Productivity
Average Treatment Effect	-12.25*** (5.090)	5.772*** (0.892)	40.82*** (4.745)
Treatment on the Treated	-26.33 (28.48)	-7.375*** (0.502)	-40.11*** (3.609)
Treatment on the Untreated	84.85** (27.91)	10.17*** (1.317)	51.73*** (5.836)
Local Average Treatment Effect/ IV	38.26*** (6.109)	-3.910*** (0.140)	-8.680*** (0.857)
Marginal Policy-Relevant Treatment Effect	33.22*** (4.322)	-0.894** (0.328)	-19.32*** (1.625)
Observations	3894	3894	3894

Figures 2, 3, and 4 present the estimated Marginal Treatment Effects (MTEs) of over-education, under-education, as well as education and skills mismatches, respectively. These figures illustrate a declining trend in the estimated MTEs.

Figure 2. Estimated MTE for Over- Education

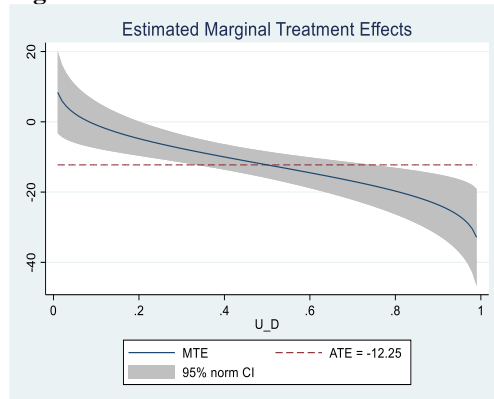
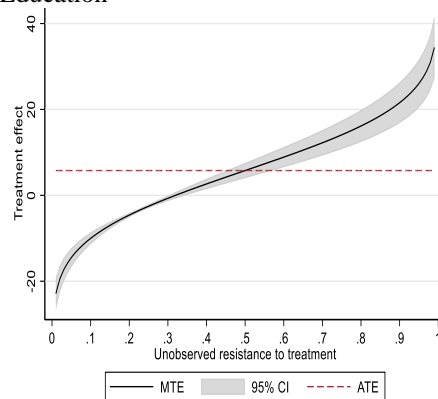


Figure 3. Estimated MTE for Under-Education



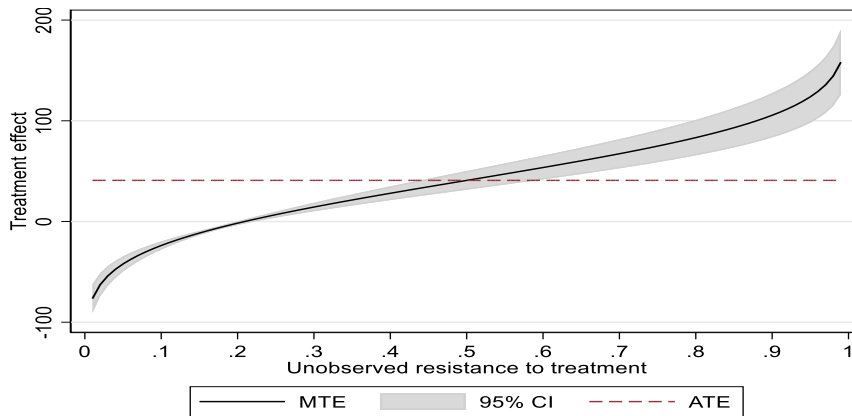


Figure 4. Estimated MTE for Education & Skills Mismatch

Figure 2 implies that people are more likely to boost production through greater marginal productivity when their degrees of over-education increases. Figure 3 shows that marginal productivity and the propensity to boost productivity declines as people's levels of education fall below the norm. Figure 4 demonstrates that the marginal production associated with education and skills mismatch fall as the mismatch grows. As a result, people are less likely to make efforts to boost productivity under these conditions. The findings from the endogenous switching regression model indicate that there is a significant positive relationship between over-education among employees and firm productivity. The estimate of the marginal policy-relevant treatment effects indicates a significant positive correlation between over-education and firm productivity, with a notable increase of 33.2 percent. On the other hand, it was discovered that under-education and mismatches between educational attainment and skill requirements had an adverse effect on firm productivity, leading to a reduction of 0.9 percent and 19.3 percent, respectively. The adverse consequences arising from insufficient education and the mismatch between education/skills underscore the need to address disparities in education and employment, which ultimately lead to decreased productivity.

Conclusion, gap, and policy implication

This study uniquely showed how skills mismatches affect firm productivity using STEP Skill data from 2016-2017. This data set was used to show that labor market frictions due to under-education, over-education, and skill-mismatch significantly impact firm productivity. In Table 2, the treatment provides significant evidence that over-education positively increases firm productivity in Kenya. Consequently, it is evident that as Kenyans climb their academic ladder, they become more knowledgeable. This

implies improved productivity and higher pay as indicated by the treatment effect of 33.22, which is significant at 5 percent. Halvarsson and Tingwall (2017) assert that over-education led to productivity improvements in firms that employed mismatched people in the dimensions of productivity, earnings, and output.

Under-education, relative to the job requirement, significantly reduces the firm's productivity in Kenyan labor market, with a treatment effect of 0.894 at 5 percent significant level. According to McGowan and Andrews (2015), under-qualification and under-skilling causes lower productivity within the affected firms due to the allocative inefficiency associated with skills mismatch in the labor market. Subsequently, a higher level of qualification and skill mismatch leads to lower labor productivity. However, this varies across the different types of mismatches. Given the greater potential for reducing mismatches in sectors with higher reallocation, this article fails to evaluate its direct influence on productivity.

Skills mismatch, which allowed workers to engage in jobs without relevant skills, created labor market disequilibrium. This resulted to a significant decline in the firm productivity by 19.32 at 5 percent. When workers are not paired with jobs that match their skills, they are less productive in those jobs. This could be due to the level of incompetence. Fanti et al. (2021) establishes that skills matching contributed to Italian companies' productivity as well as other factors such as age, size, innovation, internationalization, and recruiting tactics. On the contrary, Turrell et al. (2018) established that mismatch was affected in the UK by factors such as regional or occupational productivity variations, market tightness, and matching efficiency.

As earlier mentioned in the review section, studies and conclusions in developed economies cannot be generalized in developing economies such as Kenya. Thus, like an incurable curse in the labor market, employers' endeavor to match employees with the right jobs so as to optimize their productivity and achieve their profit maximization goal. Therefore, it is important to empirically investigate labor market frictions in Kenya's labor market. This study, however, provided insights about Kenya's labor market frictions.

The results of the analysis indicate that policy interventions, which enhance the congruity between employment opportunities and individuals' skills and education, has the capacity to augment firm productivity and tackle labor market difficulties in developing nations. These challenges arise due to substantial barriers to efficient labor matching in such contexts. It is imperative to acknowledge that this study has limitations in terms of comprehensiveness. In other words, there are additional variables that exert influence on fluctuations in firm productivity such as financial frictions and socio-economic factors.

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Social Networking and Misinformation Challenges: Moroccan Students in Tertiary Education as a Case Study

Mohamed El Kandoussi

Moulay Ismail University (ESTM), Meknès, Morocco

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Abstract

This paper focuses on examining how Moroccan university students approach the various social networking sites, including their self-perceived capacities to critically analyze and evaluate digital content in general and online news and information more specifically. The paper poses several research questions that all aim to investigate the issue under examination. This empirical endeavor used the survey as a research instrument to gather data, and presented a number of conclusions and recommendations for the Moroccan policy makers, stakeholders, and all concerned parties. The study further reported that most respondents advance by critically evaluating social media content and largely deploying various efficient verification measures and techniques. In the same vein, the majority of respondents highly rated their digital media perceived self-efficacy. Almost two thirds of the participants postulate that higher educational institutions should incorporate digital literacy skills in their curricula and syllabi.

Keywords: Moroccan, Social, Media, Digital, Literacy, University

Introduction

Amongst the most valuable merits of social media that have almost entirely revolutionized contemporary lifestyles and molded daily practices is their ability to usher in novel communication patterns, reinvigorate interpersonal and intimate spaces, and allow for unrestricted modes of social,

economic, and civic expressions. According to Kaplan and Blakley (2009), the public sphere is conquering more terrain, thus becoming less confined and more dynamic. Nonetheless, this presumably alluring and tantalizing landscape is often lamented by many sceptics who vehemently contend that the deluge of information flow on social networking sites (SNS) poses genuine ethical, intellectual, sociocultural, educational, and political challenges. Several scholars have shown that the abundance of online information has made it even harder for users, including the more talented and skilled ones, to discern genuine content from fake and deceptive news and information (Ott et al., 2011; Rizana et al., 2023).

Certainly, many studies have demonstrated that this complexity stems from multiple sources, including the difficulty to access reliable and credible sources of information, the lack of strong state media outlets, and the deployment of sophisticated technological procedures and advanced techniques by false news producers (Kumar & Shah, 2018; Wei et al., 2023). According to Martens et al. (2018), about two thirds of news seekers feed on social media sites and channels to get informed about the latest events and current issues. Hence, fake reports, news stories, and reviews seem to have pervaded almost all domains, ranging from political, social, and economic spheres to environmental and health areas. Disinformation generates confusion and instability which in turn weakens popular faith in mainstream media outlets and all social media platforms. As of 2017, the traffic of fake news on social media had reached the high rate of 42% (Gallup, Edelman, Alexa, 2017, as cited in Pesonen, 2018). This further makes the issue of misinformation and disinformation a thorny multidisciplinary sociological phenomenon that require thorough reflections to gauge its multi-levelled dimensions and far-reaching implications. The main objective of this study is to explore how Moroccan students with tertiary education level approach the various social networking sites, including their self-perceived capacities to critically analyze and evaluate digital content in general and online news and information more specifically. The paper equally seeks to reflect and share insights on an increasingly complex socio-technical problem pertaining to the generation, propagation, and management of disinformation.

Rationale, Significance, and Literature Review

At the outset, it is important to note that the terms “disinformation and misinformation” are sometimes used interchangeably. Although they are closely related, they are conceptually different in constructs. According to Tucker et al. (2018), disinformation subsumes all “knowingly” false or incorrect information such as fake news and rumors. On the other hand, misinformation refers to the sharing and propagation of false news and information “either knowing it to be false or unknowingly”. Drawing on the

definition proposed by Allcott and Gentzkow (2017), fake news includes “news articles that are intentionally and verifiably false and could mislead readers.”

As stated earlier, social media platforms are the main source for the trafficking of fake and misleading information. According to Meel and Vishwakarma (2020), the rate of fabricated news, rumors, and unverified content on those sites has reached alarming rates. This phenomenon has triggered tremendous worries for both media scholars and government stakeholders to probe the far-reaching causes and effects of this hitherto global ethical ‘epidemic’. Cardoso et al. (2016) mentions that in today’s networked societies, “the people are the message, not the media.” Therefore, following the eruption of mobile devices and information superhighways, a euphoric optimism prevailed amongst political analysts and academics of an imminent global democratization, including a free flow of access to information. However, Tucker et al. (2018) posits that “there is now widespread concern in many segments of society, including the media, scholars, the philanthropic community, civil society, and even politicians, indicating that social media may be undermining democracy”. Just like most countries in the world, Morocco has been a fertile soil for the spread and propagation of fake stories and erroneous news which have had devastating repercussions at various levels, ranging from social, economic, political, and technological spheres.

Certainly, the current Moroccan sociopolitical scenery does create a favorable environment for the spread of fake news. The proliferation of innumerable social media websites makes it harder for the average person to sift valid and reliable information from erroneous and misleading media platforms. Furthermore, the large illiteracy rate in Morocco renders such large audiences more vulnerable to consuming unverified information in a fast way due to the absence of media literacy skills, such as using fact-checking sources. The Moroccan sociopolitical environment is also characterized by a mosaic of political parties and ideological orientations that all strive to deploy SNS to leverage their political agendas and maneuver economic and societal changes. Such polarization is clearly manifested during political campaigns, family code amendments, and language planning strategy.

The dissemination of some pictures and rigged footages on social media that primarily aim to disrupt social and political serenity are reminiscent of old propagandistic tactics whose sole aim is to destabilize Moroccan institutions and spur public unrest and riots. One such infamous case was the spread of a fake video, few years ago, of a dog ‘breastfeeding’ a little baby in chilly and snowy weather in one of the regions of the Atlas Mountains. Countless ‘gullible’ Moroccan social media users had also widely shared pictures of presumably Moroccan police forces torturing protestors, illegal

immigrants taking deadly ferry boats, or fabricated dubbed footages ascribed to top Moroccan officials.

Several months after the outbreak of the COVID-19 pandemic, the proliferation of fake news had seen an unprecedented surge. During the lock down period mandated by the Moroccan government, Moroccan users on social media were shelled with relentless, incessant, and often conflicting narratives about various issues revolving around the Corona virus genesis and origin. Others promulgated messages about supposedly efficient healing treatments and magical recipes to avert contracting the virus. To curb offenders, the Moroccan government had initially drafted the controversial 22.20 law that criminalizes the propagation of false information with sentences up to five years of imprisonment. In parallel, the state-owned television channels had repeatedly called on users to exercise vigilance and caution to resist the manipulation of misleading messages. In addition, official accounts were regularly provided and experts/specialists were invited to dispel misconceptions and myths about health and education issues as well as national market provision and subsidies.

Back in 2018, the kingdom of Morocco had witnessed an unprecedented digital boycotting campaign that was launched in a bid to counter the hegemonic monopoly of three giant companies. Two of these firms specialized in the production of specific brands of dairies and mineral water, while the third one was a large fuel distributing business. Although the extent to which this campaign was efficient still remains largely controversial, most analysts agree that the financial damage incurred on the boycotted companies was clearly felt in the sharp drop in their stock market index values. One more significant observation reveals that the campaign demonstrated in quite tangible terms the huge financial losses digital platforms could inflict on apparently very powerful corporations. It also demonstrated that huge portions of the population are heavy consumers of SNS and are readily prepared to believe and spread words from potentially unverified and anonymous sources.

In addition to consumer boycotts, SNS have also proven instrumental in mobilizing both popular and mainstream support for the tragic case of the late Moroccan five-year-old kid named Rayan who, in February 2022, fell into a deep and narrow well in one of the rural villages near Chefchaouen, a small town in the North of Morocco. To compete with local digital media outlets, giant Arab television networks, such as Al Jazeera and Al Arabiya, had forsaken their usual coverage of global events and almost entirely focused on the non-stop live coverage of the Ryan rescue efforts. This rivalry was so intense and incomprehensible that it eventually brought about incessant and hysterical ‘breaking news’ that far outweighed the scale of the news worthiness. As many would argue, in many parts of Morocco and the Arab world, children are subjected to daily subservience, labor, sexual exploitation,

and trafficking. Similar stories of children trapped or killed in wells are almost a commonplace in the Moroccan press. The Ryan ‘effect’ has generated a deluge of misinformation that was indiscriminately consumed by a large number of avid SNS users.

Within this framework, and given the great concerns voiced by researchers, educational and social psychologists, parents, and policy makers over the potential hazardous effects of digital platforms on the younger population, it seems legitimate to insightfully examine such worries from an empirical perspective. Graham and Metaxas (2003) state that “the biggest challenge for students in this age of information overload is to evaluate the vast wealth of information available.” Kumar and Shah (2018) have also demonstrated that “both trained and casual readers get fooled into believing false information when it is well written, long, and well-referenced.” Scholarship on the personal gratifications and social dynamics of social media platforms is abundant. Nonetheless, unraveling the manifold impacts and implications of misinformation and disinformation on students remains woefully under-researched.

In one of the most recent published works in the area, Orhan (2023) set out to explore the extent to which critical thinking skills and media literacy can empower university students to successfully cope with misinformation and fake news on social networks. The author had harnessed the SOSU Critical Thinking Dispositions Scale (CTDS) to gather data from a sample of 157 Turkish University students. In this quantitative study, Orhan adopted Koc and Barut’s New Media Literacy Scale (NMLS) to gauge the respondents’ digital media literacy capacities. According to the researcher, this 35 items scale involves “functional consumption (7 items), critical consumption (11 items), functional presumption (7 items), and critical presumption (10 items)”. In this study, the author found that Turkish university students hold high order and digital media management thinking skills. He also outlined the moderate relationship that exists between possessing the above skills and the ability to readily identify and cope with fake news on various social networking outlets.

In a similar study, Ponera and Mubuyaeta (2023) investigated the readiness of students in higher educational institutions in Tanzania to critically analyze misinformation on social media and avoid the propagation of false information. They also sought to examine the efficiency of academic institutions’ media policy in fostering students’ digital media skills. The researchers espoused a mixed method to approach the issue. A questionnaire was devised to gather the participants responses and an interview was set up to acquire informative input from eight department heads affiliated to Tanzanian universities. The sample consisted of 633 university students from four postgraduate academic institutions. The results revealed that, while most students hardly attend digital media training sessions, Tanzanian universities

“provide their students with information literacy training to equip them with the skills to search, retrieve, evaluate, and ethically use the obtained information”. However, most students expressed their unawareness and unfamiliarity with the official social media policy and institutional training programs.

Another study was conducted by Harjule et al. (2023). In this empirical endeavor, the researchers sought to ascertain the motives behind the sharing of false and unverified information online during the period of COVID-19 lockdown. They also aimed to demystify the motivations that drive Indian students in higher education to share fake news and spread misinformation on social media websites. To gather data from participants, the authors used a google-form survey that was distributed to college students. The researchers also employed the snowball technique to maximize the participant and response rates because of its large-scale dimension. Nevertheless, only 360 students took part in the survey, which is one major limitation of this study. The descriptive and inferential statistics were deployed to statistically analyze the data. Overall, the results indicated that “the main motivations of sharing misinformation are found to be related to self-expression, information characteristics, and socializing.” They also concluded that demographic variables, especially gender and the educational level, significantly plays an important role in changing students’ perceptions and modulating digital media practice.

Based on the review of most relevant, pertinent, and up-to-date studies, the contribution of this study, which is undertaken with reference to Moroccan university students, is therefore significant since it attempts to shed light on a poorly investigated phenomenon (Mrah & Tazioui, 2018).

Research Questions

An extensive review of the existing literature on the broad theme of the usage of social media outlets by youth in general, and students in particular, has made it possible to revisit and further refine the initial assumptions and conjectures about the research problem. Thus, six research questions that are essentially intended to direct this research endeavor have been put forward. The questions are as follows:

1. What are the Moroccan university students’ overall media usage patterns and their main motives for using social media outlets?
2. What are the students’ perceptions about the generation, causes, mechanisms, and propagation of misinformation on SNS?
3. What are the salient SNS that respondents feed on the most to get news and information about current issues and topics of interest?

4. What are the most dominant techniques that Moroccan university students generally employ to verify the veracity of news and information on SNS?
5. How do respondents' rate their perceived digital media self-efficacy in relation to SNS consumption and usage?
6. How do students perceive the role of higher educational institutions in incorporating and cultivating digital literacy skills in their curricula and syllabi?

Sample and Instrument

The sample of this study consisted of students enrolled in Moroccan higher educational institutions. Although not largely representative of the vast population, 102 randomly selected students voluntarily agreed to take part in the survey. In terms of gender, 61 students (59.80 %) were males while 41 students (40.19 %) were females. The students were assured that their responses were exclusively meant for academic research and their input would remain confidential in line with the university's ethical standards and code of conduct.

The questionnaire was piloted by some colleagues, and this made it possible to identify a few flaws that were later addressed. The snowball technique was also adopted to raise the response rate which had reached 82%. This survey was administered to the respondents to gather data and gauge their attitudes about the research problem and questions. As far as age is concerned, 52.9% of students were between 21 and 25 years, 35.3% were 17 to 20 years, and 11.8% of respondents were over 25 years. The educational level was another significant variable to this study. Therefore, students were sorted out into two categories. The first cohort (48%) were undergraduate students, while the second category (52%) were postgraduate students.

The questionnaire was made up of three sections. The opening section comprised of three sociodemographic questions. The second section elicited the respondents' input about their media usage and viewing patterns. The last section which contained ten multiple choice questions was the primary part in which the students were requested to reveal their perceptions about social media content and misinformation issues. To collect and analyze data statistically, the survey was designed using the Google Forms web-based software. The data was subjected to a rigorous descriptive analysis. Given that the research primarily seeks to explore relationships and investigate students' perceptions, inferential statistics was not employed in the analysis. Admittedly, using inferential statistics would have surely enhanced the explanatory power of the results of this study.

Results and Discussion

In the second section of the survey, respondents were first asked two questions to rate their overall frequency of watching Moroccan public television outlets, such as Al Oula, 2M and Medi I as well as listening to radio stations aired inside Morocco, such as Idaa Al Wataniyya, Aswat, Med radio, Hit radio, and Mars. Such questions were significantly important as they might provide indicative insights on today's Moroccan youth's media consumption propensity and the major sources of information they feed on. This is also likely to shed light on one of the possible causes behind the propagation of fake news and unverified messages since public television and radio stations are generally recognized for their credibility, truthfulness, and accountability. Since the liberation of the media market in Morocco, the high authority for Audio-visual Communication (HACA), which is a legal and official body, was created and entrusted with monitoring and regulating the national media. With regard to the first item, almost two thirds of respondents (64.7%) admitted that they occasionally watch those television channels compared to a low rate of 19% who watch frequently or very frequently. Almost identical findings transpired from the students' usage of radio stations as over two thirds (69%) mentioned that they occasionally listen to the above stations. Conversely, a tiny proportion (16.5%) revealed that they listen frequently or very frequently.

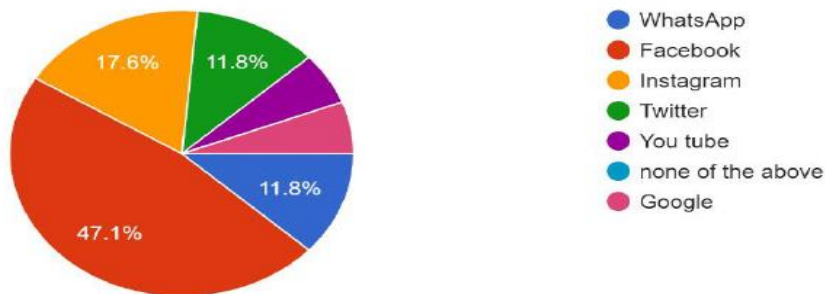
The next item was introduced to estimate the amount of time spent watching social media in an average weekday. Results showed that almost half of the sample (47.1%) consumed an amount of three to four hours per day. This is followed by nearly one third (29.4%) who reported their usage of five to six hours. A smaller portion of students (17.6%) admitted that they roughly spend one to two hours, while a tiny proportion (5.7%) reported a lower consumption of social media sites. Surprisingly, only 0.2% claimed that they spend less than one hour or no time at all on those sites. When asked about their favorite social networking sites, Instagram topped the ratings with 35.3%, WhatsApp with 29.4%, Facebook with 23.5%, and YouTube with 11.8%. The students were further requested to rate their daily usage of the social media networking site they had opted for. Nearly half of the sample (43.8%) reported the daily use of three to four hours. 18.8% of university students acknowledged that they consumed five to six hours. The same figure (18.8%) was registered with respondents whose daily diet varied between one and two hours, while only 6.1% stated that they daily use SNS for more than six hours.

The last item in the second section was designed to ascertain the participants' main motives for using SNS. About half of the students (44.4%) revealed that they used SNS for entertainment and relaxation such as watching movies and playing games, while over one third (33.3%) used SNS to get the latest news about current issues and affairs. Only 21.1% use SNS for

befriending and socializing compared with the rather unexpected low rate of 1.2% of students who utilize SNS for learning and conducting academic research.

As mentioned earlier, the aim of the third and central section of the survey was to probe the respondents' perceptions about social media content and related misinformation issues. The first item asked students to indicate the preferred media outlets they seek to get informed about the various topics and issues. The overwhelming majority (83.3%) reported that social media platforms represent their main source for obtaining information. Television outlets occupy a secondary position with a low rate of 13.1%. While print newspapers were cited as marginal sources (3.6%), radio stations failed to receive any response.

The second question required the participants to give their own assessment about the most credible and trustworthy source for obtaining news and information about current issues. As expected, results showed that both television channels and SNS enjoy the leading position as the most reliable and veracious forms of input with an identical percentage of 35.3%. On the other hand, print newspapers came second with a rate of 11.8%. Surprisingly, a relatively important portion of the sample (17.6%) think that all the suggested media outlets are, a priori at least, lacking in credibility and are not worthy of their trust. To narrow down the scope of the inquiry, the next item probed the respondents' views on the usage of social media platforms. More specifically, they were asked to specify, out of six options, the social media platform they use the most to get news and information. Graph 1 displays the details.



Graph 1. A Typology of Social Media Platforms Used by Respondents

As the figure above demonstrates, almost half of the respondents (47.1%) rely heavily on Facebook to satiate their curiosity about current news and latest events. Instagram ranked in the second position with 17.6%. This was followed by Twitter and WhatsApp that concurrently reaped 11.8% of all attitudes. Surprisingly, YouTube and Google only earned a relatively meager rate. These results vividly display that when it comes to news and information,

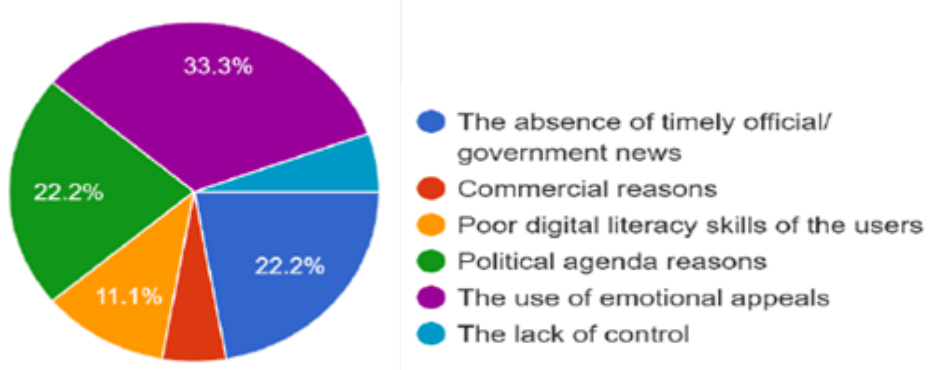
the students have different convictions about the choice of media outlets they deem appropriate and appealing to their tastes. Although accessing the Internet via google search engine provides students with ample and unlimited websites that offer rich sources of news and information, most students probably find the Internet a more tedious, cumbersome, and time-consuming means to get instant, viral, and ready-made pieces of news.

The next question in the survey required the participants to cite the most credible and trustworthy source of all the SNS. The figures showed that one third (33.3%) of the students expressed their belief that none of those suggested sites enjoys the merit of reliability and credibility. Twitter and Facebook ranked second with an equal rate of 22.2% each. This was followed by Instagram (16.7%) and YouTube as the last medium with a small percentage of 5.6%. In terms of veracity and truthfulness, many respondents are convinced that despite their frequent usage of SNS, they are well-informed about their lack of credibility. Most plausibly, such students do not fall into the fallacious trap of confounding popularity and convenience with credibility and truthfulness. This finding is corroborated by Steinfeld (2023) whose study demonstrated that tech-savvy people are more effective in identifying misleading information. However, many others are possibly swayed by the appealing design and user-friendly features of social networks such as Twitter, Facebook, and Instagram. Interestingly, WhatsApp was unanimously barred from any rating (00.00%) as it most obviously fell into disrepute for having infamously propagating dozens of fake and misleading news during the COVID-19 health lockdown in Morocco.

Another item in the survey invited the respondents to express their views vis-à-vis the attitude that social media platforms are rife with false information, rumors, and fake news. Subsequently, almost two thirds (64.7%) of the sample entirely and unequivocally agree with the above statement. 17.6% of the students think that this is true to a great extent compared with a lower segment (11.8%) that opines that this statement is valid to some extent. Other respondents (5.9%), however, displayed their strong disagreement to the assertion. In terms of gender, 59% of females uphold the statement compared to 49% of males. This finding seems to be quite consonant with previous research studies (Harjule et al., 2023).

However, it should be noted that these findings run counter to the common-sense stereotype, which denotes that the preponderant majority of today's youth, irrespective of their educational status, falls as an easy prey to manipulative media content, thus hinging on the unproven assumption that they woefully lack basic critical thinking skills. Nonetheless, the small portion of respondents who ardently contend that SNS do not disseminate misinformation should send alarming signals to all concerned parties. Many

analysts might primarily ascribe this attitude to other parameters and sociocultural variables, such as prior personal and socialization experiences, peer-learning culture, younger age, and low intellectual growth. Furthermore, a significant inquiry was carried out to ascertain the students' perceptions of the main motives behind the promulgation of fake news on social media websites. Graph 2 illustrates the results.



Graph 2. Main Reasons Behind the Propagation of Fake News on Social Media Sites

One third of the participants (33.3%) ascribe the rise of the phenomenon of disinformation and misinformation on SNS to the use of emotional appeals by content generators. The absence of timely and official government news, in conjunction with covert political agendas, had the rate of 22.2% each. Only 11.1% of the respondents believe that the issue under question is due to the poor digital literacy of the users. Relatively, fewer students assert that the lack of censorship and a supervisory body that controls the national media scenery is the main reason behind the dissemination of fake news. Similarly, a few others contend that such deceitful acts are largely driven by commercial factors. In other words, this small fragment of the sample argues that the sole objective of those who create misleading news or merely share it on a massive scale is to boost their viewing ratings. This attitude is closely related to the emotional appeal argument proposed above. To design alluring and highly sensational material, the creators make use of subliminal and sociopsychological hooks, such as reporting celebrity scandals, corruption of officials, and criminal assaults. These stories will most likely go viral given their extremely irresistible seductive power to the younger consumers in particular. Consequently, such category of news will definitely reap huge financial profits as many advertising agencies and companies will fiercely compete to sell their products and services. In this vein, Thurlow (2013) asserts that social media is deeply engrained in neoliberal ideologies. He argues that these “synthetic media” “are based on highly stylized, commoditized notions of language and communication. Therefore, instead of generating real interaction or dialogue, it fosters a kind of “pseudo-sociality”.

Nevertheless, as the figures above show, many students are convinced that the government bears a huge responsibility in the area by failing to provide accurate and updated news to fill the information gap. Interestingly, a fairly important part of students is conversant with the power dynamics involved in the media distribution industry in the kingdom of Morocco and how influential tycoons affiliated to certain political parties leverage their ‘hegemonic’ weight to undermine the political standings of their rivals by launching well-engineered smearing campaigns against them and similarly muzzling antagonistic voices through trolls, social bots, and astroturfing mechanisms.

The next item in the questionnaire allowed the researcher to get more insight into the respondents’ evaluative procedures of social media messages and images. More than one third of students (38.9%) stated that they always carefully evaluate the available information for truthfulness and reliability compared with 22.2% who often do not do same. However, smaller portions of the sample admitted that they sometimes or only rarely verify the veracity of the SNS content they receive with a rate of 16.7% each. Unexpectedly, and despite their small number, some students (5.5%) confessed that they never employ any verification strategies when they access SNS. The latter finding might seem in stark contradiction with the respondents’ previously stated attitudes. However, such answers that hinder any hasty over generalizations legitimate the incorporation of various cross-questioning techniques and the need to apply mixed methods to account for such deficiencies. This also reveals the complexity of eliciting hard and fast data that is reliable by administering survey items that might pose potential threats to the respondents’ ‘face’ or self-esteem.

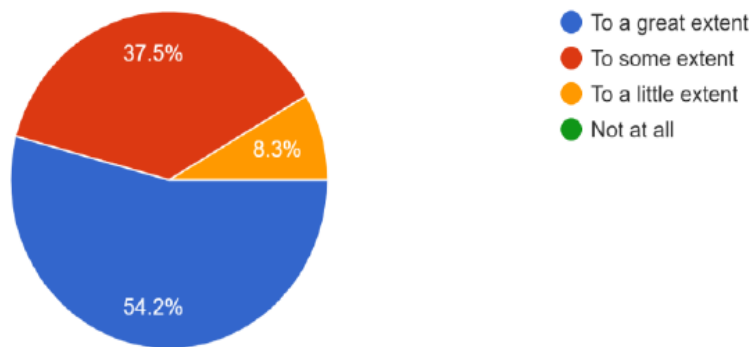
To thoroughly probe the above issue, the students were requested to suggest the techniques they most frequently apply to verify the truthfulness of the information accessed on SNS.

Table 1. Main Techniques Used to Verify the Veracity of Information on SNS

Techniques Applied to Verify the Truthfulness of the Accessed Information on SNS	Percentage
-I always do a search about the website (Design/editorial standards/email contact etc.)	11.8%
-I always critically consider the date the information was posted.	64.7%
-I always use fact-checking websites to verify the truthfulness of the message.	41.2%
- I always do a thorough research about the author’s expertise and background.	11.8
-I always compare the information with other available electronic sources.	64.7
-I always take time to critically analyse the news headline (Tone/grammar/punctuation/spelling etc.).	17.6

According to Table 1, about two thirds of the surveyed students (64.7%) revealed that they always do a search about the website by inquiring about details, such as its design, editorial standards, and email contact. With an identical result (64.7%), the respondents equally reported that they always compare the information they obtain with other available electronic sources. An important portion of the sample (41.2%) stated that they always use fact-checking websites to verify the truthfulness of the message. To a lesser degree, a smaller portion (17.6%) acknowledged that they always take time to critically analyse the news headline by examining its tone, grammar, punctuation, spelling, etc. However, two significant techniques were unexpectedly underused by most university students. Only 11.8% confirmed that they always critically consider the date the information was posted and always carry out a thorough research about the author's expertise and background.

Accordingly, most Moroccan university students are acquainted with rudimentary critical thinking skills, such as seeking information about the website's formal features and crosschecking different sources to verify for truthfulness. In contrast, many others are badly unequipped with those skills as they failed to report any of the suggested techniques. Similarly, other important subskills and techniques, as explained above, still need to be introduced and honed by students given their fundamental character for tertiary level education. Another question was addressed to the respondents to assess the extent to which they think they are digitally well-equipped to use social media platforms effectively. Graph 3 illustrates the results.

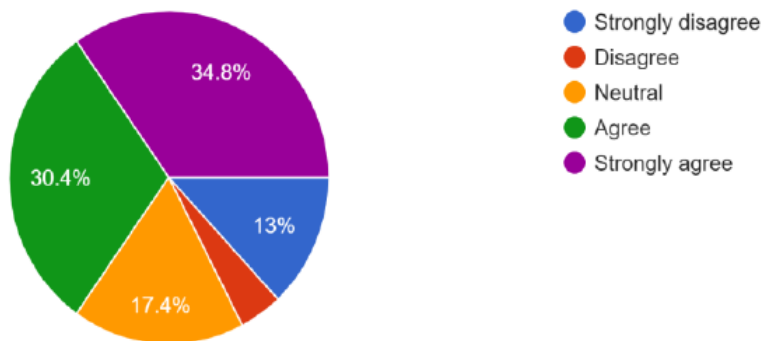


Graph 3. Self-Perception of Digital Media Efficacy

As seen from the graph above, more than half of the respondents (54.2%) perceive themselves as digitally well-trained to cope with the numerous risks and challenges inherent in SNS compared to more than one third (37.5%) who claim that they are equally well-equipped to some extent. A rather limited number of participants (8.3%) admitted that they do not

possess the requisite numeric skills and competencies that are liable to allow them to efficiently manage the potential pitfalls and hazards associated with digital platforms. Surprisingly, no student reported that they lack basic digital proficiency tools. Understandably, this might be attributed to an underlying and often hardly perceptible desire to sound more ‘mature’ and more alert intellectually. The presence of such responses would entail that a university student is ‘digitally illiterate’, which is very insulting to their intelligence and severely lowers their self-esteem. Above all, the findings to this question vividly highlight the paradox between the respondents’ largely positive perceptions of themselves and their de facto behaviours, including the preponderant practices on social media platforms.

The last item in the survey, which is thematically linked to the previous one, required the students to express their opinion about the role of higher educational institutions in promoting the students’ soft and life skills to face the ever-growing challenges posed by the mushrooming of SNS in today’s digital scenery. The graph below summarizes the details.



Graph 4. Attitudes Towards Incorporating Digital Literacy Skills in University Curricula and Syllabi

As expected, a sizable figure of about two thirds of the sample expressed their approval with the statement, with 34.8% showing strong disagreement and 30.4% expressing mere agreement. However, a small group of participants (13%) and an even smaller portion (4.3%) believe that such knowledge and skills should be imparted beyond the confines of tertiary academic institutions. Although some university students (17.4%) are undecided about such a consequential issue, those who agreed think that the proliferation of misinformation and fake news are on the rise and are fabricated by highly specialized technicians to manipulate even the most apparently well-educated. Therefore, such skills need to be regularly updated and initiated to students regardless of their academic levels. Unfortunately, very few departments in Moroccan universities incorporate digital media literacy and critical thinking courses as integral components in their curricula.

As stated earlier, to account for disagreement rates, many students may hold the conviction that a higher education institution is the venue of learning knowledge, hard sciences, and doing research experiments and not the home for acquiring soft skills such as digital literacy skills, communication, leadership, time management, and autonomy. Accordingly, such skills need to have been picked up in early school life, long before they join higher education.

Summary of Results, Recommendations, and Conclusion

This paper has investigated how Moroccan university students approach the various SNS and examined their self-perceived capacities to critically analyze and evaluate digital content in general and online news and information more specifically. Drawing on analytical empirical evidence, this research has demonstrated that television, radio, and print newspaper sources are still viewed, by young Moroccan university students, as the most credible sources of news and information. Surprisingly, using SNS to conduct academic research is not amongst the participants' top priorities. However, entertainment tends to be the leading motive. Paradoxically, most students seek these sites to get their information diet. However, a large proportion believes in the veracity of traditional media outlets, mainly TV and print newspapers. This is equally substantiated by the finding which reveals that one third of participants are fully aware that all social media platforms lack credibility and are fraught with rumors and fake news. Additionally, most respondents affirm that they critically evaluate social media content and largely deploy various efficient verification measures and techniques. The study also found that the majority of respondents' highly rate their digital media perceived self-efficacy. It is also significant to note that almost two thirds of the participants postulate that higher educational institutions should incorporate literacy skills in their curricula and syllabi.

In light of the results obtained from this study, several key recommendations can be put forth to empower Moroccan students in higher educational institutions to cope with misinformation challenges and nurture their digital critical thinking skills. Wei et al. (2023) reported that digital media literacy skills "are stronger among those with low social media literacy skills." In this respect, the incorporation of Higher Order Critical Thinking competencies, with special emphasis on digital literacy skills, in all Moroccan tertiary education curricula is a national priority. The fact that most students 'feed' on electronic media outlets poses pressing challenges to traditional print sources. Therefore, it is projected in the foreseeable future that print media will find it hard to survive the torrents of instant messages and images generated by infinite electronic sources, which are readily available and easily accessible. An official and structural upgrading of the journalism industry in

the country is imperative to fill the ‘information gap’ and boost healthy democratic practices. Similarly, providing sufficient financial resources to both credible and well-established print and digital news producers will surely yield more accountable quality news agencies and dissuade them from propagating sensational and unverified news stories.

From a legal perspective, the government issued a binding legislative framework in 2016 which sets regulatory guidelines and lays the ground for standard journalistic practices (Bulletin Officiel, 2016). Despite this bill, huge efforts need to be invested by all stakeholders to counter the generation and trafficking of fake news and unfounded allegations on many SNS that are often driven by hidden political agendas that undermine the political stability of the country. Seen from a technological standpoint, there seems to be a common consensus amongst analysts and experts in the area where no technical panacea exists to contain the scourge of disinformation. Thus, more future research is required to debug the intricacies of this alarming societal behavior. This is largely supported by Oliver (2018) who stipulates that “the problem of disinformation on social media platforms remain very much an open one-a fundamental concern of contemporary society whose answer may lie in data science.”

One of the main limitations of this study lies in its unrepresentative sample given the large size of the population under investigation. Secondly, adopting a mixed-methods research approach that combines both quantitative and qualitative data collections procedures would have certainly yielded more reliable findings. Similarly, the translation of the questionnaire into other languages, mainly French and Arabic, to involve various categories of the targeted population would probably have maximized the response rates.

Overall, the issue of fake news and misinformation online is a multidisciplinary phenomenon whose diverse discourse mechanisms can unimaginably forge public opinion and damage public trust in institutions. Its subtle influences also transcend beyond educational and intellectual boundaries and affects nearly all segments of society. Hence, this ought to be taken more earnestly. In the wake of the 2016 U.S presidential elections’ scandal, Mark Zuckerberg, the CEO of Facebook, warns that “the question of how to counteract the damage done by “fake news” has become a pressing issue for technology companies and governments across the globe.” (Meserole, 2018). Miriam and Alani (2018) propose an integral ‘Four Es’ model that adeptly combines four essential components which are vital for sustaining modern democracy and nourishing civic education, namely: empowerment, engagement, education, and encouragement. Based on their opinion, empowerment entails “raising individual and collective awareness of current misinformation content and sources.” The aim of this engagement is to foster “networking and cross-communication between users”. The purpose

of education is to inform “users of advanced misinformation analysis results and predictions.” In the fourth principle, the authors argue that future technology should encourage “all users to play a role in detecting, validating, and combating misinformation”.

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Data Availability: All of the data are included in the content of the paper.

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Declaration for Human Participants: This study did not involve animals but did involve participants who had volunteered to take part in the study as shown in the questionnaire included in the appendix.

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Appendix SURVEY

The primary purpose of this survey is to explore how Moroccan university students approach the various social networking sites and to assess their capacities to critically analyze and evaluate digital content in general and online news and information more specifically. The results of this study will be exclusively utilized for academic purposes. You are kindly invited to take few minutes to participate in this endeavor by responding to the questions below. Thank you so much in advance for your collaboration.

SECTION 1: DEMOGRAPHICS

1- Gender:

- Male
- Female

2- Age:

- 1. 17 to 20
- 2. 21 to 25
- 3. Over 25

3- Current Academic Level:

- Undergraduate
- Postgraduate
- Other (Please specify):

SECTION 2: MEDIA USAGE AND VIEWING PATTERNS

1- How often do you watch Moroccan public television outlets (Al Oula/2M /Medi I etc)?
Never occasionally fairly enough frequently very frequently

2- How often do you listen to Moroccan radio stations?
Never occasionally fairly enough frequently very frequently

3- How much time do you spend on social media *per day*?
No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours
more than 6 hours

4- Please, rate your daily usage of each of the following social networking sites along the scale provided:

WhatsApp:
No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6
hours

Facebook:
No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6
hours

Twitter:

No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6 hours

Instagram:

No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6 hours

Snapchat:

No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6 hours

YouTube:

No time at all less than 1 hour 1-2 hours 3-4 hours 5-6 hours more than 6 hours

5- What are your main motives for using social networking sites?

- Learning and doing academic research
- Getting the latest news about current issues and affairs
- Befriending and socializing
- Entertainment and relaxation (watching movies/playing games etc.)
- Other (please specify):

SECTION 3: PERCEPTIONS ABOUT SOCIAL MEDIA CONTENT AND MISINFORMATION ISSUES

1- Which outlets do you usually seek to get informed about the various topics and issues?

TV outlets Radio stations print newspapers social media platforms other (please specify):
.....

2- In your opinion, which is the most credible and trustworthy source for getting news and information about the various issues?

TV outlets Radio stations print newspapers social media platforms none of the above

3- If you use social media platforms, which one do you use the most to get news and information?

WhatsApp Facebook Instagram Twitter You tube none of the above Other (specify)....

4- Of all the following, which is, in your opinion, the most credible and trustworthy source for getting news and messages?

WhatsApp Facebook Instagram Twitter You tube none of the above Other (specify)....

5- Do you share the attitude that social media platforms are full of false information, rumors, and fake news?

Absolutely To a great extent To some extent Not at all

6- Which is, in your opinion, the most logical reason for the fast spread of fake news on social media sites?

- The absence of timely official/government news
- Commercial reasons
- The poor digital literacy skills of the users
- Political agenda reasons
- The use of emotional appeals
- Other (Please specify):

7- While accessing social networking sites, how often do you carefully evaluate the available information for truthfulness and reliability?

Never rarely sometimes often always

8- Which of the following techniques do you apply to verify and check the truthfulness of the accessed information on social media sites? (Tick all that apply)

- I always do a search about the website (Design/editorial standards/email contact etc.)
- I always critically consider the date the information was posted.
- I always use fact-checking websites to verify the truthfulness of the message.
- I always do a thorough research about the author's expertise and background.
- I always compare the information with other available electronic sources.
- I always take time to critically analyse the news headline (Tone/grammar/punctuation/spelling etc.).

9- Overall, to what extent do you think you are digitally well-equipped to use social media platforms effectively?

Not at all To a little extent To some extent To a great extent

10- 'Moroccan higher education curricula and syllabi should teach students the requisite skills to cope with the challenges of misinformation and the spread of fake news'. Do you agree?

I strongly agree I agree neutral I disagree I strongly disagree

Tourisme et Croissance Inclusive au Bénin : Une Analyse d'Après l'Indice Synthétique de Croissance Inclusive

Dognon A. Yvette

Université Africaine de Développement Coopératif (UADC), Benin

Aifa K. Emile

Université de Parakou (UP), Benin

Aifa H. F. Aristidina

Zinsou Lauretta

Université d'Abomey-Calavi (UAC), Benin

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Résumé

Cette étude vise à examiner le type de relation entre tourisme et croissance inclusive au Bénin de 1995 à 2021 en utilisant comme variable dépendante, contrairement à plusieurs études, l'Indice Synthétique de Croissance Inclusive (ISCI). En nous appuyant sur des données chronologiques, nous avons effectué des estimations à l'aide du Modèle Vectoriel à Correction d'Erreur (VECM), du test de causalité de Granger et du Modèle à Correction d'Erreur (MCE) sous STATA 15. Les résultats révèlent une relation significative positive entre le ratio des recettes touristiques réelles et l'Indice Synthétique de Croissance Inclusive (ISCI), démontrant que le tourisme contribue à la croissance inclusive jusqu'à un seuil donné. En outre, la nature bidirectionnelle de cette relation (entre tourisme et croissance inclusive) a été également mise en évidence.

Mots-clés: Bénin, Croissance inclusive, Seuil, Tourisme

Tourism and Inclusive Growth in Benin: An Analysis Based on the Synthetic Inclusive Growth Index

Dognon A. Yvette

Université Africaine de Développement Coopératif (UADC), Benin

Aifa K. Emile

Université de Parakou (UP), Benin

Aifa H. F. Aristidina

Zinsou Lauretta

Université d'Abomey-Calavi (UAC), Benin

Abstract

This study aims to examine the type of relationship between tourism and inclusive growth in Benin from 1995 to 2021 using as a dependent variable, unlike several studies, the Synthetic Inclusive Growth Index (ISCI). Based on historical data, we carried out estimations using the Vector Error Correction Model (VECM), the Granger causality test and the Error Correction Model (ECM) under STATA 15. The results reveal a significant positive relationship between the ratio of real tourism receipts and the Synthetic Inclusive Growth Index (ISCI), demonstrating that tourism contributes to inclusive growth up to a given threshold. Furthermore, the bidirectional nature of this relationship (between tourism and inclusive growth) was also highlighted.

Keywords: Benin, Inclusive growth, Threshold, Tourism

Introduction

Dans un contexte économique marqué par des défis croissants, les gouvernements sont constamment à la recherche de secteurs productifs capables de résoudre des problèmes macroéconomiques tels que la croissance économique, le chômage et les instabilités monétaires de prix. Le tourisme émerge comme l'un de ces secteurs stratégiques qui permet aux décideurs politiques de surmonter ces défis en offrant une multitude d'avantages économiques et sociaux.

En effet, l'Organisation Mondiale du Tourisme (OMT), définit le tourisme comme « un phénomène social, culturel et économique qui implique le déplacement de personnes vers des pays ou des endroits situés en dehors de leur environnement habituel pour une période consécutive qui ne dépasse pas une année, à des fins de loisirs, pour affaires et autres motifs non liés à l'exercice d'une activité rémunérée dans le lieu visité » (2019). Le tourisme

englobe donc l'ensemble des activités exercées par les visiteurs qui séjournent hors de leurs lieux de vie habituels.

Ainsi décrit, le tourisme est un moteur essentiel de la croissance économique, contribuant à renforcer les réserves de devises et à soutenir la balance des paiements. Il permet aux pays de financer leurs dettes et de promouvoir leur développement économique. De plus, le tourisme crée des emplois locaux dans des secteurs variés tels que l'accueil, la restauration et les loisirs, contribuant ainsi à réduire le chômage et à améliorer les conditions socio-économiques des communautés locales. Parallèlement, le secteur touristique stimule le développement d'infrastructures telles que la construction, les transports et l'hébergement, favorisant ainsi la croissance économique. En stimulant la demande et en créant des opportunités d'affaires pour les entrepreneurs locaux, le tourisme apporte une valeur ajoutée à l'économie et favorise le développement de secteurs connexes (Tugcu, 2014). Dans le cas du Bénin, pays d'Afrique de l'Ouest, le tourisme présente un potentiel majeur pouvant promouvoir une croissance économique inclusive. Le pays possède un riche patrimoine culturel, des sites naturels exceptionnels et une diversité ethnique remarquable. En effet, en 2019, le Bénin a accueilli 337 000 touristes, le plaçant au 145^e rang mondial en termes absolus. En rapportant ce chiffre à la population, le Bénin se classe au 161^{ème} rang mondial avec 0,026 touristes par habitant. En Afrique de l'Ouest, le Bénin se positionne à la 6^e place en termes de nombre de touristes. Le secteur du tourisme a généré environ 215,15 millions d'euros, représentant 1,4 % du PIB et environ 4 % de toutes les recettes touristiques de la région (Banque Mondiale, 2019).

Cependant, pour maximiser les avantages économiques du tourisme tout en favorisant le développement durable, il est essentiel de promouvoir une approche de croissance inclusive en alignement avec l'Objectif 8 de Développement Durable de l'Agenda 2030 des Nations Unies. Cet objectif vise à promouvoir une croissance économique soutenue, inclusive et durable, ainsi qu'un travail décent pour tous.

La croissance inclusive étant définie comme une croissance qui met l'accent sur l'emploi productif, qui crée de nouvelles possibilités économiques, qui garantit l'égalité d'accès à ces opportunités à tous les segments de la société, qui assure la protection sociale et le renforcement de la cohésion sociale (Anago et Hougbe, 2015), elle favoriserait une société plus équitable et contribuerait à la réduction de la pauvreté et des inégalités.

En effet, malgré la croissance économique et les bénéfices générés par le secteur touristique, il est essentiel de repenser à la manière dont cette croissance peut être inclusive et bénéficier à l'ensemble de la population. La croissance économique ne doit pas seulement se traduire par une augmentation des revenus et des emplois, mais elle doit également promouvoir l'inclusion sociale, réduire les inégalités et améliorer la qualité de vie de tous les segments

de la société. Ainsi, l'Organisation Mondiale du Tourisme (OMT) et ses partenaires affirment que la croissance maîtrisée du tourisme peut faciliter une transition vers une "économie verte" en favorisant la création d'emplois décents, en atténuant les impacts environnementaux, en améliorant l'efficacité de l'utilisation des ressources et en réduisant la dégradation de l'environnement. (Stroebel, 2015). Le tourisme contribue à la croissance inclusive en favorisant le développement rural et urbain, ce qui génère des emplois et réduit les inégalités et la pauvreté parmi les populations rurales et urbaines. Selon l'Organisation de Coopération et de Développement Economiques (OCDE), les politiques touristiques devraient veiller à ce que le tourisme contribue à une croissance économique largement partagée et améliore le bien-être des citoyens. En outre, le tourisme est reconnu comme un élément clé de la croissance inclusive en Afrique, conformément à l'Agenda 2063 de l'Union africaine. Le Plan d'action touristique élaboré par le New Partnership for African Development (NEPAD) en 2004 souligne également l'importance du tourisme pour l'intégration régionale et la croissance économique inclusive en Afrique, et spécifiquement au Bénin.

De ce qui précède, il s'avère utile de se pencher sur la nature de relation entre ces deux domaines. Ainsi, la question centrale qui se pose est la suivante : quel est l'effet du secteur touristique sur la croissance inclusive au Bénin ? Afin de répondre à cette préoccupation de manière approfondie, trois questions spécifiques ont été formulées : la relation entre tourisme et croissance inclusive est-elle une relation positive de long terme ? Existe-t-il une interdépendance entre le tourisme et la croissance inclusive au Bénin ? Existe-t-il un seuil au-delà duquel le tourisme cesse d'influer positivement sur la croissance inclusive ? C'est ce qui justifie le titre « Tourisme et croissance inclusive au Bénin : une analyse d'après l'indice synthétique de croissance inclusive ».

Cette étude visant à analyser la nature de relation entre le tourisme et la croissance inclusive, met l'accent sur le cas spécifique du Bénin. Pour ce faire, elle se décline en trois parties distinctes. La première partie fait un aperçu sur le secteur touristique au Bénin en relatant les faits récents majeurs. La deuxième partie met en exergue le cadre théorique en présentant une revue de littérature à la fois théorique et empirique. Enfin, la dernière partie présente la démarche méthodologique, les résultats des analyses économétriques, en fournissant une interprétation et une implication de politiques économiques.

1 Bref aperçu sur les récentes activités touristiques au Bénin

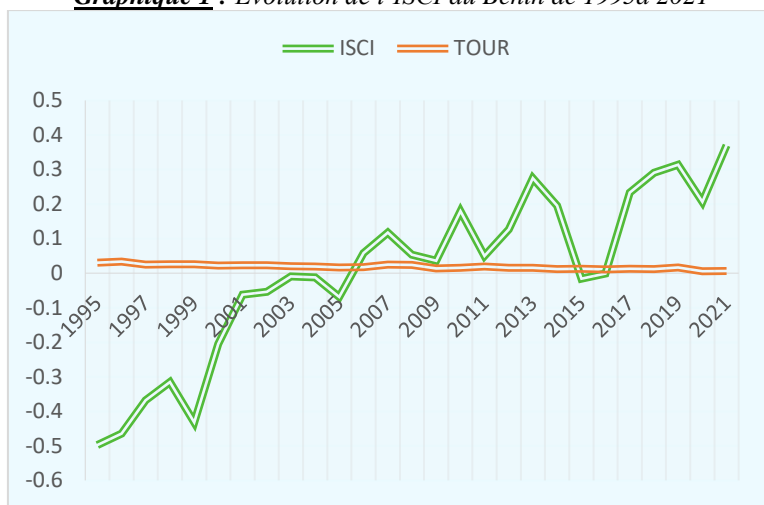
Le secteur du tourisme connaît actuellement une attention accrue de la part des gouvernements, des organisations internationales et des acteurs locaux en raison de son potentiel à stimuler la croissance économique et à favoriser un développement durable. L'augmentation constante des flux

touristiques internationaux témoigne de la vitalité et de la résilience de ce secteur. Selon l'Organisation mondiale du tourisme des Nations Unies (OMT), le nombre d'arrivées de touristes internationaux devrait augmenter de 3,3 % par an, atteignant 1,8 milliard d'ici 2030.

Le Bénin ne fait pas exception à cette tendance, et face aux répercussions négatives de la pandémie de Covid-19 sur ce secteur, le gouvernement béninois a entrepris plusieurs mesures pour stimuler et soutenir l'industrie touristique. Selon les données de l'Organisation mondiale du tourisme (OMT), le tourisme au Bénin a connu une croissance significative au cours des dernières années, avec une augmentation du nombre de visiteurs internationaux. D'après le Conseil Economique et Social (CES) du Bénin en 2021, le tourisme constitue la deuxième source nationale de rentrée de devises et le troisième créateur d'emplois après l'agriculture et le commerce. Au Bénin, le tourisme a connu une croissance régulière, avec des recettes en constante augmentation. Entre 1995 et 2019, les recettes touristiques sont passées de 79 millions de dollars à 200 millions de dollars. En 2019, la contribution du tourisme au PIB s'est élevée à 114,3 milliards de francs CFA, représentant environ 1,4% du PIB. De plus, le tourisme favorise l'intégration de l'économie nationale, avec 71% de ses dépenses provenant de sources locales. Cela démontre que le tourisme a des effets positifs sur l'économie, en stimulant les recettes en devises et en offrant des opportunités d'emploi. Cette embellie touristique, loin d'être un fruit du hasard, trouve son fondement dans maintes explications. En effet, diverses recherches (Bouzahzah et Menyari, 2013 ; Aratuo et Estienne, 2019) soulignent que la croissance économique exerce également une influence sur le développement du tourisme au sein d'une économie. Une amélioration de la croissance économique entraîne une augmentation de la demande touristique, ce qui se traduit par une hausse des recettes et des dépenses dans le secteur touristique. La croissance économique régulière qu'a connu le Bénin ces dernières années et qui l'a déclassé au rang des économies à revenu intermédiaire serait une possible réponse à ce progrès. En outre, le Bénin regorge d'un immense potentiel touristique, offrant une diversité exceptionnelle du nord au sud du pays, accompagnée d'une richesse culturelle remarquable. Parmi ses joyaux, on peut citer les plans d'eau navigables et la cité lacustre de Ganvié, souvent surnommée la "Venise d'Afrique", ainsi que le parc W, abritant une grande variété d'espèces de faune et de flore. Le Parc de la Pendjari, quant à lui, se distingue comme l'un des parcs animaliers les plus riches de la sous-région. En complément, le Bénin dispose d'un patrimoine culturel remarquable, avec des célébrations telles que la fête du vodoun et la fête de l'igname, ainsi que des vestiges historiques disséminés à travers le pays. Ces atouts exceptionnels représentent une véritable richesse qui ont sans nul doute, contribué à valoriser l'industrie touristique.

Afin de mieux appréhender cette dynamique, il nous paraît utile de présenter dans un graphique, l'évolution de l'Indice Synthétique de croissance Inclusive (ISCI) et le ratio des recettes touristiques au Bénin.

Graphique 1 : Evolution de l'ISCI au Bénin de 1995 à 2021



Source : Réalisé par les auteurs, sur Excel, à partir des données de la Banque Mondiale(2023)

Nous remarquons que sur la période d'étude le ratio des recettes touristiques réelles au PIB a une allure globalement constante. Ce qui n'est pas le cas de l'ISCI dont l'évolution s'est faite en dents de scie.

En effet, sur la période 1995 à 2006, ainsi qu'illustrée sur le graphique 1, l'évolution de l'ISCI, a connu une tendance haussière tout en observant des valeurs négatives. A l'opposé, la période d'après, à savoir : 2006 – 2015, est marquée par des valeurs positives, avant de connaître une chute en 2016. La période 2017-2021 a fait l'objet d'une reprise marquée par un affaissement en 2020 et un pic en 2021.

La stabilité relative de la courbe du ratio des recettes touristiques, serait, sans doute, en partie consécutive à la prise de conscience de l'importance du tourisme dans les programmes de développement. En effet, dans les plans d'actions des gouvernements (PAG) qui se sont suivis depuis 1995, le secteur touristique a fait l'objet d'attention particulière, avec des réalisations comme « la route des esclaves », « la porte de non-retour », « le monument de la réconciliation »... et les événements culturels riches en tradition comme la Gaani à Nikki, la fête de l'igname à Savalou, le fête de Vodoun, etc. Le tourisme a été également au centre des préoccupations du gouvernement actuel avec la mise en œuvre d'un vaste programme touristique qui a engendré des réalisations à l'image de la statue de l'Amazone, du Jardin de Saint Mathieu, etc. Tous ces faits auraient sans nul doute contribué à maintenir et à renforcer l'évolution relative des recettes touristiques.

Il nous faut après cette description passer en revue quelques études ayant abordé la problématique du tourisme.

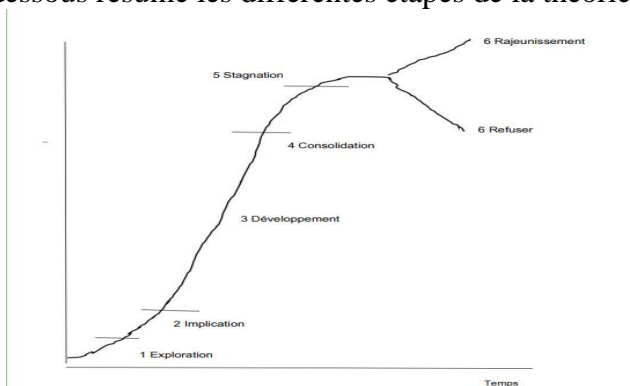
2. Revue de littérature

Dans cette section, nous présentons les diverses approches théoriques ainsi que les travaux empiriques qui ont abordé la question du lien entre le tourisme et la croissance économique.

2.1. Revue théorique

Parmi les théories développées en rapport avec le tourisme et la croissance inclusive, se trouve la théorie du tourisme de Butler (1980). Cette théorie présente un modèle de cycle de vie des destinations touristiques. Il décrit les six étapes de développement d'une destination touristique : exploration, implication, développement, consolidation, stagnation et rajeunissement ou déclin. Dans la première étape, l'exploration, quelques pionniers sont attirés par les paysages, les cultures ou les activités uniques de la destination. Ensuite, dans l'étape d'implication, le nombre de touristes augmente progressivement, avec un intérêt accru pour découvrir la destination. À mesure que la popularité croît, la troisième étape de développement voit l'afflux rapide de touristes, entraînant la mise en place d'infrastructures touristiques pour répondre à la demande. Après avoir atteint un pic dans la quatrième étape de consolidation, le nombre de touristes se stabilise. Les infrastructures touristiques sont alors matures, et la destination est solidement établie. Cependant, dans la cinquième étape de stagnation, la destination peut commencer à perdre de son attrait en raison de la concurrence d'autres destinations ou de la dégradation de l'environnement. Enfin, dans la sixième et dernière étape, appelée rajeunissement ou déclin, la destination a la possibilité de retrouver son attractivité en prenant des mesures pour améliorer son environnement, ses infrastructures et ses activités. Sinon, elle risque de continuer à décliner et devenir moins attrayante pour les touristes.

La figure ci-dessous résume les différentes étapes de la théorie de Butler.



Graphique 2. Théorie du tourisme de Butler (adapté de Butler 1980)

Certains travaux analysent les conséquences positives ou négatives de la croissance touristique dans les pays en développement ou en transition. Le modèle du "syndrome hollandais", développé par Corden et Neary en 1982, puis par Corden en 1984, présente deux effets possibles résultant de la croissance des exportations. D'abord, l'"effet dépense" qui entraîne une baisse de la production des biens échangeables, car une grande partie des facteurs de production est orientée vers les biens non échangeables, qui deviennent plus attractifs pour les producteurs en raison de la forte demande alimentée par les revenus du tourisme. Parallèlement, les prix des biens échangeables, concurrents des biens étrangers, restent presque inchangés. Ensuite, l'"effet mouvement de ressources" se caractérise par une migration des travailleurs des autres secteurs vers le secteur touristique en expansion, car le produit marginal du travail y augmente. Cela peut entraîner une désindustrialisation. Ainsi, sous certaines conditions, la croissance touristique peut nuire au bien-être économique des pays en développement ou en transition, selon Gooroochurn et Blake (2005).

Hazari et Sgro (2004) ont étudié la relation entre le tourisme et la croissance économique dans le contexte d'une petite économie ouverte produisant des biens et services touristiques ainsi que du capital. Ils ont supposé que les biens et services touristiques sont non échangeables, tandis que l'économie peut importer des biens d'équipements et des biens de consommation courante. Leurs résultats ont montré que l'épargne locale est transférée vers la consommation, ce qui améliore le bien-être à long terme. Logossah et Maupertuis (2007) ont utilisé ce modèle pour démontrer que l'accroissement de la demande touristique entraîne toujours de la croissance pour les Petites Économies Insulaires en Développement (PIED). Pour ces pays, le tourisme joue un rôle essentiel dans l'économie, et cet effet positif est associé à une augmentation des importations de biens d'équipements, stimulant la consommation des résidents. En conclusion, la spécialisation dans le tourisme constitue une valeur ajoutée pour les pays de petite taille. Cela montre que, malgré les risques potentiels, le tourisme peut être bénéfique pour le développement économique des pays en développement, en particulier pour les petites économies insulaires.

Toujours dans la perspective de déterminer le lien entre le tourisme et la croissance économique, et afin de mieux appréhender les mécanismes endogènes d'une croissance économique fondée sur le tourisme dans le cas des PIED, Lanza et Pigliaru (1999) ont utilisé le modèle de croissance endogène développé par Lucas en 1988 pour analyser l'impact de la spécialisation touristique sur la croissance économique. Dans leur étude qui prend en compte plusieurs PIED, les résultats montrent que les pays qui ont des dotations en ressources naturelles appropriées grandes par rapport à la taille de leur population active sont susceptibles de développer un avantage

comparatif dans le tourisme et de croître plus rapidement que les pays qui se spécialisent dans le secteur manufacturier.

Pour d'autres auteurs il y a la présence d'un seuil dans la relation entre la spécialisation touristique et la croissance économique. Ainsi, les tenants de cette thèse affirment que les impacts positifs d'une croissance touristique peuvent être plus que composés par des effets pervers à long terme de sorte que les valeurs ajoutées nettes attendues de la spécialisation touristique deviennent négatives ou vice-versa. Il existerait une relation non linéaire entre le tourisme mesuré par la spécialisation touristique et la croissance économique (Adama et Clerides, 2009 ; Holzner, 2011 ; Brida *et al.*, 2015 ; Brida *et al.*, 2016). Dans de tels cas, la littérature nous renseigne que la spécialisation touristique est mesurée soit par les recettes touristiques rapportées au PIB (Avegnon, 2018) ou soit par les arrivées touristiques rapportées à la taille de la population (Adama et Cleride, 2010 ; Chiu et Yeh, 2017 ; De Vita et Kyaw, 2017).

Selon Dogru et Bulut (2017), la relation entre le tourisme et la croissance économique émane de quatre courants de littérature. Il s'agit de l'hypothèse de croissance induite par le tourisme (TLGH), de l'hypothèse du tourisme induit par la croissance (GLTH), de l'hypothèse de rétroaction et de l'hypothèse de neutralité.

Selon le TLGH, le développement du tourisme entraînera une amélioration de la croissance économique. En d'autres termes, le tourisme est considéré comme l'un des principaux déterminants de la croissance économique. En effet, selon Shahzad *et al.* (2017) et Dogru et Sirakay Turk (2017), le tourisme contribue à « créer des opportunités d'emploi ; générer des recettes fiscales ; stimuler l'investissement dans le capital physique, le capital humain et la technologie ; améliorer l'efficacité des entreprises d'accueil en augmentant la concurrence ; et faciliter l'exploitation des économies d'échelle ». Balaguer *et al.* (2002), ont montré que les dépenses touristiques en matière d'hébergement, de restauration, de transport, de loisirs et des services, permettent de réaliser une production importante de biens et services et de créer de l'emploi. L'acceptation de cette hypothèse s'aligne sur les études de Nath (1998) qui dit que le secteur du tourisme est la principale source de devises dans au moins un tiers des pays en développement qui en ont fait un secteur prioritaire.

Le GLTH stipule que la croissance de l'économie globale augmentera la croissance du tourisme. Cela dépend du fait que l'amélioration de la croissance économique augmentera la demande touristique et vice-versa. Les études qui valident l'hypothèse de conservation comprennent Narayan (2004) aux Fidji ; Oh (2005) pour l'économie coréenne ; Payne et Mervar (2010) en Croatie ; Matarrita-Cascante (2010) au Costa Rica ; Lee (2012) à Singapour ; Ivanov et Webster (2012) pour une analyse globale ; Bouzahzah et Menyari

(2013) au Maroc et en Tunisie ; Phiri (2016) en Afrique du Sud utilisant les arrivées de touristes avec le cadre non linéaire ; et Aratuo et Estienne (2019) utilisant les données des États-Unis

Un autre courant de littérature soutient qu'il existe une causalité en retour entre le tourisme et la croissance économique. Cela implique que l'activité touristique et la croissance économique sont interdépendantes, ce qui signifie que la croissance du tourisme entraîne la croissance économique et vice-versa. Les modèles théoriques en majorité qui étudient une relation causale entre les biens non échangés, tels que le tourisme et la croissance économique sont des perceptions récentes. Les conclusions de Katircioglu (2009) à Malte ; Ongan et Demiroz (2005) pour l'économie turque ; Kim, Chen et Jang (2006) à Taïwan ; Seetanah (2011) pour les économies insulaires ; Tugcu (2014) dans les pays européens et asiatiques ; Phiri (2016) en Afrique du Sud utilisant des recettes touristiques et un cadre non linéaire ; Dogru et Bulut (2017) dans sept pays européens ; et Shakouri, Yazdi, Nategian et Shikhrezaei (2017) dans les pays asiatiques soutiennent l'hypothèse de rétroaction.

Le dernier volet de la littérature selon Dogru et Bulut (2017) vient de l'hypothèse de neutralité selon laquelle il n'y a pas de relation causale entre le développement du tourisme et la croissance économique. En d'autres termes, la croissance de l'activité touristique n'entraîne pas la croissance économique et vice-versa. Parmi les études concordant avec l'hypothèse de neutralité, on a : Katircioglu (2009b) en Turquie ; Tang et Jang (2009) aux États-Unis ; Ozturk et Acaravci (2009) en Turquie ; Jackman et Lorde (2010) à la Barbade ; Georgantopoulos (2013) en Inde ; Tugcu (2014) dans les pays africains ; et Phiri (2016) en Afrique du Sud en utilisant les arrivées de touristes avec le cadre non linéaire.

Après la présentation de la revue théorique, qu'en est-il de la revue empirique ?

2.2. Revue empirique

Au cours des deux dernières décennies, la relation entre le tourisme et la croissance inclusive a fait l'objet de nombreuses études empiriques. Balaguer et Cantavella-Jorda, (2002) ont utilisé la méthode de cointégration de Johansen et Juselius (1990) sur des données trimestrielles de la période entre 1975 et 1997. Leurs résultats ont prouvé l'existence d'une relation stable à long terme entre les recettes touristiques et la croissance économique espagnole. Durbarry (2004) a également étudié cette relation en Ile Maurice de 1952-1992 en utilisant la méthode de cointégration de Johansen et des tests de causalité de Granger, ses résultats ont montré que le tourisme a favorisé la croissance économique mauricienne.

Oh (2005), a examiné les relations causales entre la croissance du tourisme et l'expansion économique de l'économie coréenne de 1975-2001 en utilisant une approche en deux étapes, le modèle d'Engle et Granger et celui d'auto-régression vectorielle bivariée (VAR). Ses résultats du test de causalité de Granger impliquent la relation causale à sens unique du tourisme et de la croissance économique.

Kim et al. (2006), ont prouvé l'existence d'une relation d'équilibre à long terme et une causalité bidirectionnelle entre le tourisme à Taïwanais et le développement économique. En prenant en compte l'effet pays hétérogène, Lee et Chang (2008a), ont trouvé une relation cointégrée entre le PIB et le développement du tourisme. Leur test de causalité par panel a montré l'existence, d'une part de relations de causalité unidirectionnelles entre le développement du tourisme et la croissance économique dans les pays de l'OCDE et, d'autre part des relations bidirectionnelles dans les pays non OCDE.

En compilant un ensemble de données de panel international couvrant 162 pays sur la période 1980-2005, Amadou et Clerides (2010), ont conclu que la spécialisation dans le secteur touristique augmente le taux de croissance économique d'un pays et cela se fait à un rythme décroissant. Chou (2013), a examiné les relations de causalité entre les dépenses touristiques et la croissance économique dans 10 pays en transition pour la période 1988-2011. Ses résultats empiriques ont prouvé que le sens de la causalité est neutre pour la Bulgarie, la Roumanie et la Slovénie ; les liens croissants entre ces deux facteurs sont valables pour Chypre, la Lettonie et la Slovaquie, tandis que des relations inverses ont été trouvées pour la République tchèque et la Pologne. Chang et al. (2012) ont étudié la relation entre la spécialisation touristique et le développement économique de 159 pays au cours de la période 1989-2008 à partir de modèles à changements de régimes sur données de panel. Leurs résultats ont validé, d'une part une relation positive entre la croissance économique et le tourisme et, d'autre part l'impact significatif de la spécialisation touristique sur la croissance économique qui est beaucoup plus prononcé dans le régime faible.

Dogru et Bulut (2017) ont examiné la relation causale entre le développement du tourisme et la croissance économique dans sept pays européens sur la base de données de panels couvrant la période 1996-2014. Le test de causalité du panel de Dumitrescu et Hurlin (2012) utilisé a permis de montrer que la relation causale entre la croissance économique et le développement du tourisme est une voie à double sens, où la croissance économique attire les touristes et provoque ainsi une augmentation des recettes touristiques et le développement du tourisme stimule la croissance économique.

T. Osinubi et B. Osinubi (2020) en utilisant une série chronologique de données trimestrielles entre 1998Q1 et 2018Q4, ont étudié la direction de la causalité entre le tourisme et la croissance inclusive au Nigeria. A l'aide du test de causalité de Granger, ils ont validé l'hypothèse de croissance inclusive tirée par le tourisme avec deux des indicateurs du tourisme utilisés dans cette étude, à savoir que l'arrivée de touristes et l'indice d'activité touristique de Granger provoquent une croissance inclusive et pas autrement. Pour les recettes et les dépenses touristiques, ils n'ont trouvé aucune preuve de causalité dans les deux sens entre le tourisme et la croissance inclusive au Nigeria.

Agnoun et Chabossou (2022) analysent empiriquement les relations complexes entre le tourisme et la croissance inclusive au Bénin à partir des données chronologiques du Bénin de 1990 à 2020. A l'aide de deux modèles de régression dans un cadre de cointégration des variables, et un troisième dans un cadre de non cointégration, ils ont prouvé que le tourisme impacte positivement la croissance économique à long terme au Bénin. Leurs résultats montrent également que la croissance du secteur touristique s'accompagne par un accroissement des activités des autres secteurs de l'économie à long terme ainsi que l'existence au sens de Granger d'une causalité bidirectionnelle entre la spécialisation touristique et croissance économique. L'insuffisance majeure de cette étude se rapporte à l'utilisation du PIB par tête comme proxy de la variable dépendante « croissance inclusive », en lieu et place de l'indice synthétique de la croissance inclusive (ISCI) qui traduit mieux ce paramètre.

Balde et *al.* (2020) ont examiné si le tourisme sénégalais constitue une force motrice de la croissance économique inclusive. En utilisant deux modèles de régression : l'un analysant la relation entre les recettes touristiques et la croissance économique et l'autre analysant la relation entre l'accroissement de l'activité touristique et le développement des autres secteurs économiques ont montré, ainsi que le test de causalité de Granger ont prouvé un lien unidirectionnel entre ces deux indicateurs. Le tourisme sénégalais constitue une force motrice pour la croissance économique. De plus, les résultats ont révélé l'existence d'une relation positive entre la croissance du tourisme sénégalais et le développement des secteurs économiques comme l'agriculture et l'industrie confortant ainsi la position selon laquelle le potentiel du tourisme sénégalais est un facteur de croissance économique inclusive.

Ces travaux passés en revue nous permettent d'aborder sans équivoque le cadre empirique de l'étude.

3. Cadre empirique de l'étude

Cette section marque l'aboutissement de la recherche à travers le cadre méthodologique et l'analyse des résultats ainsi que la suggestion d'approche de solutions

3.1. Démarche méthodologique

Dans le cadre de cette étude, contrairement à Agnoun et Chabossou (2022) qui ont utilisé le PIB par habitant comme proxy de la croissance inclusive, notre modèle économétrique va adopter l'indice synthétique de croissance inclusive (ISCI) comme variable dépendante.

En effet, les points de vue des économistes sur les mesures de la croissance économique inclusive ne sont ni unanimes ni convergents. C'est pourquoi, au regard des différents points de vue sous-tendus par les auteurs et les écoles, quatre principales mesures sont proposées, en l'occurrence la mesure unifiée, les indicateurs de tableau de bord, l'indice à valeur unique et le cadre analytique. Toutefois, les approches de mesure unifiée sont les plus référencées dans la littérature dans la mesure où la plupart d'entre elles présentent non seulement l'avantage d'être utilisées dans la comparaison entre pays, mais également du fait qu'elles recourent à moins des données. Dans le cadre de notre étude, seule l'approche de mesure unifiée a été utilisée car elle permet un résumé d'informations sur des phénomènes complexes et une interprétation assez aisée...D'où notre choix de l'Indice Synthétique de Croissance Inclusive (ISCI) qui mesure la croissance inclusive. Cet indice provient de McKinley (2010) qui suggère un indicateur agrégé de la croissance inclusive, représentant la moyenne pondérée de sous-indicateurs représentatifs des cinq dimensions considérées que sont : (i) la croissance économique, l'emploi productif et les infrastructures économiques (50%), (ii) la pauvreté et l'inégalité (20%), (iii) l'égalité genre (5%), (iv) le développement humain (15%) et (v) la protection sociale (10%). L'Indice Synthétique de Croissance Inclusive (ISCI) proposé par Anago et Houngbeme (2015) et reconnu par le PNUD dans son Etude sur la croissance inclusive (Septembre 2017), retient une pondération endogène obtenue à l'aide d'une Analyse en Composante Principale (ACP). C'est un indicateur appliqué à l'économie béninoise. Ils utilisent 24 variables, couvrant la croissance économique, la structure du système productif, l'emploi, les infrastructures, l'équité genre, la santé, la démographie, l'assainissement et la gouvernance. Il s'agit des données provenant de l'Institut National de la Statistique et de la Démographie (INSTAD) que sont : le taux de croissance économique, les parts respectives des secteurs primaire, secondaire et tertiaire dans le PIB ; et celles de la Banque Mondiale, à savoir : le taux de chômage, l'utilisation de l'internet, la télé-densité mobile (c'est la proportion de la population abonnée à la téléphonie mobile), le ratio femmes-hommes dans l'enseignement primaire, le ratio femmes-hommes dans l'enseignement secondaire, le pourcentage des accouchements réalisés par un personnel qualifié, le pourcentage de femmes employées salariées non agricoles, les dépenses publiques en santé, le taux de mortalité des moins de 5 ans pour 1000 habitants, le taux de mortalité maternelle pour 1000, l'espérance de vie à la naissance, la prévalence pour la

tuberculose pour 100000 habitants, le taux de malnutrition des moins de 5 ans, le taux net de scolarisation primaire, le taux net de scolarisation secondaire, les dépenses publiques en éducation, la part de la population ayant accès à l'eau potable, la part de la population ayant accès à l'assainissement, l'indice d'allocation des ressources (c'est un indice qui mesure l'homogénéité de répartition des ressources de l'Etat entre les différents secteurs socio-économiques du pays) et la moyenne collective des politiques structurelles (c'est la note moyenne sur 6 que la Banque Mondiale attribue aux politiques structurelles de l'Etat). La méthode utilisée pour construire cet indicateur (ISCI) est l'Analyse en Composante Principale (ACP). L'objectif est de créer un indicateur unique qui représente la relation entre différentes variables liées à la croissance inclusive. L'ACP permet de déterminer les pondérations des variables en utilisant des données empiriques, ce qui reflète mieux la variabilité réelle des données. Un indicateur construit comme une moyenne arithmétique simple des 24 variables présente l'inconvénient de considérer que toutes les variables participent avec un même poids à la construction de l'indicateur ce qui est loin d'être réaliste car les différentes variables ne participent pas du même poids à l'amélioration du bien-être des populations et par ricochet à la croissance inclusive. L'ISCI est calculé en utilisant la première composante principale, qui capture la plus grande part d'information des données. Les coefficients de liaison entre les variables et la première composante principale sont estimés à l'aide de la méthode des moindres carrés ordinaires. Nous nous sommes donc inspirés de la méthodologie Anago et Hounbeme (2015) pour construire la suite de la série (2014-2021).

3.1.1 Modèle de relation entre l'activité touristique et la croissance inclusive

Ce modèle, celui qui permet d'évaluer la relation entre l'activité touristique et la croissance inclusive repose sur deux variables principales :

- ISCI, qui représente l'indice de croissance inclusive servant de proxy à la croissance inclusive au lieu du PIB réel par habitant qui sert de proxy à la croissance économique.
- TOUR, qui représente le ratio des recettes touristiques réelles (TOUR), et sert de proxy au développement touristique. Ainsi, le modèle se met sous la forme :

$$ISCI = f(TOUR)$$

Cela correspond à : $ISCI_t = \alpha_0 + \alpha_1 TOUR_t + \varepsilon_t$ en termes économétriques.

En outre, le modèle intègre deux autres variables car la demande touristique au Bénin se caractérise par une faible diversification de la clientèle, caractérisé par la prédominance des touristes étrangers et de la présence de

différentes devises monétaires. De ce fait, le taux d'inflation (INF) et le taux de change (ECH) sont deux variables à ne pas négliger dans l'expression du modèle. Ces deux variables y jouent un rôle crucial en tant que stabilisateurs macroéconomique.. L'équation du modèle devient :

$$ISCI_t = \alpha_0 + \alpha_1 TOUR_t + \beta_1 INF_t + \beta_2 ECH_t + \varepsilon_t .$$

3.1.2. Modèle d'analyse de l'existence d'un seuil dans la relation entre la spécialisation touristique et la croissance économique

Tout comme Anago et Houngbeme (2015), nous faisons l'hypothèse qu'il est possible que la spécialisation touristique ait un effet stimulant sur la croissance économique à des niveaux de spécialisation faibles, mais cet effet peut ne pas être durable à mesure que la spécialisation atteint des niveaux élevés. Ainsi, il existe une relation non linéaire entre la spécialisation touristique et la croissance économique. Dans notre modèle, nous incluons le terme quadratique de la variable "spécialisation touristique ($TOUR_t$) (le ratio des recettes touristiques réelles)" pour prendre en compte cette relation non linéaire.

$$ISCI_t = \alpha_0 + \alpha_1 TOUR_t + \alpha_2 TOUR_t^2 + \varepsilon_t$$

3.2. Présentation et justification du choix des variables

Afin de déterminer le lien entre le tourisme et la croissance inclusive au Bénin, deux ordres de variables ont été utilisées.

❖ **La variable dépendante** : L'Indice Synthétique de Croissance Inclusive (ISCI)

L'Indice Synthétique de Croissance Inclusive (ISCI) est utilisé pour mesurer la croissance inclusive, basé sur cinq dimensions importantes, telles que la croissance économique, l'emploi, la pauvreté, l'égalité genre, le développement humain et la protection sociale. L'ISCI est mis à jour régulièrement pour refléter les nouvelles observations et est construit à l'aide de l'Analyse en Composante Principale (ACP), facilitant ainsi son calcul et sa mise à jour.

❖ **Les variables explicatives** :

Tableau 1. Les variables explicatives

Variables	Codification	Mesures	Description	Signes attendus	Sources
Tourisme	TOUR	Ratio des recettes touristiques réelles au PIB.	Cette mesure permet de quantifier le poids des recettes touristiques par rapport à l'ensemble de l'économie, et elle est largement utilisée comme proxy du tourisme. Des chercheurs tels que Dupont (2015) et Baldé et al. (2020) ont également adopté ce ratio pour évaluer l'importance du tourisme.	+	Banque mondiale et nos calculs
Inflation	INF	Taux d'inflation	La variable inflation fait référence au niveau général des prix. C'est une mesure de l'augmentation générale des prix des biens et des services dans une économie donnée sur une période de temps. Elle indique la perte de pouvoir d'achat de la monnaie et peut avoir des implications sur la stabilité économique et la politique monétaire. Elle a été l'objet de débats au sein des différents courants de pensée économique. Certains soutiennent que la monnaie a un impact positif sur l'activité économique (Mundell, 1963; Tobin, 1965), tandis que d'autres soutiennent qu'elle a un effet négatif sur l'économie réelle (Engle, 1983 ; Hwang, 2001). Dans cette étude, nous soutenons la thèse selon laquelle il existe une relation négative entre l'inflation et la croissance économique	-	Banque mondiale
Taux de change	ECH	Taux de change	Le taux de change d'une devise est le cours de cette devise par rapport à une autre. Dans notre cas, il s'agit du cours du dollar par rapport au FCFA.	-	Banque mondiale

Source : Les auteurs,2023

Comme on peut s'y attendre, les données utilisées dans le cadre de cette étude sont issues de sources diverses à savoir : la base de données de la Banque Mondiale et la base de données de Anago et Houngbeme (2015). Grâce à ces diverses plateformes, nous avons pu recueillir et consolider des données pour

constituer une base de données complète comportant l'Indice Synthétique de Croissance Inclusive, le ratio des recettes touristiques au PIB, les taux de change et d'inflation. Cette base de données a ensuite été utilisée pour mener les analyses nécessaires dans le cadre de notre recherche. Ce sont des données qui couvrent la période de 1995 à 2021, soit vingt-six (26) observations.

Le nombre court d'observations dans notre étude est principalement dû à la disponibilité limitée de données historiques concernant les variables qui entrent dans la composition de l'Indice Synthétique de Croissance Inclusive (ISCI) et les recettes touristiques pour le Bénin.

Néanmoins, il est important de noter que malgré le nombre réduit d'observations, Cox (1972) et Box (1976) ont souligné que les études avec un petit nombre d'observations peuvent être fiables et informatives que celles avec un grand nombre d'observations, à condition que le modèle soit correctement spécifié et que les données soient collectées avec soin. Ainsi, malgré les contraintes liées au nombre d'observations, notre étude peut néanmoins fournir des résultats pertinents et significatifs pour comprendre l'effet du tourisme sur la croissance inclusive au Bénin.

Après la présentation de l'approche méthodologique, passons à celle des résultats.

4. Présentation et interprétation des résultats d'estimation

4.1. Test de stationnarité

La première étape de l'analyse consiste à faire les tests de stationnarité sur les quatre variables utilisées. Les résultats des tests sont résumés dans le tableau ci-dessous :

Tableau 2. Test de racine unitaire

TESTS DE RACINE UNITAIRE					
Variables	Test ADF				
	Test de tendance et constante		Test de constante		Test sans tendance et sans constante
	p (trend)	p (ADF)	p (cons)	p (ADF)	p (ADF)
A niveau					
ISCI	0,155	0,6067	0,023	0,5353	-
TOUR	0,0000	0,0001	-	-	-
IECH	0,737	0,7479	0,099	0,4138	0,73
INF	0,039	0,0000	-	-	-
Différence première					
ISCI	0,467	0,0086	0,039	0,0014	-
TOUR	0,778	0,0000	0,596	0,0000	0,0000
IECH	0,787	0,0232	0,905	0,0034	0,001
INF	0,823	0,0122	0,883	0,0012	0,001

Sources : les auteurs, 2023

De l'analyse de ce tableau, on retient que deux (2) variables sur nos quatre (4) sont stationnaires avec tendance alors que les deux (2) autres sont stationnaires en différence première au seuil de 5%. Pour les variables stationnaires avec tendance, nous avons régressé les séries sur leur tendance et nous avons travaillé avec le résidu.

Les séries différenciées sont toutes stationnaires, indiquant qu'elles sont intégrées d'ordre un (I(1)). Cette observation nous a permis de procéder à la vérification de l'existence d'une relation de cointégration entre ces variables.

4.2. Test de cointégration de Johansen

Le test de cointégration de Johansen se base sur le critère de la trace. D'après les résultats dans le tableau ci-dessous, il existe deux relations de cointégration entre nos variables d'étude. Le modèle approprié à notre estimation se révèle être un VECM (Vector Error Correction Model).

Tableau 3 .Test de cointégration

TEST DE COINTEGRATION		
Ordre optimal	Valeur de la trace	Valeur critique (seuil de 5%)
0	153,0479	47,21
1	60,222	29,68
2	15,0521*	15,41
3	1,7149	3,76

Source : les auteurs, 2023

4.3. Test de causalité de Granger

Tableau 4. Test de causalité de Granger

TESTS DE CAUSALITE DE GRANGER	
Hypothèse nulle	Probabilité
ISCI ne cause pas TOUR	0,0460
TOUR ne cause pas ISCI	0,0000

Source : les auteurs, 2023

Le test de causalité indique l'existence au Bénin d'une causalité bidirectionnelle entre la spécialisation touristique et croissance économique car la probabilité associée aux tests est inférieure au seuil de 5%.

4.4. Estimation du Modèle VECM

Tableau 5. Relation de long terme

RESULTAT DE LA RELATION DE LONG TERME		
Variable dépendante	:	ISCI
Méthode d'estimation	:	VECM
Nombre d'observation	:	24
Variables	Coefficients	P-value associée
Terme d'ajustement	-0,067	0,030
TOUR	-852,572	0,000
IECH	0,910	0.210
INF	-0,417	0,004

Source : les auteurs, 2023

D'après le tableau, le terme d'ajustement est significativement négatif au seuil de 5%, indiquant l'existence d'une relation de long terme entre l'ISCI et les autres variables du modèle. Les coefficients sont significativement positifs entre l'ISCI et le ratio des recettes touristiques, ainsi qu'entre l'ISCI et le taux d'inflation. En revanche, le coefficient entre l'ISCI et le taux de change est négatif et non significatif.

A long terme, cette équation d'équilibre suggère que le ratio des recettes touristiques (TOUR) a un effet positif sur l'ISCI. En effet, une augmentation d'une unité des recettes touristiques devrait entraîner, toutes choses égales par ailleurs, une augmentation de l'indice synthétique de croissance inclusive de 852,572 unités.

Concernant les résultats de l'estimation du modèle de court terme, aucun coefficient n'est significatif sauf celui du taux d'inflation.

→ **Test de validation du modèle VECM**

Le test de validation nous permet d'analyser la validité du modèle estimé à travers les tests de diagnostic résumés dans le tableau suivant :

Tableau 6. Test de validation du modèle VECM

TESTS DE VALIDATION DU MODELE	
Tests	Probabilité
Test de normalité des résidus (Jarque-Bera)	0,501
Test d'autocorrélation des erreurs de Durbin Watson	0,475
Test de stabilité du modèle	0,927

Source : les auteurs, 2023

D'après les résultats du tableau, les probabilités obtenues à l'issue des différents tests sont toutes supérieures au seuil de 5%. Par conséquent, les erreurs du modèle estimé suivent une distribution normale, sont non auto corrélées et le modèle est stable. De plus, d'après le test de bruit blanc sur les résidus, on peut conclure que les résidus du modèle estimés sont des bruits blancs. Le modèle est donc validé.

4.5. Modèle d'analyse de l'existence d'un seuil dans la relation entre la spécialisation touristique et la croissance économique

Les variables prises en compte pour cette analyse montrent qu'il y a une unique relation de cointégration. Le tableau ci-dessous présente les résultats de cette estimation :

Tableau 7. Test de cointégration pour la vérification de l'existence d'un seuil

TEST DE COINTEGRATION		
Ordre optimal	Valeur de la trace	Valeur critique (seuil de 5%)
0	47,2429	29,68
1	10,6761*	15,41
2	3,5221	3,76

Source : les auteurs, 2023

Étant donné l'existence d'une unique relation de cointégration, nous avons choisi d'utiliser le Modèle à Correction d'Erreur (MCE) pour estimer les coefficients des variables. Les résultats du modèle de court terme ont révélé que les coefficients ne sont pas significatifs, nous privilégions donc l'analyse sur le long terme. Pour valider nos estimations, nous avons effectué plusieurs tests, notamment le test de normalité des erreurs, le test d'hétéroscédasticité de Breusch-Pagan et le test d'autocorrélation des erreurs de Breusch-Godfrey. Les résultats de ces tests montrent que les erreurs suivent une distribution normale, sont homoscédastiques et non corrélées. Les détails des estimations sont présentés dans le tableau suivant :

Tableau 8. Relation de long terme (MCE)

RESULTAT DE LA RELATION DE LONG TERME						
Variables	Estimation 1			Estimation 2		
	Coef	Std Err	P> t	Coef	Std Err	P> t
TOUR	7,5348	17,44634	0,67	40,73422***	7,220096	0,000
TOUR2				-899,6732***	74,31124	0,000
cons	- 2,69e-11	0,0476168	1	0,3491438***	0,0341171	0,000

*= seuil de 1% ; **= seuil de 5% ; ***= seuil de 10%

Source : les auteurs, 2023

Notre deuxième estimation, en incluant le terme quadratique pour les recettes touristiques, montre que nos variables expliquent 86,03% de la variation de la "croissance inclusive" (ISCI). Les variables sont globalement significatives, avec une probabilité attachée à la statistique de Fisher inférieure à 1%. Cependant, le coefficient du terme quadratique est négatif et significatif, révélant un seuil dans la relation entre le tourisme et la croissance inclusive. Cela signifie que la relation entre le tourisme et la croissance inclusive au Bénin est non linéaire. Ce qui voudrait dire, toutes choses étant égales par ailleurs, qu'au-delà de ce seuil, l'effet s'inverse.

4.6. Discussion des résultats

4.6.1. Modèle de relation entre l'activité touristique et la croissance inclusive

Les résultats de la régression du modèle de court terme indiquent que le coefficient de la force de rappel est négatif et significatif au seuil de 5% et vaut -0,067. De façon concrète, lorsqu'un choc survient sur l'ISCI au Bénin, ses effets sont résorbés à 6,7% au cours de l'année suivante. Ce choc est entièrement résorbé au bout de quatorze (14) ans et onze (11) mois environ. Il existe une relation de long terme entre l'ISCI et les autres variables. Dans le modèle de court terme, seul le taux d'inflation a un effet significatif sur l'ISCI ; tandis que sur le long terme, toutes les variables sont pertinentes dans l'explication de la croissance inclusive, à l'exception de la variable "taux de change" dont le coefficient n'est pas significatif.

Plus précisément, le ratio des recettes touristiques réelles a un effet positif et significatif sur l'ISCI à long terme, ce qui confirme la théorie et les analyses des études précédentes. Le tourisme joue un rôle essentiel dans la promotion de la croissance inclusive en générant des revenus étrangers, en créant des opportunités d'emploi et en stimulant le développement d'infrastructures et d'autres secteurs économiques locaux. Cela contribue à réduire le chômage, améliorer les conditions socio-économiques des communautés locales et favoriser une distribution plus équitable des revenus. Le secteur touristique peut également avoir un effet multiplicateur sur d'autres activités économiques, renforçant ainsi la contribution positive du tourisme à la croissance inclusive au Bénin.

Par ailleurs, le taux d'inflation a un effet positif et significatif sur l'ISCI à long terme au Bénin. Cela pourrait s'expliquer par le fait qu'une inflation modérée stimule la demande intérieure en encourageant la consommation des ménages et les investissements des entreprises. De plus, elle peut faciliter la gestion de la dette en réduisant le fardeau réel des emprunteurs, tout en contribuant à améliorer l'emploi et les politiques sociales inclusives.

Quant au test de causalité entre l'ISCI et le ratio des recettes touristiques réelles, il montre l'existence au Bénin d'une causalité bidirectionnelle entre la spécialisation touristique et croissance économique car la probabilité associée aux tests est inférieure au seuil de 5%. En effet, il est constaté que la croissance économique encourage la spécialisation dans le secteur touristique, et inversement, le tourisme contribue également à la croissance économique, ce qui corrobore les conclusions de Dupont (2015). Ces résultats rejoignent ceux trouvés par Lee et Chang (2008), qui ont identifié une relation bidirectionnelle entre le tourisme et la croissance économique en utilisant la méthode de régression en données de panel dans leurs estimations et de Agnoun et Chabossou (2022) qui ont conclu à l'existence, au sens de Granger, d'une causalité bidirectionnelle entre la spécialisation touristique et

croissance inclusive . Il est clair que l'amélioration de l'Indice Synthétique de Croissance Inclusive (ISCI) peut influencer positivement le ratio des recettes touristiques réelles par divers mécanismes, tels que la stimulation de la demande touristique, les investissements dans l'infrastructure touristique, la promotion de la destination et les effets d'entraînement sur l'économie. Une meilleure situation économique et sociale d'un pays peut attirer davantage de touristes et favoriser le développement du secteur touristique, entraînant ainsi une augmentation des recettes touristiques réelles.

4.6.2. Modèle d'analyse de l'existence d'un seuil dans la relation entre la spécialisation touristique et la croissance économique

L'estimation avec le terme quadratique montre que nos variables expliquent 86,03% de la variation de la croissance inclusive (ISCI). Le terme quadratique indique un seuil dans la relation entre le tourisme et la croissance inclusive au Bénin. Au-delà de ce seuil, l'effet du tourisme sur la croissance inclusive s'inverse. En d'autres termes, le tourisme a un effet positif sur la croissance inclusive jusqu'à ce seuil, mais au-delà, son effet devient négatif. En début de période, l'accroissement des recettes touristiques occasionne une augmentation du PIB. Lorsque l'accroissement du tourisme atteint ce seuil, il devient une menace pour la croissance inclusive, car l'effet est négatif. Les résultats de notre étude sont similaires à ceux de Modeste (1995), de Agnoun et Chabossou (2022) montrant que le tourisme a un effet sur la croissance économique. Il explique que le tourisme peut affecter négativement certains secteurs d'activité du PIB, ce qui, par effet d'entraînement, impacte la croissance économique. Cependant, ces résultats diffèrent de certaines études antérieures (Adamou et Clerides, 2009, 2010 ; Geronimi et *al.*, 2014; Avegnon, 2018), qui ont trouvé une absence d'effet de seuil pour des degrés de spécialisation touristique plus faibles. En conclusion, nos résultats indiquent une relation non linéaire entre le tourisme et la croissance économique, révélant ainsi l'existence d'un seuil jusqu'auquel le tourisme a un effet positif sur la croissance inclusive.

4.6.3. Implication de politiques économiques

Au regard des résultats obtenus et de toute l'analyse qui précède, le tourisme joue un rôle significatif dans la promotion de la croissance inclusive, en particulier au Bénin. Dès lors, nous recommandons, en guise de politiques économiques, les suggestions suivantes.

- L'implication communautaire aux fins d'une prise en compte de leurs préoccupations dans la mise en œuvre des actions touristiques dans leurs milieux.

- La préservation de l'environnement par l'adoption d'une approche durable du tourisme en minimisant les impacts négatifs sur l'environnement et en préservant la culture locale.
- La formation et le développement des compétences locales à effet inclusif.
- La promotion du tourisme responsable par la sensibilisation des visiteurs aux pratiques légales.
- Le renouvellement permanent des investissements dans les infrastructures touristiques afin que ne paraissent durables les phases de stagnation et de déclin.
- La mise en place de mécanismes de suivi d'impacts sociaux et environnementaux afin de permettre la prise efficiente de décisions éclairées.

Ces mesures non exhaustives, mises en œuvre par des autorités à divers niveaux, de façon coordonnées, contribueront, sans nul doute, à renforcer les recettes touristiques et permettre la consolidation d'une croissance inclusive au Bénin.

Conclusion

La croissance inclusive vise à partager équitablement les bénéfices économiques en créant des opportunités d'emploi, en améliorant les revenus des populations vulnérables et en réduisant les écarts de développement. Le tourisme, en tant que secteur clé de l'économie béninoise, contribue à la création de revenus, à la génération d'emplois, à l'amélioration des conditions de vie et à la préservation de la culture locale, tout en stimulant la croissance économique grâce au développement d'infrastructures. La combinaison de la croissance inclusive et du tourisme peut ainsi favoriser l'emploi, réduire les inégalités et préserver la culture au Bénin. Cette problématique a été l'objet de notre étude qui comble un manque de recherches sur les liens entre tourisme et croissance inclusive au Bénin, apportant ainsi une contribution significative à la littérature académique. En effet, cette étude a exploré la relation entre le tourisme et la croissance inclusive, en utilisant l'indice Synthétique de Croissance Inclusive, le ratio des recettes touristiques réelles au PIB, le taux de change et le taux d'inflation. En explorant la relation bidirectionnelle entre tourisme et croissance inclusive, elle permet une meilleure compréhension des interactions complexes entre ces domaines et de leur impact mutuel. De plus, elle a examiné l'existence d'un seuil où le tourisme cesse d'avoir un impact sur la croissance inclusive, fournissant ainsi des informations précieuses pour les décideurs et les acteurs du secteur touristique en vue de promouvoir une croissance durable et inclusive. A cet effet, en guise d'implication de politiques économiques, il est suggéré le renforcement des acquis touristiques,

le renouvellement des infrastructures touristiques chaque fois que cela est nécessaire, la promotion et le suivi d'un tourisme responsable.

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ANNEXES

Annexe 1 : Séries chronologiques des variables dépendante et indépendantes

Années	ISCI	TOUR	ECH	INF
1995	-0,49766	0,030772	499,1484	14,46255
1996	-0,46415	0,033501	511,5524	4,91424
1997	-0,36848	0,024776	583,6694	3,466296
1998	-0,31562	0,02615	589,9518	5,753315
1999	-0,43161	0,02567	615,4733	0,326723
2000	-0,20478	0,021989	710,208	4,165404
2001	-0,06193	0,023321	732,3977	3,984295
2002	-0,05365	0,02253	693,7132	2,489162
2003	-0,00968	0,020171	579,8974	1,487242
2004	-0,01241	0,019531	527,338	0,873891
2005	-0,0687	0,016399	527,2584	5,364521
2006	0,058223	0,017287	522,4256	3,782177
2007	0,117505	0,025254	478,6337	1,298068
2008	0,05338	0,024153	446	7,947299
2009	0,036324	0,013493	470,2934	0,896072
2010	0,179566	0,015668	494,7943	2,207835
2011	0,049733	0,018797	471,2486	2,704239
2012	0,126249	0,015617	510,5563	6,744683
2013	0,275394	0,015418	493,8996	0,428889
2014	0,195713	0,011517	493,7573	-0,54876
2015	-0,01624	0,012996	591,2117	0,218786
2016	-0,00146	0,010913	592,6056	-0,79405
2017	0,233309	0,012597	580,6567	1,769412
2018	0,290653	0,01227	555,4465	0,644804
2019	0,314177	0,016736	585,9508	-0,70503
2020	0,206047	0,00554	574,2945	3,022721
2021	0,370104	0,006078	554,6078	1,73354

Annexe 2 : Matrice de corrélation

. pwcorr ISCI TOUR ECH INF, sig

	ISCI	TOUR	ECH	INF
ISCI	1.0000			
TOUR	-0.8004 0.0000	1.0000		
ECH	-0.2123 0.2877	0.0649 0.7478	1.0000	
INF	-0.5082 0.0068	0.5269 0.0047	-0.1458 0.4679	1.0000

The Effect of Using the Flipped Learning Strategy on Developing Primary Stage Fourth Graders' English Comprehension Skills in Kuwait

Bedour Alshati
Dr. Ahmad Hamad Al-Khawaldeh
University of Jordan, Jordan

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Abstract

This paper focuses on investigating the flipped learning strategy's effect on developing reading comprehension skills in English among 4th-grade primary pupils in the Kuwaiti capital schools. To achieve the study's objective, the researcher redesigned 9 reading comprehension lessons from the 4th grade EFL textbook. The researcher used the quasi-experimental approach with an experimental and a control group to measure the effect of the flipped learning strategy on pupils' achievement in English reading comprehension. To calculate the effect, a post-achievement test was used, and the study sample was intentionally selected. This is consisted of 50 male and female pupils from the basic stage. The data were analyzed statistically, and the results revealed statistically significant differences in favor of the experimental group. Based on the obtained results, the researcher recommended applying the flipped learning strategy in teaching English and related subjects in primary schools in Kuwait and holding training courses for English language teachers to design lessons that align with flipped learning. Further research can address the effect of AI tools in improving reading comprehension.

Keywords: Flipped learning, reading comprehension, learning strategy, reading skills

Introduction

1.1 A general overview

Reading comprehension is considered one of the four foundational skills of language learning which has received special attention in EFL instruction in the state of Kuwait and the world. Various strategies have been proposed to teach this important skill effectively. Recently, educators have thought of employing educational technology to teach languages. One suggested strategy is flipped learning, which is an educational strategy that may help attract the students' attention and get them out of the conventional and ordinary environment, making the learner feel satisfied and active in the language learning process. According to scientific and technological scholars in the educational field, this strategy falls within the newly emerging e-learning strategies paradigm. It is one of the new concepts in education, which is in the process of formation with its basic idea based on the exchange of scientific knowledge. In other words, what is being done at school can be done at home where classroom learning is specified for discussion and deepening learning. So the employment of the new technology has become an integrative and hands-on process that allows the student to achieve so much in the educational process. Also, it allows the student's parents and family members to participate in and help in the instructional process. Flipped learning is defined as:

a method that allows increasing the process of effective interaction between teachers and students while also creating an educational environment that motivates students and teachers to take responsibility for their learning (Al Far, 2015, p. 220).

Teachers use this strategy to achieve several functions, including assisting students in overcoming the challenges that may impede achieving excellence and creativity. The flipped learning strategy is one of the active learning methods that support the learner's personality, by enabling them to be independent to acquire skills on their own through various technological media, especially audio-visual ones. The strategy also helps to extend the concept outside the school environment in collaboration with peers, which can be achieved by employing the skill of linking what is learned in school with the learner's personal life due to the academic services it provides (Al-Kahili, 2014).

Hawks (2014, p.264–269) described flipped learning as:

an academic model that makes use of current technology and the Internet in a way that lets the teacher put together the lesson through movies, audio documents, or various media, to be presented to the students anywhere they are at homes or schools, and the students can use their computers, smartphones, or tablets even before attending the lesson.

This illuminates the significance of this kind of learning and the benefits learners may obtain by applying this model to English language learning.

Consequently, this learning style is based on preparing the video to be shown at any time, while the class time is dedicated to debates, discussions, exercises, and activities. The teacher can prepare a video which lasts for 5 to 10 minutes and, meanwhile, share it with learners using certain websites and social networks. Dunker defined this type of instruction as "an educational approach in which technology is combined with face-to-face teaching in regular classrooms by watching or listening to one of the lessons on the Internet and then participating in the implementation of individual and group activities in the classroom with the teacher and his students, which helps in the assimilation of the concepts, information, and thinking skills in the lesson" (Dunker, 2015, p.171-186).

According to Lipson and Wixon (2009), the development of reading comprehension has two main arrangements: reading for the achievement of understanding, which connects with the skills of the reader to justify, and reading the text by completing the existing information, formulating hypotheses, and then testing them out. However, this is for the purpose of comprehension such as building the integrated structure of information existing in the text.

Reading comprehension may be described as a complicated skill because it consists of more than one range that depends on symbols and their pronunciation. The reader needs to recognize that correct reading comprehension requires the availability of situations, along with identifying the meanings in the text and linking words and sentences. As a result, the reader merges them with a series of interrelated ideas to convey the message that the writer intends to convey. This does not happen unless the reader selects the meanings accurately, and follows the writer's ideas (Bani Yassin, 2008).

Several scholars perceive the current reading comprehension process as a difficult skill that requires deriving meanings and higher thinking skills encompassing evaluation, criticism, selection, as well as organization. The different reading levels embody the student's ability to grasp what they read in different educational materials. Reading comprehension is represented through stages of comprehension that include various intellectual competencies, which might be represented by practical knowledge within the textual material and various expressions depending on the general context of the reading material (Hassan & Al-Haddad, 2013).

1.2 Theoretical framework

▪ Flipped Learning strategy

To effectively teach reading comprehension as a major English language skill, the present study examines the flipped learning strategy's probable effect on EFL learners' development of this skill. In recent years, technological developments have introduced significant adjustments in the teaching field, in

which blended learning procedure is becoming a growing fashion due to its prominent advantages. According to Shin (2011), blended learning that combines online and face-to-face instruction can create a successful teaching and learning experience. It proves that the flipped learning model can create a great amount of educational value such as developing class preparation, classroom interaction, and academic accomplishment.

1.3 Defining Flipped Learning Strategy

Aronson and Afrstrom (2013, p.1) defined flipped learning as getting ready for a lesson in addition to preparing a video by the teacher which is watched outside academic hours, and it is also exploited for paintings and enforcing lab reviews. Also, they define it as an academic model that displays the realistic educational method wherein a video is watched as a model lesson at home and carrying out the associated activities at school.

The roots of flipped learning went back to 2006 and were presented by two Chemistry teachers (Jonathen Bermman and Arson Sam) in Colorado in the USA. They are referred to as the pioneers of flipped learning. It all began when they started to become concerned about students' absence from lectures. As a result, they used video records for lectures on YouTube to help students easily have access to the educational material.

Brame (2013), cited in Tran's (2017), proposed four design principles for a flipped classroom including providing an opportunity for students to prepare for class, providing a mechanism to assess student understanding, and providing in-class activities that focus on higher-level cognitive activities.

A flipped mastery learning strategy saves class time for teachers and allows students to learn about learning alternatives for students. With this learning model, teachers can give this instruction by recording and reporting screencasts of the work they can do using their computers, developing videos for their teaching, or creating video lessons from reliable Internet sites. Students need to watch such videos before entering the classroom to participate actively in classroom activities. The videos embrace a "bring the world to the classroom" approach and, for this reason, they become more engaging, attractive, and motivating to the classroom students (Hamden & McKnight, 2013, p.107).

The use of flipped learning has been prominent to be a green and useful strategy for schooling to replace the conventional direct guidance by expressing written presentations, video lectures, and providing online reading texts as well as assignments outside the class time. Thus, this allows for more class time to be exploited for active learning.

Active learning may include activities and discussions in which teachers produce its content, and inquiry is mainly based on studying. Flipped learning has been compared to online learning, but there are obvious differences. Online education, for example, occurs remotely, and the teacher and student never

interact face-to-face. Virtual class meetings, assignments, and lectures may happen online through a course management website usually conducted asynchronously.

Sometimes the instruction and the related tasks are enhanced by utilizing group chats or another method of enabling collaboration and peer guidance. Mixed instruction also occurs in class time alongside direct pupil-instructor interaction. The flipped learning model bridges a learner-centered classroom environment by enabling the in-depth learning that educators seek (Bergmann & Sam, 2012).

In reality, "flipped learning" tackles the students' benefit, in the first place, publicity to the new stuff of learning sophistication, normally throughout the reading process or lecture movies. Thereafter, it allocates a specific time to do the problem-solving conversation or debates which are assigned to develop the lower levels of cognitive learning to attain knowledge and comprehension from outside the class. It also, at the same time, focuses on the higher levels of cognitive instruction including application, analysis, synthesis, and finally evaluation in class. Here, they receive support from peers and instructors. Hamden and McKnight (2013) mentioned four key features of flipped learning: flipped learning requires flexible environments, needs a shift in knowledge of culture, desires intentional content, and needs expert educators.

For a class to be considered "flipped", it should contain four basic pillars: (1) a flexible setting in which students select when and where learning should take place; (2) a learning culture in which the student-centered model is used; (3) intentional material used by educators to increase classroom time to use methods of the sort of student-centered, active learning strategies, relying on the learner's level and subject; (4) an educator who takes on less prominent roles in the flipped classroom and remains as the necessary element that enables flipped learning to occur.

In the Flipped Learning classroom, instructors change the direct acquisition of knowledge out of the learning institution and cause it to flow into the learner's mastering area. This is with the assistance of one of the various technologies. Teachers can make files and narrate screencasts about their work on their laptops, produce movies of the instruction while teaching, or generate video lessons from Internet sites. Many educators started flipping their classrooms by using the available materials. Videos or screencasts should be made available so that students can have access to them at a convenient time at home, during study halls, in the hospital, or probably on the bus to assist the students in attending class well-prepared (Musallam, 2011).

1.4 Theories and Concepts related to the Flipped Learning Strategy

It is worth pointing out that flipped learning is based on learning theories. The most significant of these include the following according to Abdel-Wahhab (2016, p.19-20):

- **Constructivist Theory:** This learning system presents facts because the teacher constructs previous information through his previous reviews, develops new expertise, and hyperlinks it to the current learner's know-how. They are to be developed via learners' discussions in the school room or through electronic communication.
- **Dialogue Theory:** This depends on the discussion between novices and the instructor. The dialogue will increase the effectiveness of education and maintain its impact. Dialogue has a position within the framework of education and the direction of the educational process. The discussion after the instructional content's presentation deepens educational content and enriches the educational process.
- **Expansive Theory in Education:** This theory is an extension of the cognitive-perceptual concept, which concerns cognitive systems to improve the learner's reviews and link them in a transferable and retrieval manner when wanted. This concept is a practical software of the opposite traditional approach of gaining knowledge, as education begins with the learner's view of the educational material and then the teaching procedures through discussion that focus on the main concepts.
- **Social Presence Theory:** This theory is based on both verbal exchange and social psychology, as it measures the social learning of verbal exchange through the Internet, which is consistent with the nature of the learning style. The Flipped Learning Strategy, which is based on the learners' effort to study through the online educational site and then discussing what has been studied in the traditional classroom, indicates effective interaction between the learners.

1.5. Pillars of flipped learning strategy

Flipped Learning rests on four main pillars: Flexible Environment, Learning Culture, Intentional Content, and Professional Educator.

- **Flexible Environment:** This is the main pillar to Flipped Learning. "Flipped classrooms allow a variety of learning procedures. Educators regularly rearrange their gained knowledge of space to hold the lesson or unit, which may involve organization work, unbiased studies, performance, and assessment" (Hamden & McKnight, 2013, p.17). Having a flexible environment, the students don't feel tense and nervous, rather than the need to hurry to get details in a lecture based on the flexibility method. However, the learner feels free to receive help from their peers or consult the teacher at the time they want. In the same way,

by eliminating the burden of "teaching" pushed by time, the teachers may enjoy the freedom to have extra time for additional activities of authentic practice. Educators who flip their classes are described as flexible in their assessments of the student's learning (Bergmann & Sams, 2012).

- **Learning Culture:** Changing from an instructor-based model to a student-based one, the mastering tradition is changed from its bases. Flipped learning firmly changes instruction to a learner-centered type of instruction, whereas class time is given to exploring subjects in greater depth and using rich learning opportunities. As a result, students are actively involved in the construction of knowledge as they take part in the class and evaluate their learning in a personally constructive way (Aronson, & Arfstorm, 2013).
- **Intentional Content:** The instructor decides on the content to be taught without delay and what is to be explored by the learners. Here, "Educators use intentional content to maximize classroom time to adopt various methods of instruction such as active learning strategies, peer instruction, problem-based learning, or mastery, or Socratic methods, depending on grade level and subject matter" (Peter, Khoo, Scott, & Round, 2016, p.7). Deciding on the content and planning for the learning process, the classroom time is maximized, and much time is left for other strategies and interaction. This provides more classroom time. Flipped learning educators continually consider how they can use flipped learning to enable students to increase conceptual expertise, in addition to procedural fluency. Educators use the intentional content to enhance lecture instructional time on the way to undertake student-centered and active achievement techniques, thereby relying on grade stage to be counted (Aronson, & Arfstorm, 2013).
- **Professional Educator:** The role of a professional educator is important. During class time, they constantly observe their students, giving them feedback relevant to the material, and evaluating their learning outcome. Professional educators are reflective in their respective work, care about improving their instruction, welcome constructive criticism, and stand controlled turmoil at their classrooms. While professional educators take on less important roles in flipped learning, they remain the essential partners enabling flipped learning (Aronson & Arfstorm, 2013).

The flipped learning strategy addresses the desires of both high-achieving and struggling learners. Flipped learning allows advanced students to learn autonomously while struggling students do not give up on homework or class learning (Talbert, 2012).

1.6. Advantahas of using the flipping learning strategy

Traditional techniques consider the students as passive elements to be taught and the students feel so. They sense worthless and they suppose they should obey what the teacher requires them to do. In contrast to traditional methods, flipped learning considers the learner to be the core of the instructional process. Based on this view, students feel responsible for their learning -fostering independent learning and learner engagement- and so they become independent learners. In this way, "learning" becomes the goal in flipped learning, not the "teaching" process. Flipped learning turns traditional classes upside down due to the use of technology. At home, the students watch the videos alone at varying speeds as they like, and it does not matter how many times students watch. The idea is to get the gist. They decide for themselves. Independent learning is promoted following this type of instruction. "Students are not confronted with spontaneous questions during the interaction with the video. Nonetheless, it is interesting to notice that engaging with the video will lead to the maximum retention of information and will inspire high-level thinking skills" (Nicolosi, 2012, p.13-18).

The flipped paradigm contains several potential benefits, extra one-on-one time with students, possibilities for active and collaborative mastering, neglected lectures, self-paced studying, and 'simply-in-time' type coaching. Indeed, flipped studying can be taken into consideration as a supplement, rather than a substitute to the traditional mode of instruction. Thus, it has been reported that flipped learning significantly enhances the academic achievement of school students (Hamden & McKnight, 2000; Ay & Dağhan, 2023; Aybirdi, Efe & Atasoy Sal, 2023).

Chen and Line (2012) indicated that using videos of instructional material in the class leads to an increase of 4 percentage points. Flores and Savage (2007) show that not only does the use of recorded lecture material aid in student performance, but students are also willing to pay more for a class that makes use of recorded lectures. Scholars in flipped learning (Bergmann Sams, 2012, p.12) noted that flipped learning does not look like 'a synonym for online videos. When most people hear about the flipped class, all they think about are the videos. It is the interaction and the meaningful learning activities that occur during face-to-face time that is most important'.

The advantages that could emerge from lively and collaborative learning are nicely documented in the education literature, and consequently will only be mentioned in brief. Including carefully constructed collaborative studying inside the classroom can appeal to many students and probably help too. Empirical research on active and collaborative learning has revealed that students who were taught using collaborative learning techniques performed better (Maxwell et al., 2005, p.51). Despite the many reasons to incorporate active and collaborative learning, a median of 30% of class time is devoted to classroom activities and discussions (Goffe & Kauper, 2013).

1.7. Reading comprehension

Reading comprehension is a mental skill that aims at obtaining and acquiring the skill, and it is a complex system of several sub-processes that the reader performs to elicit. This means that the reader interprets the examined fabric based totally on his expertise. It depends on mental perception rather than on sensory perception, and so it requires focus, attention, analysis, reproduction, linkage, criticism, and judgment. Reading comprehension includes three main additives: the reader, the text, and the learning objective. Reading comprehension relies upon many language abilities, which include low-level lexical skills along with talent in word reading sentence-level skills such as knowing grammatical structures and higher-level text-processing skills such as observing comprehension. In addition, effective low-level lexical skills facilitate reading comprehension by directing more resources to higher-level processes (Suman, Abdelhak, 2019, p.234). Pupils improve their level of knowledge and advance the educational process toward achieving its goals because it involves mental awareness that requires focus and attention (Al Shalaby, 2013, p.343).

The importance of reading comprehension becomes clear as it helps the learner develop his/her linguistic competence with its literal and figurative meanings. This is because the learner, without this linguistic wealth, cannot comprehend what he/she reads and, consequently, cannot specify details, remember facts, and identify the main idea. Organizing the text, according to its substantive/temporal sequence, the learner also cannot master executing instructions, deriving conclusions, analyzing roles, forecasting events, solving learning problems, working on judgment, and finally criticizing what they read (Awad, 2003).

Furthermore, by looking at the various studies related to reading comprehension, such as those by Al-Alwan and Al-Tal (2010) and Ahmed (2011), one can find that there are many opinions about the factors affecting the reading comprehension process. Nonetheless, it can be argued that the factors affecting reading comprehension lie in the following:

1.8. Statement of the study's problem

The problem of the study has to do with the general complaint that students' reading comprehension needs to be improved. The study probes the effect of the flipped learning strategy on the development of reading comprehension skills in English among the 4th grade primary students in Kuwait.

This study aligns with the study of Al Ma'ani (2008) and Al Raies (2007), which indicate the negativity that dominates the students in approaching reading texts and also weakens their interaction with what they read. As a

result, they do not comprehend the text as expected, and they restrict themselves to shallow analysis.

The weak reading comprehension and comprehension talents in the English language amongst the 4th grade primary students in Kuwait indicates the existence of shortcomings related to coaching studying. The study by Al-Ghamdi (2011) indicates the weak level of learners' reading skills in the English language at various educational levels, which resulted in a weakness in the level of female students in creative reading skills. This indicates the scale of the challenges and difficulties among those engaged in the instructional process of teaching English, considering that reading is the first provider of information, experiences and knowledge, a means of communication between societies, and an effective tool in achieving intellectual development. As the results of the study of Marlowe (2012) and Al-Zahrani (2014) revealed, there is the need to adopt a modern strategy through which it is possible to develop creative reading skills among primary school students.

The basic principles of learning English for the primary stage are perceived as having a potential influence on reading difficulties and achieving the objectives set for that age stage, which has a special impact on the levels of logical thinking in the future (Al-Ghamdi, 2011). This is based on what was confirmed by the study of Al-Zboun (2020) on the effectiveness of the strategy of flipped education in arousing motivation, enhancing thinking abilities, and facing routine and comprehension difficulties. The problem of the study was addressed through the following main research question: what is the effect of using the flipped learning strategy on developing reading skills among the 4th primary grade students in the Kuwaiti capital governorate?

1.9 Objectives of the study

This study seeks to probe the effect of the flipped learning strategy in developing reading comprehension subskills within the English language for the 4th primary grade students in the Kuwaiti capital governorate. It has the following sub-objective:

- Illustrating the effect of using the flipped learning strategy in developing reading comprehension skills in the English language among the 4th primary grade students in the Kuwaiti capital governorate.

1.10 Importance of the study

For Students: Developing reading comprehension in the English language for the 4th primary students and developing the participatory technique using classroom activities.

For Teachers: Developing their teaching methods through modern methods such as the flipped learning method, which depends mainly on

technological improvements and techniques of teaching, reading, and comprehension.

For Researchers: The study will contribute scientifically to developing the strategy of flipped learning and reading comprehension in the English language.

Definition of terms

Flipped Learning Strategy: It is a strategy that concentrates on the learner. Al-Zain (2015, p.177) defines it as: "A strategy based totally on focusing across the pupils as opposed to the instructor, in which the pupil watches instructions through video in his home before attending the educational lessons, which allows the teacher to use the class time to activate and direct the student depending on what he knows".

It is procedurally defined as an interactive getting-to-know surroundings which are created via giving the student computerized academic material in the form of shows as learning equipment. Here, the learners watch the instructions at their homes before class time, while the teacher uses the class time to provide an active interactive environment in which the student is directed to apply what they learned at home.

Reading Comprehension: "We know that the student's abilities to recognize the ideas contained in reading the text and interpret them at varying levels (infer thoughts, interact with it, after that they will be able to answer the text-based questions) depends on the learner's cognitive heritage and their potential to research, shape, and evaluate" (Abdul Haq & Souman, 2016, p.231). This is procedurally defined as the student's ability to comprehend in line with the reading comprehension skills adopted in this study, and it is measured by the degree achieved by students in the reading comprehension test prepared for this purpose (Madden, 2011, p.911).

1.11 Study limitations and delimitations

The limitations of the study are as follows:

Spatial and Temporal Limitations: This study is limited to 4th primary-grade students in the first semester, 2020-2021.

Object Limitation: The study is limited to the sixth unit in the English language textbook for 4th primary-grade students.

Delimitations of the Study: The generalization of the study results is determined by the nature of the test and its psychometric properties of validity and reliability.

2.1 Relevant literature

Among the studies related to the subject of this study, the following are included:

2.2 Literatyre related to reading comprehension

A set of related studies have investigated different reading comprehension aspects and skills.

Tolba (2021) studied the effectiveness of a program that was based on the situational learning of enhancing and developing reading comprehension skills and pragmatic language among elementary students with reading difficulties. The research aims to identify and recognize the effectiveness of that program. The experimental group included 30 fourth- grade students who suffered from reading difficulties. The research materials and tools included a list of reading comprehension skills, and a list of pragmatic language aspects and dimensions. Also, the program was based on situational learning including the teacher's guide, the student's book, and the following measure tools like reading comprehension test and pragmatic observation criterion. The experimental strategy was used and applied to selecting the research group and the program, using the semi-experimental group through the pre and post-test. The program has been applied on the research group students while using appropriate tools to measure them before and after. The results showed improvement in reading comprehension and pragmatic language skills for the students.

Mansour and Al-Talafeh (2020) studied the impact of the use of the listening triangle strategy in the development of student's comprehensive reading skills among third-grade students. The study aimed to explore the effect of using the listening triangle strategy in developing comprehensive reading skills among 3rd-grade students. The study used the experimental method together with a semi-experimental design. Therefore, a sample from the third primary class students consisting of 60 male and female students was chosen randomly and divided into two study groups. An experimental group that consisted of 30 students was taught by using the listening triangle strategy, while a control group consisting of 30 male and female students was taught by using the traditional method. The results of the study indicated significant differences between the experimental group and the control group in the post-test of the reading comprehension test levels embodying the literal, deductive, and critical ones in favor of the experimental group students.

Al-Amayra (2020) studied the efficiency of using the hot seating strategy in teaching reading texts to improve reading comprehension and critical thinking skills among 6th-grade students in Jordan. The study was conducted on 51 fourth-year university students in the Amman governorate, divided into two groups: the experimental group which included 25 students, and a control group which consisted of 26 students. The study used a quasi-experiment design to attain the purposes of the study. A test consisting of 24 items was applied to measure reading comprehension among the study participants. Watson-Glaser test was used to measure their critical thinking skills. The study revealed a significant

impact of teaching using the hot seat strategy to develop reading comprehension and critical thinking skills in favor of the treatment group.

Ebnian (2019) investigated the effects of the flipped learning strategy on the development of university students' reading comprehension in EFL while examining the students' attitudes toward the target strategy. The study also sought to reveal students' attitudes toward using the flipped learning strategy. The sample of the study comprised 72 students who were enrolled in the 101 English Communication Skills course at the World Islamic Sciences and Education University in Amman. The students were assigned to two groups, experimental and control groups. The instruments used included a pre-post reading comprehension test and a scale for measuring students' attitudes towards the flipped learning strategy. The results of the study showed that the flipped classroom strategy had a positive effect on developing university students' reading comprehension in EFL. The results pointed a statistical difference between the (control and experimental) groups in the post-reading comprehension test in favor of the experimental group. Furthermore, the study's results revealed that students from the experimental group demonstrated positive attitudes toward the target strategy.

Al Mashaqbeh (2019) studied the effectiveness of the teaching of English by computerized survey and computer-assisted learning in the development of reading comprehension skills and elevated thinking among 10th-grade students. The study intended to explore the effectiveness of teaching English through the computer-guided survey and the development of reading comprehension skills and the elevated thinking skills of 10th- grade students. The study sample included (105) 10th-grade students from the Martyr Ahmed Al-Ziyud Secondary School for Boys belonging to the directorate in Zarqa in Jordan. The results of the study indicated a statistically significant difference between the reading comprehension skills in English, because of the teaching strategy in enhancing the directed survey. There were also statistically significant differences between reading comprehension skills due to the teaching strategy in boosting the computerized survey. The results also showed significant differences between thinking skills due to the targeted teaching strategy.

Al Enezy (2019) studied the effect of a concept mapping strategy on developing creative reading skills in English among first-grade secondary school students in Tabuk. This study inquired about the effect of teaching English by using the concept maps strategy in enhancing creative reading skills among Tabuk first grade secondary students. To achieve this aim, the study used a quasi-experimental design and randomly assigned two groups of first-grade secondary students at Aben Al-Ameed School in Tabuk. The results show that there were statistically significant differences ($\alpha = 0.05$) between the experimental and control group students in their creative reading skills regarding fluency, originality, and

flexibility for the experimental group students. The effect on fluency and flexibility was high, while the effect was average on the original reading skills.

Al Gatawneh (2007) examined the effect of using the Reciprocal Teaching model on enhancing the reading comprehension skills of Jordanian secondary school students. The study participants comprised 88 1st secondary grade male students in 2005/2006. The school was purposefully selected on convenient grounds. The two first secondary grade students' sections in the school were assigned to the levels of treatment by draw. The results of the study revealed a statistically significant difference at the significance level $\alpha = 0.05$ between the two groups in the entire reading comprehension test and in each domain of the test to the benefit of the experimental group. The study concluded that more research is needed to provide additional knowledge concerning the replication of the experiment at other different levels of learners.

2.3 Literatyure related to flipped learning

Irsheed (2022) probed the effect of the use of the flipped learning method in teaching English to develop reading comprehension among 10th female students in Atorah female secondary school in Alramtha government. The study used the quasi-experimental method with a sample consisting of 40 female students, and they were distributed equally into two groups, a control group which included 20 students and an experimental group of 20 students. However, the experimental group studied the reading texts by using Flipped classroom. The control group studied them via the usual way of teaching. The researcher developed a test to assess the levels of reading comprehension skills (literal, deductive, critical, and creative) in the two study groups. After applying the pre-post reading comprehension skills test to the two study groups, the results revealed that there were statistically significant differences ($\alpha = 0.05$) between the two study groups on the reading comprehension test and on all skills domains in favor of the experimental group students who studied by using the flipped classroom method. The results also pointed out that the flipped classroom strategy has a clear impact on the survival of the effect of previous learning, and its transfer to the classroom. This is because this strategy focuses on the student's self-learning, and it makes it the core of their education. This contributed to the development of the reading comprehension skills of students in the experimental group. The study recommended the importance of using the flipped classroom strategy in teaching English language skills and in the various other education media.

Effendi (2020) implemented a study that aimed to identify the effects of the use of the flipped learning strategy in the improvement of students' grades in writing a descriptive text in English. It consisted of 38 students and of 38 Eighth-grade students. The results of the study demonstrated considerable differences in the students' achievements between the experimental group which received

learning using the flipped learning strategy and the control group which received learning via the traditional way. The differences were, however, in favor of the study group, which received learning using flipped learning.

Al Rewely (2019) studied the impact of using flipped classroom strategy in learning creative English reading skills among 3rd-grade intermediate school female students. To achieve the purpose of this study, the researcher employed a semi-experimental design. The sample encompassed 67 Third-grade students who were split up into an experimental group (32 students) as well as a control group (35 students). The study uncovered significant differences in developing creative reading skills between the pre and post-tests with a total average of 13.44, compared to the control group with an average of 11.51.

Sherida (2019) conducted a quasi-experimental study that aimed to identify the influence of the flipped learning strategy in teaching critical reading skills among 10th- grade students. The results showed that there were significant differences in the mean scores of study participants in favor of the experimental group students and in comparison with the control as well as mixed groups. Furthermore, the study indicated that there were substantial differences between the mixed group and the control group favoring the mixed group. Also, these differences are ascribed to the use of the flipped learning strategy in the teaching of English.

Attia (2019) studied the effect of the flipped classroom method on reading instruction, reading comprehension, and phonological awareness among non-native Arabic speakers who are learning the language. This research study aimed to identify the usefulness of that. The sample consisted of 64 students who were at the first level in an Arabic Language Learning Institute. They were subdivided into the experimental group (32 students) and the control group (32 students). The researcher prepared the educational materials and evaluation tools. The educational materials for teaching reading were obtained through the flipped classroom approach, a special reading comprehension test, and a phonological awareness test. The validity and reliability of such tools were verified. The findings revealed that there is a significant difference between the experimental group and the control group in the post application pertaining to the reading comprehension test and the phonological awareness test for the benefit of the experimental group.

Al Nashwany (2016) studied the influence of the flipped learning strategy on teaching Arabic language instruction and developing reading comprehension skills and its effect on the education of sixth-grade pupils in Riyadh. This study aimed to assess the reading comprehension skills among sixth-grade Riyadh pupils and their knowledge, and the effectiveness of the flipped learning strategy in their education. The sample was comprised of 50 students, who were split into two groups: experimental group (25) and control group (25). The researcher used the descriptive approach to prepare the theoretical framework of the study.

Therefore, the study indicated that there were significant differences in favor of the experimental group. This confirms the effect of the flipped learning strategy in improving the educative experience.

Methods and procedures

This chapter describes the research approach used in the execution of the experiment in pursuit of attaining its goals and answering its questions. Also, this chapter introduces the population and the tools that were used to collect the data of this study.

3.1 Research design

To assess the effectiveness of using the flipped learning approach in developing reading and English language skills among 4th-grade students in the Kuwaiti capital governorate, the researcher used the quasi-experimental approach based on a test to either accept the proposed hypothesis or reject it via experimentation. To help us gain knowledge of the proposed unit of the English language curriculum and calculate the impact, a pre-posttest was used with the two groups to ensure that the two groups are identical to achieve the purpose of the study.

3.2 Participants of the study

The study participants included fifty (50) 4th-grade students in Abdul Mohsen Al-Badr Primary School for Boys in Kuwait in the 2021-2022 academic year.

Table 1. Distribution of the Sample

Group	Schools
Experimental	25
control	25

The sample was an intentional one taken from 4th grade sections and randomly distributed to two groups as shown in the table above.

3.3 Study instrument

To achieve the goal of this research study, the researcher developed a multiple-choice test with two essay questions designed in the light of Bloom's taxonomy. The study was designed to offer the extent of information, know-how, software, analysis, and evaluation. Relying on related literature along with Al-Mashaqbeh's study (2019), Al Enezy's study (2019) and Al Gatawneh's study (2007), the use of the flipped learning method was implemented to expand students' reading comprehension capabilities in the English language in the 4th primary grade at Abdul Mohsen Al-Bader Primary School in Kuwait. The researcher provided the teacher who taught the experimental group with an

explanation about flipped learning and redesigned 9 reading comprehension lessons from the 4th-grade textbook of the English language according to the related literature on principles and procedures of flipped learning to allow flipped learning to take place. Students were assigned reading comprehension tasks at home. At school, discussions on what they read at home were undertaken to deepen their reading comprehension and enhance their reading skills. The control group followed the conventional method of reading comprehension instruction used at the school.

3.4 Reading comprehension test

The researcher developed the reading comprehension test. The test consisted of a set of questions. The questions rank the students' related reading comprehension skills in the English language. The reading comprehension test was related to the topic titled 'Sabah Al-Ahmad Natural Reserve' which includes 9 reading comprehension questions, of which 7 multiple-choice questions and 2 open short-answer questions. All were related to the reading comprehension text. Each question is given 2 marks.

3.5 Validity

To affirm the test validity, it was forwarded to specialists and professionals in English language curricula and related teaching methods and English language supervisors. They were asked to specify their opinion on the test regarding the link between the test items and the content they represent. They all considered the test appropriate with a few modifications regarding the formulation of two items and a few language issues considered in the final copy of the test.

3.6 Cronbach's alpha reliability coefficient RO

After completing the modification of the test in its final form, it was given to an exploratory sample which included 4th primary grade students from outside the study sample. In the test, the researcher considered the individual differences among the students. The value of Cronbach's Alpha coefficient for all test items reached 0.704, indicating an appropriate degree of reliability. Slight modifications were made to ensure the appropriateness of the final version of the test.

3.7 Test implementation

After making the final changes and modifications on the test items, the researcher applied the test to a group of 4th-primary students, numbering 25 primary students, and re-tested them after two weeks to ensure consistency after deleting one item.

3.8 Instrument reliability

The Pearson correlation coefficient was extracted among the full scores of students' performance at the pre and post-applications, and the value of the Pearson correlation coefficient was 0.850. Thus, this shows the steadiness of the correlation.

3.9 Study variables

Independent Variable: Flipped Learning Strategy.

Dependent Variables: Developing reading comprehension skills in English.

3.10 Study design

The design of the study is presented in the table below.

Table 2. Design of the study

EG	O1	X	O2
CG	O1	-	O2

3.11 Statistical analysis

The researcher used the following procedures:

- Applying ANCOVA analysis and calculating t-test, significance level, and effect size.
- The Pearson Correlation Coefficient.
- Test-retest method to measure the stability of the two study tools.
- The achievement test items' difficulty and discrimination coefficients.
- Univariate Analysis: This analysis aims to reduce the error of variance.

4. Study results

This study aimed to investigate the effect of the flipped learning strategy in developing reading among 4th-primary grade students in the Kuwaiti capital governorate.

Means and standard deviations were extracted, and an analysis of variance was performed to test the impact of using the flipped learning strategy on developing reading comprehension skills in English among 4th grade primary students in the Kuwaiti capital governorate.

Table 3. Means and standard deviations of achievement in the pre-post-test for the experimental and control group

Group	Number	Pre test		Post test	
		Mean	Standard deviation	Mean	Standard deviation
Experimental group	25	4.60	1.61	6.44	1.16
Control group	25	4.68	1.80	4.84	1.70
Total	50	4.64	1.69	5.64	1.65

The mean of the achievement of the experimental group in the post-application was 6.44, and a standard deviation of 1.16, while the mean of the control group was 4.84, with a standard deviation of 1.70. As for the pre-application of achievement, it was 4.60 for the experimental group, with a standard deviation of 1.61, and the control group 4.68, with a standard deviation of 1.80.

It is obvious from the above table that there are clear differences in the average achievement regarding the experimental group on the post-application. To test the implication of the differences between the means for the post-achievement of the two groups (experimental and control), the analysis of covariance (ANCOVA) was applied. Table 4 shows the results.

Table 4. ANCOVA results concerning the effect of using the flipped learning strategy on developing English reading comprehension skills among fourth-grade students in the Kuwait city

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Pretest	55.688	1	55.688	57.107	0.000*	0.55
Group	34.035	1	34.035	34.902	0.000*	0.43
Error	45.832	47	0.975			
Corrected Total	133.520	49				

* Differences are statistically significant at the level ($\alpha \geq 0.05$).

The results of the covariance analysis after eliminating the differences in pre- achievement indicate that there is a statistically significant influence at the level of significance ($\alpha \geq 0.05$) for using the flipped learning strategy in the development of reading comprehension skills in English among fourth-grade students. Here F value reached 34.902 and its statistical significance is less than 0.05. By reference to the arithmetic averages, the results in the table above reveal that they are in favor of the experimental group members. There is a high effect for the use of the flipped learning strategy in developing reading comprehension skills in the English language subject for fourth-grade students along with the Partial Eta Squared which reached 0.43. Through the researcher’s contact with the participants of the study, the pupils expressed their admiration for using the flipped learning approach in their reading comprehension.

Table 5. Adjusted Means for achievement on the post-test by group

Group	Number	post test	
		Mean	Std. Error
Experimental group	25	6.47	0.20
Control group	25	4.82	0.20
Total	50	5.64	1.40

Among the arithmetic averages shown in Table 5, it is noticed that the arithmetic average of the achievement of the experimental group was 6.47, while the standard error was 0.20. The arithmetic mean of the control group was 4.82, whereas the standard deviation was 0.20.

Based on the foregoing results, it is concluded that there is a benefit in using the flipped learning strategy in developing reading skills in the English language for fourth-grade primary students in Kuwait.

5. Discussion, conclusion and recommendations

This study answered the following research question: What is the effect of using the flipped learning strategy on developing reading and language skills for 4th-grade primary students in the Kuwait Capital Governorate?

The results obtained by the analysis of covariance, which were presented above, after excluding the differences in the pre achievement reveal that there is a significant effect at the significance level ($\alpha \geq 0.05$) for the use of the treatment (flipped learning strategy) in the development of the reading comprehension skills in the English language among 4th grade students. Here, the calculated F value reached 34,902 and its statistical significance is less than 0.05. By reference to the arithmetic means, it can be inferred that the significance effect was in favor of the experimental group.

The results of this study align with the result of Al Mashaqbeh's (2019) study which showed that there are statistically significant differences between reading comprehension skills in English due to the employment of the strategy in favor of the experimental group. Also, Al Enezy's (2019) study demonstrated that there were statistically significant differences ($\alpha = 0.05$) in the average scores in favor of the experimental group in the post-test.

This is also consistent with the results of Al-Amayra's (2020) study, which showed a significant effect of teaching by hot seat strategy to improve reading comprehension and critical thinking skills in favor of the experimental group. Likewise, this agrees with the results of Al Gatawneh's (2007) study which revealed that there was a statistically significant difference ($\alpha = 0.05$) in the mean scores of the two groups on the entire reading comprehension test, and on each domain of the test in favor of the experimental group. The study concluded that more research is recommended to provide additional knowledge concerning the replication of the experiment at other different levels of learners in school.

Further, Ebnian (2019) conducted a related research study that included a reading comprehension test and a scale to assess participants' attitudes toward the flipped learning strategy using certain research instruments. The research showed that the flipped classroom strategy positively impacted the improvement of EFL reading comprehension among university students.

The results from Al Rewely's (2019) study showed significant differences in the development of creative reading skills between pre- and post-tests. The

experimental group achieved a total average of 13.44, whereas the control group averaged 11.51. Based on the study's results, several recommendations and proposals were presented to activate the strategy to develop creative reading skills in teaching English.

Also, the results of AlNashwany's (2016) study showed significant differences in favor of the experimental group to test reading comprehension skills. It demonstrated the existence of substantial differences and statistical function for the experimental group, which confirms the role of the flipped learning strategy in the endurance of the impact of learning. Similarly, Abdullah's (2020) study showed that there is a significant difference between the mean scores of the two (experimental and control) groups in the post-use of reading comprehension test as well as the phonological awareness test in favor of the experimental group. Finally, the results of Irsheed's (2022) study demonstrated that there were significant differences ($\alpha = 0.05$) between the scores of the two study groups on the reading comprehension test as well as all skills domains in favor of the experimental group students who received instruction by using the flipped learning strategy.

The researcher attributes this result to the use of the target flipped learning strategy which contributed to the rise of the level of reading comprehension skills among the students in the experimental group, as the activities and applications that they practiced in the classroom complemented the videos that were available to them at home, which can be referenced when needed.

Also, this result may be attributed to the point that teaching by employing the flipped classroom strategy improves students' motivation for learning to read, unlike the conventional strategy, which depends on the teacher's notes, questions, comments, answers, and images of reinforcement that the student receives from the teacher. Through teaching using the class strategy, the reinforcement may come from the practical activity itself, and from the excitement the learner feels while presenting the information and the practical application he had conducted. Relevant analysis and reflection on the results showed that the differences favor the experimental group on the educational achievement test.

The use of the flipped learning strategy, the presentations it contains, and watching videos represent a new way for students in the fourth grade of primary school. This is because it is more interesting for them than the traditional method. With attractive elements that stimulate viewing presentations, as well as the freedom to choose the time and place of learning, this method stimulates social and participatory relations between the parties to the educational process, within the framework of an effective educational environment that works to benefit from technological progress and techniques in the teaching process, and so reduces the total dependence on the teacher. This method stimulates students' self-learning, curiosity, and searching for information on their own, and it increases their motivation as the related literature reveals.

The results of this study revealed that the flipped classroom strategy had a clear impact on the continuity of the influence of previous learning, and its transfer to the classroom. This is because this strategy focuses on the student's self-learning, and makes it the core of learning, which contributed to the development of reading comprehension skills among the experimental group students in the English language.

The researcher refers to this result as the capability of the flipped learning strategy to expand students' intellectual abilities in reading comprehension. The academic content was transformed through flipped education into the material presented in the form of dialogue activities, considering individual differences among students, as the learning process turned into an easy method that allows students to respond to the reading comprehension content of the course.

5.1 Recommendations

Based on the study results, the researcher recommends the following:

- Applying the Flipped Learning Strategy to teaching English and other similar subjects in primary schools in the State of Kuwait.
- Conducting training courses for English language teachers on how to design lessons in the form of videos that are consistent with the educational content of the English language subject.
- Designing English language curricula in a way that considers flipped learning in some of its academic units.
- Paying attention to developing reading comprehension skills at all levels, starting from the primary stage to the secondary stage.
- Directing those in charge of preparing textbooks to provide textbooks with essential reading skills at all learners' levels.
- Reconsidering the content of English language textbooks by curriculum developers in line with modern AI tools and strategies in teaching reading comprehension.
- Inclusive reading comprehension should be included in teaching the reading skill.
- Conduct further studies to probe the impact of using the flipped learning strategy on developing other language skills.

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