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College of Business and Economics
University of Gondar
Gondar, Ethiopia

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Maraki Campus, 2nd Floor, Office Number 08
College of Business and Economics
P O Box 196, Gondar, Ethiopia

Email: yechale.m.geremew@gmail.com

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Determinants of Intention to Buy Packaged Foods and Drinks in Ethiopia: Evidence from a Cross-Sectional Survey Design

By

Habtamu Genet Yeniakal¹; Missaye Mulatie Mengstie (PhD)²; Teshome Ajabew Geresu³

Abstract

Consumers' buying decisions are very dynamic and complex. Various factors, including perceptions, behaviors, and attitudes influence consumer purchase intentions for Packaged foods and beverages. In light of the rising consumption of packaged foods and beverages, this study examines the psychological factors that influence consumer behavior and purchasing decisions in the Central, North, and South Gondar Zone, Ethiopia. A cross-sectional survey design was employed to achieve this. Using a convenient sampling technique, 411 respondents were selected. The data was collected using a standardized instrument that measures the buying intentions of customer behavior and analyzed through descriptive and inferential statistics. The finding indicates that the independent variables (attitude, perceived value, perceived quality, advertisement, packaging, and price) explain 34.3 % of the variance in intention to buy a product. Consumers' attitude to a product is the most important predictor of buying intention, followed by the perceived quality of a product. The study concludes that psychological attributes, specifically consumers' attitudes towards a product and perceptions of its quality, play a pivotal role in the decision to purchase packaged foods and beverages. The study recommends that marketing strategies prioritize psychological attributes, specifically consumers' attitudes and perceived product quality, as fundamental drivers of purchase behavior of packaged foods and drinks.

Keywords: Attitude, Purchasing intention, Perceived quality, Perceived value, Packaged foods and Drinks

1 Corresponding Author: Habtamu Yeniakal ; harghabt@gmail.com; habtamu.genet@uog.edu.et

2 Department of Psychology, University of Gondar, Gondar, Ethiopia

3 Department of Psychology, University of Gondar, Gondar, Ethiopia

1. Introduction

Customer decisions involve psychological constructs like consumer attitude, preference, behavior, motivation, perception, and learning. According to Maslow's need hierarchy, people attempt to satisfy physiological needs before addressing higher-order needs. In addition to physiological drives, social factors also play a prominent role in drinking culture. Consumers often identify with a community or group and adopt its consumption patterns. Alternatively, an individual may join a community that reflects existing usage and consumption habits. This socialization process is driven by the consumer's aspiration for self-actualization, which is shaped by the desire to enhance their social image. As a result, a growing array of niche brands, driven by targeted marketing strategies, fosters a culture of diverse choices (Kotler & Keller, 2006). Recent research supports this, with studies indicating that digital communities and online social interactions increasingly shape consumer preferences and behaviors across industries, including food and beverage consumption (Appel et al., 2020).

Consumer attitudes toward specific product brands play a critical role in shaping purchasing intentions and behaviors. Recognizing this, successful organizations invest in gathering detailed insights into consumer behavior (Fall Diallo et al., 2013). In the context of packaged foods, for instance, consumer attitudes have been found to mediate the relationship between perceived product quality and purchase decisions (Satriawan & Setiawan, 2020). Moreover, research indicates that attitudes are often context-dependent, functioning as temporary constructs that evolve as the meaning associated with a product changes (Wood, 2000).

Social influence plays a central role in changing attitudes. Different theoretical models explain this process in distinct ways. The Elaboration Likelihood Model suggests that the extent and nature of one's cognitive processing of a message determine its persuasive impact (Petty et al., 1986). In contrast, the Heuristic-Systematic Model maintains that when individuals are both motivated and able to process information, the strength of the arguments presented becomes the key factor in persuasion (Chaiken & Ledgerwood, 2012). Essentially, through interactions with others whom they see as similar, desirable, or expert, individuals undergo real attitude change (Petty & Brinol, 2010).

Customers' behavior also influences the intention to purchase packaged foods and beverages. In relation to this, the theory of planned behavior of Ajzen (1991) suggested that the behavioral intention (i.e., purchase intention) is determined by three factors: the attitude that the person holds toward engaging in the behavior (i.e., purchasing attitude), the degree of social pressure felt by the person about the behavior (i.e., subjective norm), and the degree of control that the person feels he or she has overperformed the behavior (i.e., perceived behavioral control). The first two factors reflect the perceived desirability of performing the behavior, while the third reflects perceptions of whether the behavior is personally controllable or not. Overall, these factors predict the intentions and behavior of consumers (Ajzen, 1988).

In today's competitive market, consumer preferences are continually evolving and diversifying. The complexity of consumer behavior varies significantly across different products and individuals. Consumers encounter a wide array of products and services that differ in price, quality, packaging, and advertisement. They engage in processes of seeking, evaluating, purchasing, and utilizing these offerings. Understanding consumer behavior is challenging, as individuals may express one intention

but act differently (Lake, 2009; Blythe, 2013; Lantos, 2015), and they may change their decisions at the last moment.

Understanding consumers enables marketers to identify how individuals seek information prior to purchasing, the criteria that motivate them, and the factors influencing their buying decisions (Ashman et al., 2015).

Gender significantly impacts consumer behavior, as men and women differ in expectations, desires, needs, and lifestyles, which in turn affect their consumption patterns (Akturan et al., 2009). The impact of gender on the motivators and loyalty to a brand or a shop is based on the different social interaction needs (Noble et al., 2006). Women are more likely to yield to emotional factors while selecting a shop or a brand (Granot et al., 2010). A direct correlation between hedonistic values and satisfaction with the purchase was discovered among women. Unlike men, women perceive the hedonistic value markedly higher and connect satisfaction to interaction at mediation of a product to a pleasant environment and shopping experience (Carpenter & Moore, 2009). Given the increasing desire of firms to build long-term consumer/brand relationships, understanding the factors that influence them has become crucial.

Consumer preferences are pivotal in marketing, as they underpin customer choice among alternatives. Preferences are attitudes toward one object in relation to another. A preference may be transformed into a motivation that ultimately finds expression in a specific behavior. Despite this concept's utility, it should be noted that consumer preferences alone are not the only factor implicated in a purchase decision. Price and in-store promotion can moderate a purchase decision despite a consumer's preference for a particular brand (Shamshad, 2023).

Few studies in Ethiopia have explored the factors influencing consumers' intentions to purchase packaged foods and beverages, with a particular focus on packaging, perceived quality, advertising, and store image, mainly in the capital city (Imiru, 2017; Ashenafi, 2018). However, there is a need for more comprehensive research that considers psychological attributes and extends to a broader range of communities. Understanding consumer behavior is crucial for Ethiopian marketers to develop more effective strategies. While prior discussions on brand preference have primarily examined consumer-brand relationships and the stability of brand preference (Austin et al., 2003), their application across different product categories remains underexplored. Therefore, this study aims to analyze the key determinants driving the increasing consumer intention to purchase packaged foods and beverages in Ethiopia.

2. Objective of the study

The general objective of this study is to examine psychological attributes that explain customer purchasing behavior in packaged foods and drinks. In addition to this general objective, the following specific objectives are assessed.

- To determine the product attributes (packaging, price, advertisement, perceived quality, perceived value, and attitude) consumers desire.
- To assess whether gender determines customers' attitudes, product-related factors, and perceived quality and value in the intention to buy packaged foods and drinks.

- To assess whether educational level determines customers' attitudes, product-related factors, and perceived quality and value in the intention to buy packaged foods and drinks.

3. Method of the study

Approach and Design of the study

The study employed the quantitative approach with a cross-sectional survey design. This design helps collect data from a population at a single time. It is commonly employed to assess relationships, trends, and patterns among variables without altering them (Creswell & Creswell, 2018). Hence, this study employed this design to determine the determinant factors of a customer's choice of packaged foods and drinks.

Population and Sampling

The population of this study was from the Central, North, East, and South Gondar zones of Ethiopia, and they used packaged foods and drinks. Multistage and convenient sampling techniques were used to select the sample participants. A multistage sampling technique was used to select Woredas/districts, and convenient sampling was used to select respondents or customers buying packaged foods and drinks at a supermarket. The sample respondents' size was determined using the single population proportion formula, and 411 samples were selected.

Instrument

This study utilized a standardized questionnaire consisting of 37 items measured on a 5-point Likert scale. The questionnaire assessed customers' intentions to purchase packaged foods and beverages by considering factors such as pricing, packaging, advertising, perceived quality, perceived risk, perceived value, customer attitudes, and purchase intention.

Data analysis technique

The data analyzed included frequency, percentage, mean, standard deviation, independent sample t-test, One-Way ANOVA, and structural equation modeling (path analysis). Based on their response, their experience using packaged foods and drinks was counted through frequency. Besides, their maximum and minimum frequency were counted in line with the average values. To see whether there were statistically significant differences in the dependent variables across genders, an independent sample t-test was employed. One-way ANOVA was employed to test a statistically significant difference among the educational levels.

A structural equation model generated through AMOS was used to test the determinant factors of the intention to buy packaged foods and drinks among the dependent variables (attitude, perceived value, perceived quality, advertisement, packing, and price). The Model fit indices fulfill the criteria to examine their explaining power. Hence, a path analysis was computed to see the explaining power of the constructs in the intention to buy packaged foods and drinks. SPSS version 20 and AMOS software were used to analyze the data. Alpha 0.05 levels were set to determine all significant tests.

4. Results

Demographic characteristics of participants

Table 1 presents the background characteristics of the respondents. The average age of the respondents in this study was 30. The maximum age of the respondents was 65, and the minimum was 18. Concerning the respondents' Gender, male respondents shared more than half of the percent of study participants. Their educational status, as shown in Table 1, indicated that most of the participants had an educational level of diploma or above. A small portion of the participants were in secondary school. The majority of respondents' marital status was single, followed by marriage. The frequency of buying packaged foods and drinks ranges from one to two hundred based on their responses.

Table 1. Participants demographic characteristics

Background characteristics	Classification	Frequency	Percentage	Min	Max	Average
Sex	Male	309	67.8			
	Female	132	32.2			
Age				18	65	30
Frequency of usage				1	200	19
Educational status	Illiterate	17	3.5			
	Primary school completed	38	7.3			
	Secondary school completed	115	30.3			
	Diploma/certificate	99	22			
	Degree and above	172	36.9			
Marital status	Single	269	51.9			
	Married	226	43.6			
	Divorced	12	2.35			
	Widowed	11	2.25			

The background characteristics suggest that male respondents (67.8%) outnumber females, which may influence product positioning strategies. The average age of 30 suggests that the market includes both younger and middle-aged consumers. A high level of education (36.9% having a degree or higher) may indicate consumer preference for well-informed purchasing decisions. Most respondents are single (51.9%), which may influence product preferences.

Factors influencing consumers' intention to buy a product

Structural equation modeling was conducted to see whether independent variables significantly predict the dependent variable (intention to buy a product). The model is accepted if the value of the CMN/GF is less than 5, the GFI and CFI are greater than 0.9 ((Hair, Sarstedt, Ringle, & Mena, 2012), and the TLI (Tucker & Lewis, 1973). In addition, an adequate fitting model was accepted if the AMOS computed value of the standard root mean square (SRMS) was less than 0.05 and if the root mean square error

approximation (RMSA) was between 0.05 and 0.08 ((Hair, Sarstedt, Ringle, & Mena, 2012). The fit indices for the model shown in Table 6 fall within the acceptable range (CMI/DF= 1.75, GFI= 0.91, CFI=0.86, SRMR=0.058 and RMSEA = 0.050). Hence, this study fulfills the criteria, and the findings are presented in Table 1.

Table 1. Path analysis on factors influencing consumers' intention to buy a product

Path	B	S.E	p
Intention to buy a product <--- Attitude to a product	.357	.065	.000
Intention to buy a product <---Perceived value of a product	.249	.090	.051
Intention to buy a product <---Perceived quality of a product	.331	.058	.002
Intention to buy a product <--- Advertisement	-.108	.116	.469
Intention to buy a product <--- Packing of a product	.056	.076	.650
Intention to buy a product <--- Price of a product	.024	.123	.822
R ² = .343*			

As Table 1 shows, the independent variables(attitude, perceived value, perceived quality, advertisement, packing, and price) explain 34.3% of the variance in intention to buy a product, $R^2 = .343$, $p < .05$. The results indicated that the attitude of consumers to a product is the strongest and most significant positive influence on purchasing intention ($\beta = .357$, $p < .05$) followed by the perceived quality of a product ($\beta = .331$, $p < .05$). As the attitude of consumers to a product increases by .357 units, their buying intention increases by 1 unit. Similarly, as consumers' perception of the quality of a product increases by .331 units, their buying intention increases by 1 unit. This shows that the attitude towards a product and perceived quality are consumers' priorities when buying a product.

Advertisement ($\beta = -0.108$, $p = 0.469$), Packaging ($\beta = 0.056$, $p = 0.650$), Perceived value of a product ($\beta = 0.249$, $p = 0.051$) and Price ($\beta = 0.024$, $p = 0.822$) do not show significant effects on purchase intention.

Gender difference in product-related factors (advertisement, packing, and price)

This analysis examines whether male and female consumers differ significantly in their perceptions of price, packaging, and advertisement in the intention to buy packaged foods and drinks. The results are summarized in Table 2 below.

Table 2. Independent samples t-test comparing male and female consumers in product-related factors

Variables	Gender	N	Mean	SD	T	Sig.
Price	Male	309	15.6764	4.19943	2.58	.010
	Female	132	16.8333	4.55864		
Packing	Male	309	13.0874	3.12127	.96	.336
	Female	132	13.3939	2.91288		
Advertisement	Male	309	12.2492	3.73376	.72	.471
	Female	132	12.5227	3.42525		

Table 2 shows a significant mean difference between male and female participants in price consideration

to use a packaged product. A significant difference exists between male and female consumers ($t = 2.58$, $p = .010$). Female consumers (Mean = 16.83) perceive price differently compared to male consumers (Mean = 15.68), suggesting that price sensitivity varies by gender. However, in packaging and advertisement perception, no significant difference is observed between male and female consumers (advertisement, $t = 0.72$, $p = .471$) and packing, $t = 0.96$, $p = .336$). The finding indicates that, while price perception varies significantly between genders, perceptions of packaging and advertisements remain similar among male and female consumers.

Gender difference in attitude towards a product

In this section an analysis examines whether there is a significant difference between male and female consumers based on attitude towards a product in the intention to buy packaged foods and drinks. The analysis shows that there is no difference between male and female consumers in their attitude towards packaged foods and drinks. The summary of the analysis is presented in Table 3.

Table 3. Independent samples t-test comparing male and female consumers' towards a product

Gender	N	Mean	SD	t	Sig.
Male	309	22.0777	5.83822	.44	.660
Female	132	22.3333	4.97270		

Attitude towards a product is influenced by gender. In this study, a gender-based comparison was made to see the differences in consumers' attitudes towards packaged food and drink intentions. The finding indicated that there was no statistically significant difference in attitude towards a product between male and female consumers, $t = .96$, $p > .05$.

Table 3 indicated that male respondents have a mean score of 22.08, while female respondents have a mean score of 22.33. The difference in means is minimal, suggesting similar responses between genders. The t-value (0.44) and p-value (0.660) indicate no significant difference between male and female participants. Since $p > 0.05$, the null hypothesis (which assumes no difference between genders) is retained. The results suggest that gender does not have a statistically significant impact on the measured variable. Both male and female respondents exhibit similar perceptions or behaviors in this context.

Gender difference in consumer perception (perceived value and perceived quality)

There is a difference in a product's perceived value and perceived quality across genders. In this study, gender differences in perception of packaged foods and drinks' perceived value and perceived quality were computed.

Table 4. Comparing male and female consumers' perception of a packaged product

Variables	Gender	N	Mean	SD	T	Sig.
Perceived quality	Male	309	10.3495	2.36468	.59	.551
	Female	132	10.4924	2.14901		
Perceived value	Male	309	5.6699	2.23776	1.14	.254
	Female	132	5.9318	2.12291		

The finding in Table 4 shows that male and female consumers have similar perceptions of product quality of packaged foods and drinks (Male: 10.35, Female: 10.49). The t-value (0.59) and p-value (0.551) indicate that this difference is not statistically significant ($p > 0.05$). Regarding the perceived value of Packaged foods and drinks, Female respondents have a slightly higher perceived value score (5.93) than males (5.67). However, the difference is small and not statistically significant ($t = 1.14$, $p = 0.254$). There is no significant gender-based difference in how consumers perceive product quality and value. This suggests that both male and female consumers evaluate these factors similarly, indicating that gender does not play a major role in shaping these perceptions.

Gender difference in buying intention

Different demographic variables determine the intention to buy packaged foods and drinks. In this study, a gender-based comparison was made to see whether there is a significant difference between male and female respondents' buying intentions of packaged foods and drinks and the findings are presented in Table 5.

Table 5. Independent samples t-test comparing male and female consumers' buying intention

Gender	N	Mean	SD	t	Sig.
Male	309	9.2492	2.99123	1.31	.188
Female	132	9.6591	2.98042		

The finding in Table 5 showed no statistically significant difference in buying intention between male and female consumers, $t = 1.31$, $p > .05$. Female respondents have a slightly higher mean buying intention score (9.66) compared to males (9.25). However, the difference in means is relatively small. The findings suggest that gender does not play a critical role in shaping purchase decisions in this context. Marketers may need to focus on other factors beyond gender when influencing consumers' buying behavior.

Product-related factors, consumer perception, attitude and buying intention across the educational level

The level of education is one of the essential factors in determining buying intentions. In this study, product-related factors such as price, packing, and advertisement were compared across the educational levels of respondents. The finding indicated that there was a statistically significant difference in price and packing across educational levels. However, an advertisement was not statistically significant across educational levels.

Table 6. Comparing product-related factors across the educational level

Product-related factors	Educational level	N	Mean	SD	F	Sig.
Price	Illiterate	17	19.17	4.82	6.17	.000
	Elementary(1-8)	38	16.71	3.07		
	High school Graduate	115	17.02	3.92		
	Diploma	99	15.34	4.80		
	Degree & above	172	15.27	4.25		

Packing	Illiterate	17	12.94	2.63	2.79	.026
	Elementary(1-8)	38	13.42	2.79		
	High school Graduate	115	13.92	3.16		
	Diploma	99	12.64	2.98		
	Degree & above	172	12.95	3.06		
Advertisement	Illiterate	17	13.05	3.86	1.23	.294
	Elementary(1-8)	38	11.42	3.50		
	High school Graduate	115	12.64	3.99		
	Diploma	99	11.98	3.54		
	Degree & above	172	12.44	3.44		

A one-way ANOVA result indicated in Table 6 shows a statistically significant difference in the price of a Packaged product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=6.17$, $p<.05$. In addition, there was a significant difference in packing style of a product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=2.79$, $p<.05$.

The post hoc test shows a statistically significant difference between illiterate and diploma holders considering the price of buying a packaged product. Similarly, there was a significant difference between illiterate and degree and above holder participants. The mean score of illiterate participants to consider price was significantly higher than diploma and degree and above holder participants. Regarding packing, a significant difference was observed between those participants who completed high school and those who were diploma holders.

However, there was no significant difference in the advertisement of a Packaged product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=1.23$, $p<.05$.

Table 7. One-way ANOVA comparing Attitude towards a product's educational level

Educational level	N	Mean	SD	F	Sig.
Illiterate	17	23.0000	5.06211		
Elementary(1-8)	38	23.2895	4.90949	4.10	.003
High school Graduate	115	23.6087	6.39585		
Diploma	99	21.5455	4.46134		
Degree & above	172	21.1977	5.58260		

As Table 7 shows, there was a significant mean difference in the attitude of a Packaged product among illiterate, elementary school, high school, diploma, and degree and above holder participants, $F=4.10$, $p<.05$. The post hoc test indicated a significant mean difference between high school graduates and degree and above holder in attitude towards a packaged product. Here, the mean score of high school graduates was significantly higher than that of degree and above-holder participants.

Table 8 Comparing consumers across educational levels in perceived quality and value

Consumers perception	Educational level	N	Mean	SD	F	Sig.
Perceived quality	Illiterate	17	10.7647	2.16591		
	Elementary(1-8)	38	10.2105	2.17054		
	High school Graduate	115	10.2522	2.67491	.37	.829
	Diploma	99	10.3737	2.06815		
	Degree & above	172	10.5000	2.21241		
Perceived value	Illiterate	17	5.7647	2.51320		
	Elementary(1-8)	38	6.1053	2.12818		
	High school Graduate	115	6.0087	2.51485	1.06	.373
	Diploma	99	5.6667	2.13809		
	Degree & above	172	5.5407	1.99519		

As indicated in Table 8, there was no statistically significant difference in consumers' quality perception towards a Packaged product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=.37$, $p>.05$. Similarly, there was no statistically significant difference in consumers' value perception towards a Packaged product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=1.06$, $p>.05$.

Table 9. Comparing consumers across educational levels in intention to buy

Intentions	Educational level	N	Mean	SD	F	Sig.
Intention to buy	Illiterate	17	9.6471	3.21988		
	Elementary(1-8)	38	10.1316	2.86801		
	High school Graduate	115	10.0261	3.01593	3.38	.010
	Diploma	99	9.0909	2.99691		
	Degree & above	172	8.9012	2.89112		

The education level of the customers is determinant in their intention to buy packaged foods and drinks. In this study, comparisons were made across educational levels. The finding indicated that there was a statistically significant mean difference in intention to buy a Packaged product among illiterate, elementary school, high school, diploma and degree and above holder participants, $F=3.38$, $p<.05$. The post hoc reveals a significant mean difference between high school graduates and degree and above holder in intention to buy a packaged product. Here, the mean buying intention of high school graduate participants was significantly higher than a degree and above the holder.

Discussion

There is a growing use of packaged foods and drinks in Ethiopia. Purchase behavior is an important key point for consumers during considering and evaluating a certain product (Hoeffler & Keller, 2002). There are several factors influencing the intention to buy packaged foods and drinks. In this study, the determinant factors of intention to buy packaged foods and drinks (product-related factors, attitude, perception of value, and quality) are examined in this study. Ghosh (1990) stated that purchase intention is an effective tool for predicting the purchasing process. Once the consumers decide to purchase the product in a particular store, they will be driven by their intention. However, purchase intention might

be altered by the influence of price, quality perception, and value perception (Zeithaml, 1988; Grewal et al., 1998). The current study shows that product-related factors of price, packing, advertising, and perceived quality of a product and perceived values are found to be important determinant factors in influencing the intention to buy packaged foods and drinks.

Considering the importance of consumer attitudes, successful organizations gather extensive information on consumer behavior ((Fall Diallo et al., 2013). The most significant factors influencing consumers' purchase intention towards private-label food products are 'consumers' attitude' and 'perceived price' (Lomboan, 2017; Jaafar et al., 2012). Consumers' past purchasing experience with private-label food products may also influence their perceptions of price, packaging, store image, and trust in those products. The result of this study shows that independent variables (attitude, perceived value, perceived quality, advertisement, packing, and price) explain significantly the variance in intention to buy a product. The results indicated that consumers' attitude to a product is the most important predictor of buying intention. The attitude towards a product and perceived quality are consumers' priorities when buying a product. In contrast, positive consumer attitudes toward a product do not always translate into actual purchasing behavior (Essiz, Yurteri, Mandrik, & Senyuz, 2022). This inconsistency indicates that while favorable attitudes and perceived values play a role, they may not be enough to drive purchase intentions, as other factors can hinder the conversion of intent into action.

Demographic factors like gender, and educational background can influence the purchasing intention of customers (Kavitha & Muthumani, 2015; Wang et al., 2020).

Product-related factors of price can have a statistically significant difference between male and female customers in the intention to buy packaged foods and drinks in this study. Recent studies have highlighted notable gender differences in price sensitivity, particularly concerning packaged foods and drinks (Barnes & Brounstein, 2022). However, packaging and advertisement didn't influence male and female consumers.

Attitude towards a product can have an influence of the intention to buy packaged foods and drinks between male and female consumers. This is the most important determinates in other studies (Theben, Gerards & Folkvord, 2020).

Perceived value and quality of a product are influenced by one gender. Research indicates that female consumers often emphasize practical benefits, affordability, and overall experience when assessing a product's value. They are more likely to seek discounts and promotions, and consider emotional and social aspects, such as sustainability and ethical sourcing. Brand trust and recommendations from peers or reviews significantly influence their perceived value (Panaso, 2021; Wang & Kim, 2019). On the other hand, illiterates and diplomas consider price when buying products. The product packaging is sensitive to high school complete and diploma holders in this study.

Conclusion

This study highlights the importance of psychological attributes such as Attitude, perceived value, perceived quality, advertisement, packing, and price in shaping consumer purchasing behavior of packaged foods and drinks. Furthermore, the study found that women exhibit greater price sensitivity than men when purchasing packaged foods and beverages. Additionally, educational level plays a critical role in shaping consumer preferences, purchasing intentions, attitudes toward a product, and

price considerations.

Recommendation

Building on these insights, businesses and marketers should design tailored strategies that address the psychological drivers of consumer behavior while accounting for variations in price sensitivity, gender, and educational background. A deeper understanding of these factors can help create more effective marketing approaches that resonate with diverse consumer segments. Additionally, future research should explore the interplay between these variables and other demographic and socio-economic factors to refine market positioning and enhance consumer engagement in the packaged food and beverage industry.

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Determinants of Voluntary Tax Compliance in Ethiopia: Systematic Literature Review using the Vote Counting Technique

By

Beza Muche Tekal

Abstract

Taxes are undoubtedly the most important source of revenue for governments in both developed and developing nations. Like many developing nations, Ethiopia finds it challenging to increase tax revenue to the level needed to support economic growth. In Ethiopia, there is a large discrepancy between the amount of tax included in the budget and the amount of tax actually collected as a result of taxpayer non-compliance behavior. Therefore, the goal of this study was to determine, via a thorough assessment of the literature, the key elements that frequently influence taxpayers' voluntary tax compliance behavior in Ethiopia. The literature includes published empirical research works as well as unpublished research outputs in different local universities website. The period of the study covers from 2014 to 2021. Vote counting technique, a weak type of meta-analysis, was used to analyze the results of the research that were evaluated, and conclusions were drawn based on the results of the vast majority of empirical studies. Consequently, the results of the current study showed that tax rates, compliance cost, perceptions of government spending, simplicity of the tax system, probability of detection in tax audit, perceptions of equity and fairness, peer influence, tax knowledge, personal financial constraint and education level are the major significant determinants of voluntary tax compliance in Ethiopia. Finally; the study suggested that the revenue and customs authority use these factors as a roadmap to enhance tax compliance and hence increase revenue mobilization.

Keywords: Voluntary tax compliance, vote counting technique, weak form of meta-analysis and systematic literature review.

1 Correspondence: Department of Accounting and Finance, College of Business and Economics, Debre Markos University, Debre Markos, Ethiopia; bezamt@gmail.com or beza_muche@dmu.edu.et
ORCID ID: <https://orcid.org/0000-0002-5486-2250>

1. Introduction

According to Lymer & Oats (2009), a tax is a compulsory levy, imposed by government or other tax raising body, on income, expenditure, or capital assets, for which the taxpayer receives nothing specific in return (Lymer & Oats, 2009). It is obvious that taxes are the most significant source of income for governments of both developing and developed countries (Manchilot, 2019). Even though tax revenue is a potent tool in the government's ammunition for shifting consumer spending power from citizens to the government to finance public expenditures, most people find it difficult to pay their taxes on time and in full because of a negative attitude. After that, they adopt a number of steps to lower their tax obligation (Amina & Saniy, 2015; Manchilot, 2019). The level of tax compliance in the nation is one factor that affects the quantity of tax revenue generated.

Tax compliance does not have a single, agreed definition. For instance, tax compliance, as defined by James & Alley (2002), refers to a person's readiness to behave in accordance with both the letter and the spirit of the tax legislation and administration without resorting to enforcement action. According to James & Alley (2010), tax compliance is the accurate reporting of revenue and the justification of expenses under the applicable tax legislation. According to Kirchler (2007), tax compliance refers to a taxpayer's capacity and willingness to abide by the tax laws, which are influenced by their morals, the legal system, and other contextual elements at a given time and place. Based on the aforementioned definitions, tax compliance may be summed up as the taxpayers' intention or readiness to act in a way that complies with the tax code as well as their voluntary efforts to make timely tax payments (Manchilot, 2019).

Tax non-compliance, on the other hand, refers to violations of the nation's tax laws and regulations (Noor, Jeyapalan, & Uchenna, 2014; Haile & Destaw, 2020). Individuals that have a tax non-compliance attitude are those who do not honor their tax obligations. Tax non-compliance was widely described by Loo (2006) as include the following: failure to file a tax return; understatement of taxable income; overstatement of tax claims, such as deductions and exemptions; and inability to pay tax liabilities in a timely manner. Tax evasion is socially detrimental because it can lower tax receipts, skew the labor market, and erode state stability by enhancing the perception of deceit and fraud (Manchilot, 2019; Netsanet & Biniam, 2020). In emerging nations, there is a growing culture of noncompliance with tax obligations, which lowers the ability to generate the intended amount of money and causes budget deficits. To this end, Giulia et al. (2014) and Ahlerup et al. (2015) argued that although developing countries, especially those in sub-Saharan Africa, have a high potential to generate tax revenue to support their economic development, the tax revenue collected by these governments currently represents a much smaller percentage of their GDPs.

Like many developing nations, Ethiopia finds it challenging to increase tax revenue to the level needed to support economic growth. The difference between the amount of tax allocated in the budget and the amount actually collected is significant as a result of taxpayer non-compliance (Esmael & Mohammed, 2023). The actual tax share of GDP remains at a low level (Lashetew, 2019). The majority of tax payers in Ethiopia were found to be non-compliant with the tax system (Meaza, 2018). This is mostly because people do not fully comprehend the purposes of taxes, and many taxpayers are still unaware that the taxes they have paid would provide them with various services (Lashetew, 2019). The low tax to GDP ratio in Ethiopia is a result of this low degree of tax compliance behavior. For instance, FDRE National Planning Commission (2016, p. 108) reports that the tax to GDP ratio collected in GTP I was 13.3% even though the government had planned to raise 15.3%, which is less than the average for developed countries (25% - 35%), developing countries (18%-25%), and even sub-Saharan African countries (16%). Due to Ethiopia's extremely low tax collection as a percentage of GDP, domestic resource mobilization through taxation is still in its infancy (Neway, Kenenisa & Woldemicael, 2018; Manchilot, 2019).

Numerous research on tax compliance have been undertaken in Ethiopia over the past 20 years, but no consistency in the factors affecting tax compliance has been attained (Manchilot, 2019; Abdulsemed, 2019). As predictors of tax compliance, too many and various explaining factors have been suggested in the literature (Christian, 2015; Manchilot, 2019; Alemayehu, 2020; Haile & Destaw, 2020; Netsanet & Biniam, 2020; Mohammed & Simachew, 2019; Abibual, 2019; Tsigereda, 2020; Bekure, 2021). Therefore, the purpose of the current study is to identify the major common factors that determine tax compliance behavior of tax payers in Ethiopia.

2. Methodology

Several research have been undertaken in the past to explore the factors that influence voluntary tax compliance in Ethiopia, and the bulk of these studies produced inconsistent findings. Therefore, the goal of the current study is to identify, through a thorough literature analysis, the key variables that determine voluntary tax compliance in Ethiopia. The literature consists of both published empirical research articles and unpublished research results that can be found on the websites of various regional universities. Only studies that employed taxpayers' tax compliance behavior in Ethiopia as the dependent variable were eligible for inclusion in the review's final analysis. The study's time frame is from 2014 to 2021. As a result, the author found 29 studies that matched the aforementioned requirements (tables 1 and 2 below). Vote counting methodology, a weak type of meta-analysis, is a method of synthesis that can be used to analyze the results of the studies that have been examined (Hedges & Olkin, 1980). The vote-counting approach, in essence, sums up the number of studies that find a positive effect, a negative effect, or a non-significant effect on tax compliance for each independent factor (Zou, 1998). Finally, the

results of many empirical researches were compiled and analyzed, and conclusions were drawn for each factor based on the results of the vast majority of empirical investigations.

Theoretical Approaches to Tax Compliance

The economic method and the behavioral approach are the two basic frameworks for comprehending tax compliance concerns (James, Hasseldine, Hite, and Toumi, 2001). The behavioral method incorporates ideas from fields like psychology and sociology, whereas the economic approach is established on the idea of economic rationality (Meaza, 2018).

Economic Deterrence Theory

According to the economic deterrence theory, the tax rate determines the advantages of evasion, and the likelihood of being caught and the associated penalties (Allingham & Sandmo, 1972). Economic considerations, also known as deterrence theory, in connection to tax compliance refer to activities that are associated with the costs and rewards of doing the acts (Loo, 2006). These factors include tax rates, tax audits, and perceptions of government expenditure. Economic theories suggest that taxpayers "play the audit lottery," that is, they calculate the financial ramifications of various compliant options, such as whether or not to evade taxes; the likelihood of being caught and the ensuing consequences; and, after adjusting for the desired level of risk, they select the option that maximizes their expected after-tax return or profit (Christian, 2015).

Psychology Theories

The social/fiscal psychological model places emphasis on psychological elements such as moral principles and the belief that the tax code and taxing authority are fair (Devos, 2014; Christian, 2015). Contrary to the economic deterrent model, the social psychology model focuses on how social relationships and customs relate to tax compliance (Yesegat & Fjeldstad, 2016). According to the theory, a person's peer groups' actions may have an impact on their perceptions of the tax system, attitudes toward it, and compliance behavior. It is believed that the perceptions and compliance choices of others will be influenced by the compliance behavior of peer groups including friends, neighbors, and family. More particular, peer groups' noncompliant choices may lower others' levels of tax compliance. Psychological models of tax compliance, according to Trivedi & Shehata (2005), presuppose that psychological elements, such as moral and ethical considerations, are as significant to tax payers and that tax payers may comply even when the danger of audit is low.

Determinants of Tax Compliance

Literature indicates that tax compliance determinants are classified in to four categories (Kirchler, 2007; Loo, 2006; Tilahun & Yidersal, 2014; Abdu & Wondimu, 2019; Manchilot, 2018; Kanbiro, 2018; Meaza, 2018; Manchilot, 2019; Gashaw, 2019; Abibual, 2019; Tsigereda, 2020; Alemayehu, 2020; Haile & Destaw, 2020; Netsanet & Biniam, 2020; Mohammed & Simachew, 2019; Bekure, 2021). The four categories are: Economic factors (tax rates, compliance cost and perceptions of government spending); Institutional factors (efficiency of the tax authority, simplicity of the tax system and Probability of detection in tax audit); Social factors (perceptions of equity and fairness, change in government policy, Peer influence); and Individual and demographic factors (tax knowledge, awareness of offences and penalties, personal financial constraint, gender, age and education level). Empirical evidences related to each factor are discussed below.

1. Individual and Demographic Factors (tax knowledge, awareness of offences and penalties, personal financial constraint, gender, age and education level)

1.1. Tax Knowledge: The effect of tax knowledge on compliance behavior has been examined in several researches. Education level is a crucial factor that affects a person's understanding of taxes. Tax knowledge is linked to taxpayers' capacity to comprehend tax regulations and willingness to abide by them as one of the factors affecting compliance. A part of information that is pertinent to compliance is broad understanding of taxation. Through education, the taxpayer learns about their rights, duties, and tax-paying procedures as well as the consequences of not complying (Machogu & Amayi, 2013). Tax knowledge improves taxpayers' understanding of tax laws (positive association) and regulations and their capacity to comply (Meaza, 2018; Mesele, 2018; Abibual, 2019; Alemayehu, 2020; Bekure, 2021, Tsigereda, 2020), or it suggests that tax payers who are aware of and comprehend tax rules and regulations fulfill their obligations or adhere to taxation (Maseko, 2015; Mohammed & Simachew, 2019). In a similar vein, Abdu and Wondimu (2019) indicate that tax payers are more likely to be in greater tax compliance levels if they have good awareness and knowledge of the tax system. For any government or tax collecting agency, understanding tax payer knowledge and compliance behavior is essential, particularly in the context of self-assessment (Niway & Wondwossen, 2015; Redae & Sekhon, 2016; Kanbiro, 2018; Abdu & Wondimu, 2019; Dereje, 2020). On the contrary, Ashenafi (2018) discovered through his empirical study that tax knowledge has a major negative impact on tax compliance since those who are aware of the tax system (the laws and regulations) plainly find ways to avoid paying taxes or to be non-compliant. On the other hand, an empirical study by Tadesse & Goitom (2014) and Mitiku (2020) revealed that taxpayers' tax compliance behavior is not significantly influenced by their understanding of taxes.

1.2. Personal Financial Constraint: Personal financial constraints are thought to have a negative effect on

tax compliance because they may lead a person to prioritize basic survival needs over tax obligations, which results in low compliance (Tilahun & Yidersal, 2014; Meaza, 2018; Tadesse & Goitom, 2014; Netsanet & Biniam, 2020). It is implied that taxpayers who face serious financial hardships would often be less compliant than other taxpayers.

1.3. Gender: It is discovered to be a significant factor in predicting compliance behavior. It has been discovered that having a male gender has an average significant negative impact on category tax payers' compliance behavior. Male taxpayers are less likely than female taxpayers to exhibit compliance behavior (Haile & Destaw, 2020). Women have been found to be more compliant than males' taxpayers, meaning that they are more likely than men to have a positive voluntary compliance attitude (Kanbiro, 2018; Seid & Fissaha, 2020; Alemayehu, 2020). This may be because, in accordance with Ethiopian culture as a whole, women often obey religious norms, cultural traditions, social group beliefs, and other national laws more than men do (Kanbiro, 2018). Since female business income taxpayers have a more positive attitude toward voluntary compliance than male business income taxpayers, this finding offers a potential recommendation for the tax authority and policy makers to work on encouraging female taxpayers and educating male taxpayers to comply as much as possible with females. In contrast to the conclusions of the aforementioned empirical investigations, Tilahun & Yidersal (2014) discovered that gender had no appreciable impact on tax compliance which is consistent with other empirical studies (Meaza, 2018; Bekure, 2021; Netsanet & Biniam, 2020).

1.4. Age: Various conclusions have been reached by researchers regarding the connection between age and tax compliance. For instance, Kanbiro (2018) found in his empirical study that older taxpayers are more likely than younger ones to have a good attitude about tax voluntary compliance, suggesting that as a taxpayer's age rises, so too does the likelihood that they will pay their fair share of taxes. This may be due to the fact that as age increases the knowledge of taxation as well as experience of tax payment along with its benefit for nation building improves. Similarly, Netsanet & Biniam (2020) on their study investigated that older taxpayers has positive compliance attitude than younger tax payers (Alemayehu, 2020). The fact that younger taxpayers are less experienced with the tax system, risk-takers, and have been demonstrated to have less established moral obligations to pay taxes may help to explain this. The government should educate the young population about taxes, according to these studies, because young taxpayers tend to be less compliant than older ones. On the contrary, other researchers found that age has no discernible impact on tax compliance (Meaza, 2018; Bekure, 2021; Abibual, 2019).

1.5. Education Level: The direct and positive association between educational attainment and tax compliance has previously been documented. The level of education is discovered to be a substantial significant driver of category tax payers' tax compliance behavior. Having completed secondary

education as well as college or higher does have a statistically significant positive difference on the compliance behavior relative to primary level completed, even though tax payers without formal education do not have a statistically significant difference in terms of compliance behavior relative to primary level completes (Haile & Destaw, 2020). This is because tax payers' education levels will make it easier for them to comprehend the tax system and behave appropriately (Meaza, 2018). A likelihood of compliance is directly correlated with education level. Even though educated taxpayers may be aware of noncompliance prospects, their possible stronger comprehension of the tax code and higher moral development encourage a more positive attitude toward the tax payer and, as a result, greater compliance (Frehiywot & Lemma, 2018). This suggests that the likelihood of tax payers being in higher tax compliance levels is induced by their degree of education (Abdu & Wondimu, 2019), or that as education level rises, the number of compliant taxpayers rises (Niway & Wondwossen, 2015). On the other side Abibual (2019) and Netsanet & Biniam (2020) on their study showed that educational level of tax payers has negative impact on tax compliance. The implication is that as education levels rise, compliance levels fall, increasing the likelihood of tax evasion (become more aware about the loopholes to evade tax). On the other hand, Kanbiro (2018) found that tax payers' tax compliance behavior is not significantly impacted by their education level.

1.6. Awareness of Offences and Penalties: Results from earlier empirical studies showed a positive and significant relationship between compliance attitude and awareness of tax evasion offenses and penalties (Allingham & Sandmo, 1972; Amina & Saniy, 2015; Meaza, 2018; Kanbiro, 2018; Alemayehu, 2020, Tsigereda, 2020). This suggests that the higher the penalty, the more it deters future tax avoidance. The likelihood of tax evasion will be decreased if the taxpayers are informed of the crimes they are committing and the penalties for doing so (Tilahun & Yidersal, 2014; Kanbiro, 2018; Dereje, 2020; Abibaker, 2021). In contrast to the previous finding, a study by Netsanet & Biniam (2020) found that tax compliance is not significantly impacted by awareness of offenses and penalties which is also supported by other previous studies (Tadesse & Goitom, 2014; Muluken, 2017).

2. Institutional Factors (probability of detection in tax audit, simplicity of the tax system and efficiency of tax authority)

2.1. Probability of Detection in Tax Audit: Tax audits have a major goal of increasing voluntary compliance, which can be a significant contribution to tax compliance. However, tax audit is one of the most sensitive interactions between tax payers and tax authority in Ethiopia. It impose burden on tax payers in greater or lesser extent depending on the number and probability of interaction with the authority (Abdulsemed, 2019). The probability of non-detection in tax auditing has negative relationship with compliance behavior. The result implies that an increase in the probability of non-detection in tax

auditing leads to a decrease in the compliance behavior. The likelihood that tax payers will comply with the law is decreased when a tax payer's idea in a tax audit moves from successful detection to non-detection (Haile & Destaw, 2020). On the other hand, the probability of being caught by tax audit has positive significant effect on taxpayers' voluntary compliance behavior (Tadesse & Goitom, 2014; Ashenafi, 2018; Frehiywot & Lemma, 2018; Abibual, 2019; Tsigereda, 2020). This implies that taxpayers comply with taxation because of fear of being detected by the tax audit (Kanbiro, 2018). The probability of being audited by the tax authority is very low in Ethiopia but taxpayers' believe that if audited the probabilities of being detected by the tax authority for not declaring the exact tax is high. As a result, improving tax compliance should result from increasing the number of audits, which also raises the likelihood of being audited (Netsanet & Biniam, 2020). Taxpayers may be more cautious when filing their tax forms, record all income, and claim the appropriate deductions to determine their tax burden if audit rates and audit care are high (Mesele, 2018; Abdulsemed, 2019; Bekure, 2021). Therefore; these findings suggested that the switch from intermittent auditing to continuous auditing raises the likelihood of compliance behavior (Meaza, 2018; Haile & Destaw, 2020; Alemayehu, 2020). These findings are consistent with Allingham & Sandmo's (1972) economic model of tax compliance. Contrary to what the aforementioned empirical investigations indicated, Tilahun & Yidersal (2014) discovered that the likelihood of an audit is not a significant factor in influencing tax compliance behavior. One argument would be that previous audits might not be as disastrous as taxpayers fear (Dereje, 2020).

2.2. Simplicity of the Tax System: An essential factor in determining tax compliance level and having a favorable impact on tax payers' tax compliance behavior is how simple the tax rules and regulations are. The result is that tax payers are more likely to be in greater tax compliance levels if the tax system is transparent and easy to understand for them (Abdu & Wondimu, 2019; Abibual, 2019; Tsigereda, 2020). This implies that making the tax return simpler will motivate taxpayers to file their taxes themselves rather than hiring a tax professional, hence lowering compliance costs, which are the primary benefit of self-assessment (Niway & Wondwossen, 2015; Kanbiro, 2018; Ashenafi, 2018). The accuracy of the returns and the determination of the tax liabilities are time-consuming tasks that taxpayers do not wish to do. Therefore, the best strategy to assure tax compliance is to simplify the tax administration system, which reduces compliance costs (Netsanet & Biniam, 2020; Alemayehu, 2020; Bekure, 2021).

2.3. Efficiency of Tax Authority: The effectiveness of tax administration by revenue authorities has a favorable impact on taxpayers' tax compliance behavior (Mohammed & Simachew, 2019). Taxpayers are more likely to comply if they are pleased with the authority's effectiveness/service, which includes offering trainings and advice, treating them fairly, and increasing the authority's capacity to process appeals promptly and fairly (Muluken, 2017; Ashenafi, 2018; Abibual, 2019). The likelihood that individual taxpayers will behave in a tax-compliant manner grew as the tax authority's efficiency rose.

Because of this, tax administration with a capable and accountable workforce is crucial to raising tax payer compliance levels (Frehiywot & Lemma, 2018; Abibaker, 2021).

3. Social Factors (perception on equity and fairness, change in government policy and peer influence)

3.1. Perception on Equity and Fairness: It has been discovered that tax compliance behavior and tax payer perception of how taxes and benefits are distributed are positively correlated. Taxpayers who have a favorable perception of equity in the tax system are more likely to comply with the law than those who have perception of inequality (Niway & Wondwossen, 2015; Muluken, 2017; Geletaw, 2017; Abibual, 2019; Haile & Destaw, 2020; Alemayehu, 2020, Tsigereda, 2020). In extreme situations, public perceptions of unfairness can lead to a loss of legitimacy and may discourage potential taxpayers from voluntarily joining the tax system if people are forced to pay taxes that are not determined by their ability to pay (Tilahun & Yidersal, 2014; Daba, 2017; Gashaw, 2019). Similarly; Manchilot (2018) also found a positive and significant relationship between tax compliance and fairness of the tax system and his finding suggests that making the tax system fair leads to higher levels of tax compliance behavior of the taxpayers (Netsanet & Biniam, 2020). On the contrary, Meaza (2018) on her empirical study found that perception on equity and fairness has no significant effect on voluntary tax compliance behavior of tax payers. Abdu & Wondimu (2019) on their study also indicated that tax fairness has no statistically significant effect on tax compliance behavior (Tadesse & Goitom, 2014; Dereje, 2020).

3.2. Change in Government Policy: Adverse changes in government policies including increases in fuel prices, electricity and water rates negatively affect tax compliance behavior of tax payers (Tadesse & Goitom, 2014; Tilahun & Yidersal, 2014; Mohammed & Simachew, 2019; Alemayehu, 2020). In contrast, Meaza (2018) and Bekure (2021) on their empirical study found that change in government policy has no significant effect on voluntary tax compliance behavior of tax payers.

3.3. Peer Influence: The conduct of a person's reference group, such as neighbors and friends, can have an impact on how compliant taxpayers are with the tax system. In relation to this, earlier empirical investigations have demonstrated both positive and negative effects of reference group on taxpayer compliance with a tax system. While honestly adhering to the reference group's tax laws has a positive impact on taxpayers' attitudes about taxation, reference group non-compliances appear to have a negative impact on other taxpayers' compliance with taxation (Tilahun & Yidersal, 2014; Muluken, 2017; Ashenafi, 2018; Frehiywot & Lemma, 2018; Abibual, 2019; Haile & Destaw, 2020). Since taxpayers are eager to consult their immediate family members or peers about their tax issues, the influence of referent groups tends to be significant (Meaza, 2018). Taxpayers will elect to commit the same offense if they believe that their peers are noncompliant and have never faced consequences (Davos, 2014; Mohammed & Simachew, 2019; Tsigereda, 2020, Bekure, 2021). In consistent with these findings, the psychology

theory of tax compliance also stated that other people's opinions and compliance choices are likely to be influenced by the compliance behavior of peer groups including friends, neighbors, and family members. More specifically, peer groups' noncompliant choices may have an impact on how well others comply with tax laws (Devos, 2014; Christian, 2015; Niway & Wondwossen, 2015). In contrast with the above discussion, an empirical study conducted by Manchilot (2018) revealed that tax compliance decision of referral groups have no significant effect on other tax payers decision which implies that taxpayers make their compliance decision independent of others decision (Mesele, 2018).

4. Economic Factors (tax rate, compliance cost and perception on government spending)

4.1. Tax rate: According to Muoki et al. (2014), tax rate includes both the rate of income tax that is applicable to an individual or firm and the rate of tax on goods and services. Tax rate is found to have statistically significant negative effect on the compliance behavior of tax payers (Abdu & Wondimu, 2019; Frehiywot & Lemma, 2018; Abibual, 2019; Bekure, 2021). The implication is that, the higher the tax rate, the lower is the level of tax compliance behavior among tax payers (Haile & Destaw, 2020; Mitiku, 2020) which is consistent with economic based theory of tax compliance (Allingham & Sandmo, 1972). In other words, the effect is that higher tax rates incentivize tax avoidance and evasion, which lowers tax compliance levels. The tax authority must therefore maintain it to a minimal and implement it in a way that promotes tax compliance behavior (Manchilot, 2018; Mohammed & Simachew, 2019).

On the other side, Netsanet & Biniam (2020) and Tilahun & Yidersal (2014) on their study found that tax rate is not an important factor that determines tax compliance level of the tax payers.

4.2. Compliance Cost: Consistent with economic based theory of tax compliance developed by Allingham & Sandmo (1972), the expense to the tax payer of adhering to the law in order to meet their tax obligations as a company affects how compliant they. Higher compliance costs have a statistically significant negative impact on the compliance behavior of category tax payers (Manchilot, 2018; Frehiywot & Lemma, 2018). The findings suggest that either an increase in compliance costs incurred by taxpayers to comply with their tax obligations decreases tax compliance or a shift from low compliance cost to higher compliance cost results in taxpayers being less likely to exhibit compliance behavior than taxpayers with lower compliance costs (Haile & Destaw, 2020; Mitiku, 2020). Therefore, it is important to design tax compliance costs in a way that discourages tax evasion or compliance costs should be kept to a minimum (Manchilot, 2018).

4.3. Perceptions on Government Spending: The perception of the legitimacy, effectiveness, and credibility of the government, or, more simply, the perception of government spending, positively affects taxpayer compliance and, as a result, the amount of tax revenue collected by the government (Manchilot, 2018).

and Abibual, 2019). The fair terms of trade between taxpayers' private consumption and the provision of public goods by the government can be estimated (Amina & Saniy, 2015). Tax payer compliance decisions are significantly influenced by the quality of tax services and government spending goals (Maseko, 2015). In other words, the amount of compliance that should be anticipated is equivalent to the taxpayers' judgment of the government in terms of accountability, probity, proper management, transparency, and other virtues (Abdu & Wondimu, 2019). In contrast, taxpayers' will tend to evade tax if they perceive that the government spends tax money unwisely or if they perceive that the government is spending too much on unnecessary things (Abdulsemed, 2019; Netsanet & Biniam, 2020, Tsigereda, 2020). The implication is that voluntary compliance will rise if the government wisely allocates national revenue for necessities like public transportation, health care, and education, or if tax payers are pleased with the services the government offers (Meaza, 2018; Abdu & Wondimu, 2019; Gashaw, 2019; Tilahun & Yidersal, 2014; Niway & Wondwossen, 2015).

In contrast to the explanation above, Ashenafi (2018) showed in his empirical study that tax compliance behavior is not significantly influenced by how people perceive government spending. This was due to the extreme differences in how the general public perceives how the government uses the tax money it receives, as well as the respondents' varying levels of information exposure, political allegiance, and first-hand knowledge of the actual infrastructural development taking place in their region or across the nation (Tadesse & Goitom, 2014; Mesele, 2018; Bekure, 2021).

Table1. Tax Compliance Empirical Studies Reviewed

Author (s)	Theory / Model	Year of publication	Statistical Method	Sample Size used
Mesele	Economic based and psychology theories	2018	Multiple regression	378
Ashenafi	Economic based and psychology theories	2018	Binary logit model	120
Meaza	Economic based and psychology theories	2018	ordered logistic regression	120
Abdu&Wondimu	Economic based and psychology theories	2019	Ordered logistic regression	311
Gashaw	Economic based and Socio-psychology theories	2019	Binary logistic regression	201
Niway & Wondwossen	Institutional Anomie Theory	2015	Ordered logistic regression	377
Abdulsemed	Economic based and social factor theories	2019	Multiple linear regression	378

Netsanet&Biniam	Economic based theory	2020	Ordered logit model	366
Manchilot	Institutional Anomie Theory, Theory of planned behavior and Allingham and Sandmo Model	2018	Meta-analysis	
Manchilot	Economic based and psychology theories	2018	Ordered logit model	248
Haile &Destaw	Economic deterrence and psychology theories	2020	Binary logistic regression	295
Frehiywot & Lemma	Economic based theory	2018	Ordered logistic regression	185
Kanbiro	Economic based theory	2018	Binary logistic regression	291
Mohammed &Simachew	Classical Economic deterrence theory and Behavioral tax compliance behavior model	2019	Multiple regression	299
Alemayehu	Deterrent (Economic) model, Social-psychology Model, Comparative Treatment and Fiscal Exchange	2020	Multiple linear regression	264
Daba	-	2017	Ordinary Least Squares regression	161
Amina&Saniy	Economic based and Socio- psychology theories	2015	Multiple linear regression	384
Redae&Sekhon	Social learning theory, Theory of Planned Behaviour, Attribution Theory	2016	Descriptive statistics	398
Seid&Fissha	Economic based theory	2020	Binary logit model	408
Tilahun&Ydersal	Economic based and psychology theories	2014	T-test and ANOVA	201
Geletaw	Economic deterrence, Fiscal exchange, social influence model, comparative treatment model and political legitimacy theory.	2017	Multiple linear regression	225
Bekure	Economic based and psychology theories	2021	Multiple linear regression	381
Mitiku		2020	Multiple linear regression	325
Abibaker	Economic based theory, psychology theory, ability theory, benefit theory and proportionate theory.	2021	Multiple linear regression	150

Dereje		2020	Binary logistic regression	346
Tadesse&Goitom		2014	Ordered logistic regression	105
Muluken	Institutional Anomie Theory, Theory of planned behavior and Allingham and Sandmo Model	2017	Multiple linear regression	54
Tsigereda		2020	Multiple linear regression	394
Abibual	Economic based theory and psychology theory	2019	ordered logistic regression	364

Table 2: Summary of Variables Used and Association with Tax Compliance

S.No	Variables	Number of findings which displayed:			
		Positive association	Negative association	No association	Totals
A	Economic Factors				
1	Tax rate	-	12	2	14
2	Compliance cost	-	5	-	5
3	Perception on government spending (positive perception)	13	-	4	17
B	Institutional Factors				
1	Efficiency of the tax authority	6	-	-	6
2	Simplicity of the tax system	9	-	-	9
3	Probability of detection in tax audit	16	-	2	18
C	Social Factors				
1	Perception on equity and fairness (positive perception)	12	-	4	16
2	Change in government policy	-	4	1	5
3	Peer influence (compliance of peers)	10	-	4	14
D	Individual and Demographic Factors				
1	Tax knowledge	15	2	2	19
2	Awareness of offences and penalties	8	-	3	11
3	Personal financial constraint	-	4	-	4
4	Gender (being male)	-	5	4	9
5	Age	3	-	3	6
6	Education level	6	-	2	8

Conclusion

Vote counting technique, a weak type of meta-analysis, was used to analyze the results of the research that were evaluated, and conclusions were drawn based on the results of the vast majority of empirical studies. Accordingly, despite the existence of too many factors that determine voluntary tax compliance, the findings of the current study revealed that economic factors (tax rates, compliance cost and perceptions of government spending); institutional factors (efficiency of the tax authority, simplicity of the tax system and Probability of detection in tax audit); social factors (perceptions of equity and fairness, change in government policy, Peer influence); and individual and demographic factors (tax knowledge, awareness of offences and penalties, personal financial constraint and education level) are the major significant determinants of voluntary tax compliance in Ethiopia. This demonstrates that if the government doesn't use its resources for the welfare of its people and the tax system is not equitable and fair, no severe penalties, high tax rate, adverse changes in government policies, high compliance cost, low probability of tax audit, complex tax system, low level of tax knowledge, crucial personal financial constraint of tax payers and if there are referral group (friends, relatives etc.) negative pressures, compliance behavior of the tax payers can be negatively affected and their level of tax compliance becomes low. However, the influence of gender and age is unclear (table 2). Thus; the study suggested that the revenue and customs authority can thus utilize these factors as a reference to enhance tax compliance and thereby increase revenue mobilization.

Limitation of the study and Direction for Further Study

The conclusions reached in this study are only a compilation of findings from related empirical studies that did not show a statistically significant impact evaluation (meta-analysis) of the identified factors on taxpayers' voluntary tax compliance behavior. Therefore, by taking into account the statistical significant effect of the identified factors, future researchers might do comparable research through Meta-Analysis.

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The Effects of Strategic Innovation on Competitive Advantage with Mediating Role of Human Capital, A case of SMEs in Ethiopia

By

Tafese Niguse¹, Brehanu Borji², Shashi Kant³

Abstract

This purpose of this study is to investigate the association among strategic innovation, human capital, and competitive advantage in SMEs. Both primary and secondary data was used in this study. By using non probability known as convenience sampling technique, the researchers selected 384 respondents from 950 SMEs operating in Sidama Regional state. The data collected by structured questionnaire was analyzed by SEM with the help of EFA and CFA. Descriptive and inferential statistics was done by use SPSS and AMOS version 23. According to the findings of this study, strategic innovation directly influences competitive advantage with the value 0.45 meaning that, understanding innovative strategies in SMEs helps to perform more than competitors. The indirect effect of strategic innovation on competitive advantage through human capital valued at 0.47, underscores the role of human capital in leveraging strategic innovation for competitive gains. Overall, the total influence of 0.92 indicates that strategic innovation significantly impacts competitive advantage, both directly and through human capital, highlighting the importance of both factors in this relationship. Furthermore, the study revealed that human capital plays a partial mediating role in this connection, suggesting that businesses that successfully use strategic innovation are more likely to invest on human capital that improve their competitive posture. The results emphasize how crucial it is to incorporate innovative strategies into strategic decision-making and how human capital plays a crucial role in enabling competitive advantage.

Keywords: Innovative strategies, Human capital, Competitive Advantage, SMEs

1 PhD candidate, Marketing management Department, tafeseniguse80@gmail.com, Bule Hora University, Ethiopia.

2 Professor in marketing management, brehanub2017@gmail.com, Hawassa University, Hawassa Ethiopia.

3 Assistant professor in management, skant317@gmail.com, Bule Hora University, Bule Hora Ethiopia.

1. Introduction

1.1 Background of the Study

Strategic innovation has emerged as a vital origin of a competitive edge in today's quickly changing global marketplace. Strategic innovation was first defined by Markides (1997) as a fundamental reconceptualization of business models that revitalizes current markets by violating the norms and changing the dynamics of competition (AlQershi et al., 2021). When businesses find holes in the industry's positioning map and choose to fill them, they can enter new, undifferentiated markets. According to AlQershi and Mokhtar (2020), strategic innovation enables businesses to reframe competitiveness and develop new value propositions by highlighting the potential for industry transformation. Organizations can develop new business models and strategies through strategic innovation that improve operational effectiveness and provide consumers with distinctive value (Zhang, 2023). The notion of strategic innovation originated in theories of innovation management and strategic management (Datiko, 2024).

Research on association among competitive edge, human capital, and strategy of innovation has produced a variety of findings. While Datiko, (2024) found that strategic innovation does not improve human capital; Chi et al., (2020) contended that strategic innovation does not directly increase competitive advantage among participants in Indonesia. On the other hand, recent research, such as conducted by Al-Surmi et al., (2020), (Chen et al., 2021), and Wahyuni, (2024), has demonstrated the direct and indirect benefits of strategic innovation for SMEs' competitive advantage and human capital. According to Bekata & Kero, (2024), strategic innovation and human capital are positively correlated. Additionally, Chi et al. (2020) discovered that the competitive advantage and human capital of SMEs are directly impacted by strategic innovation. In support of this, Chtourou Ben Amar & Ben Romdhane (2020) discovered that strategic innovation has positive effects on competitive advantage and human capital.

The relationship between strategic innovation, human capital, and competitive advantage may be understood using the Resource-Based View (RBV), Schumpeter's supposition of innovation, and human capital theory. Human capital theory states that the skills and expertise of an organization's personnel significantly increase its effectiveness. Businesses that make investments in employee development create an atmosphere that encourages creativity, which boosts their competitive edge (Fathi et al., 2021). According to the RBV, maintaining a competitive advantage requires distinctive resources, especially human capital. Businesses might outperform rivals by utilizing their highly qualified personnel, as these resources are frequently precious, uncommon, and hard to replicate. This is supported by empirical research, which demonstrates that companies with highly trained employees often perform better and are better at putting strategic ideas into practice (Wang et al., 2023). Schumpeter's theory emphasizes the importance of entrepreneurs and their potential for invention, underscoring the critical role that

innovation plays in economic progress. His viewpoint is consistent with actual data showing that businesses that embrace innovation typically achieve greater competitive advantages (Al Hebsi & Al-Shami, 2022).

Since strategic innovation and competitive advantage have a complicated rather than straightforward relationship, it makes sense to include mediation in this situation. One important mediator that shows how creative tactics result in advantages over competitors is human capital. Even the strongest inventions might fail in the absence of a skilled staff, underscoring the importance of human capital in this dynamic. Since human capital has a direct impact on the successful implementation of strategic innovations, it is especially well-suited as a mediator. Maintaining a competitive edge requires a trained staff that can both innovate and adjust to changing market needs. The idea that human capital is a strategic asset, crucial to the innovation process, and necessary to maintain competitive advantage in today's quickly evolving corporate environment is supported by this cyclical connection.

1.2 STATEMENT OF THE PROBLEM

The combination of strategic innovation and human capital as a road to competitive advantage is an appealing ideal for SMEs, particularly in developing countries such as Ethiopia. Ideally, organizations that effectively exploit strategic innovation, supported by a talented staff, should be able to react to market changes, improve operational efficiency, and create long-term competitive advantages. However, reality frequently contradicts this ideal situation, as many Ethiopian businesses fail to execute new methods owing to a variety of obstacles (Zhang, 2023).

Empirical data reveals significant gaps in the literature regarding the link innovation competitive advantage, human capital, and innovation of strategy in Ethiopian SMEs. Although some research suggests that strategic innovation improves organizational performance, human capital is frequently ignored in these studies. Furthermore, different researchers have showed a different result, which indicates a theoretical gap of how human capital affects strategic innovation performance (Alajeeb & Al Najjar, 2022). Due to the fact that the majority of current research concentrates on industrialized economies and ignores the particular difficulties encountered by Ethiopian SMEs, there are also knowledge gaps regarding the application of these concepts within Ethiopia's distinct socioeconomic setting. Contextual issues include limited access to resources, inadequate infrastructure, and shortages of skilled personnel further impede successful innovation (Zhang, 2023).

The researchers was originally inspired to do this study since the majority of earlier research focused on the connection between competitive advantage, human capital, and strategic innovation, especially in the banking sector. This sector, for example, has been the primary topic of studies by Alkharabsheh & Al-Sarayreh, (2022), Al-Surmi et al., (2020), AlQershshi, (2021), Ateş et al., (2020), Abebe & Gemeda, EJBME, Vol. 7, No. 2, 2025

(2020), competition Borodako, (2023), Wahyuni, (2024). Nonetheless, this study's goal is to look at this topic in SMEs. Association among innovation of strategy and competitive edge in SMEs was examined by Fathi et al. (2021) and Datiko (2024); however, they neglected to include the vital component of human capital. The paucity of study on innovation of strategy and its connection to human capital and competitive advantage in SMEs, as in other developing nations, was another research need that inspired the researchers. This study is thus especially pertinent, despite growing requests from academics for in-depth research in this field; there is a dearth of scholarly work on strategic innovation.

Ethiopian SMEs are unable to successfully use innovation to obtain a competitive edge due to these knowledge gaps about the connection between strategic innovation and human capital. SMEs find it difficult to put into practice pertinent methods that address their particular issues in the absence of empirical findings catered to Ethiopia's distinct socioeconomic setting. Furthermore, their capacity to adopt new methods is restricted by a lack of study on the institutional and cultural elements, which eventually stifles growth and competitiveness (Wang et al., 2023). By examining how strategic innovation uses human capital to create competitive advantage in Ethiopian SMEs, this study seeks to close these gaps and shed light on the particular possibilities and difficulties they face.

2. LITERATURE REVIEW

2.1 Definition and origin of terms

Strategic innovation:

Strategic innovation is the process by which SMEs create and execute innovative business plans, value propositions, or strategies that radically alter their competitive environment is known as strategic innovation. Strategic innovation stresses a comprehensive strategy that redraws market boundaries and generates new demand, in contrast to traditional innovation, which usually concentrates on improvements to products or processes. This idea, which gained popularity in the early 2000s, emphasizes how important it is for businesses to adjust to the quick changes in technology and the changing tastes of their clientele (Fathi et al., 2021).

Strategic innovation dimensions

An organization's resources and operations are guaranteed to be in line with its objectives when there is strategic alignment. It leads to higher performance and a stronger competitive advantage by improving efficiency, facilitating better communication, and fostering cooperation by synchronizing internal operations with external conditions competition (Borodako, 2023).

Anticipating future trends and obstacles that might impact a business is a key component of strategic

foresight. Businesses may anticipate possible outcomes and make proactive strategy adjustments by evaluating data and market signals. In a setting that is continuously changing, this strategy promotes long-term sustainability and resilience while reducing risks and taking advantage of possibilities (Wahyuni, 2024).

Understanding consumer demands and habits via research and data analysis is the main goal of consumer insight. Businesses may develop individualized experiences that increase consumer happiness and loyalty by adjusting their marketing strategy and product offerings to these findings. In addition to encouraging innovation and preserving a competitive edge, this information aids in identifying market trends and gaps (Mokhtar, 2020).

Human capital

Human capital refers to the combined abilities, expertise, and experience of all members of a business, emphasizing their significance as essential resources for raising productivity and competitiveness. According to this idea, which was made popular by Gary Becker in the 1960s, spending money on staff development encourages innovation and adaptability, which improves results (Al-Surmi et al., 2020).

Dimensions of Human Capital

Education includes both formal and informal educational experiences that provide people information and the ability to think critically. It serves as the cornerstone for both professional and personal growth, improving a person's capacity to contribute successfully to a company and adjust to changing market needs (Arokodare & Asikhia, 2020).

Skills relate to the particular skills and proficiencies that people learn from practice, education, and experience. These might be analytical, interpersonal, or technological in character, and they are essential for improving performance, efficiency, and productivity at work (Alnoor, 2020).

Training: entails methodical procedures intended to improve workers' knowledge and abilities for particular jobs or roles. Organizations invest in training to increase workforce capability, adaptability, and alignment with strategic goals through a variety of techniques, including workshops, on-the-job training, and e-learning (Fathi et al., 2021).

Competitive advantage

Competitive advantage depicts the conditions that allow a firm to exceed competitors, such as superior technology, skilled personnel, or strong branding. Popularized by Michael Porter in the 1980s, his frameworks help SMEs leverage their unique strengths (Wang et al., 2023).

Dimensions of Competitive Advantage

Cost leadership (CO): aims to become the industry's lowest-cost manufacturer. By simplifying operations and reducing expenses, businesses may maintain profitability via high volume sales, attract price-conscious customers, and provide competitive prices while growing their market share (Distanont, 2020).

In order to better serve clients, focus strategies target a certain market segment or niche. Businesses that use this strategy focus on comprehending and satisfying the particular requirements of their target market, enabling customized goods and services that increase client happiness and loyalty ((Abebe & Gemed, 2020).

Differentiation is a tactic that places an emphasis on developing distinctive goods or services that make a statement in the market. Businesses may charge premium prices and foster brand loyalty by providing unique features, higher quality, or outstanding customer service, drawing in clients who look for value beyond price alone (Al-Surmi et al., 2020).

2.2 THEORETICAL FRAMEWORK

A number of concepts underpin the concepts of competitive advantage, human capital, and strategic innovation, providing a strong basis for comprehending how they interact.

Based View (RBV): According to the Resource-Based View (RBV), which emphasizes that resources must be valuable, rare, inimitable, and non-substitutable (VRIN), a company's unique potential and assets are crucial for acquiring and preserving a competitive edge. According to this study, human capital is a vital resource that SMEs can use to boost their competitive position and promote strategic innovation by investing in workforce development (Fathi et al., 2021). Furthermore, the Dynamic Capabilities framework emphasizes how a company may adapt to changing circumstances by integrating and reconfiguring its internal and external competences, highlighting the significance of flexibility in strategic innovation for preserving competitiveness (Alnoor, 2020).

Human Capital Theory: is particularly relevant to this study since it focuses on investments in education, training, and skill development that improve individual and organizational performance. According to this idea, human capital is a major driver of productivity and innovation, and businesses that emphasize human capital development are better positioned to effectively implement strategic innovations (AlQersh, 2021).

Innovation Diffusion Theory: sheds light on how innovative ideas and technology move inside and between businesses. This theory can assist explain the constraints and facilitators of implementing

strategic innovations in a variety of industries, particularly the significance of human capital in creating an atmosphere receptive to innovation. Understanding how innovations are conveyed and adopted can help shape strategies for improving their implementation (Zhang, 2023).

Porter Generic Competitive Strategic Model: Cost leadership, distinctiveness, and focus are the three main strategies that firms may use to gain a competitive edge, as to Porter's Generic strategies of competitive model. Being the manufacturer of industry's lowest-cost warrants competitive pricing. This is called leadership of cost. Providing unique goods or services that stand out in the marketplace and support a higher price is the main goal of differentiation. By addressing its particular demands, the focus approach aims to reach a certain market group. Businesses can improve their market position and profitability by successfully putting one of these methods into practice (AlQershi et al., 2020).

2.3. EMPIRICAL LITERATURE

A. Strategic innovation and competitive Advantage

According to Schumpeter innovation theory, Strategic innovation enhances competitive advantage by enabling businesses to differentiate themselves in the marketplace. SMEs may differentiate themselves from rivals by creating new goods, services, or procedures that cater to changing consumer demands and build a distinctive brand. Long-term success depends on fostering brand loyalty in addition to drawing in customers. Businesses that prioritize strategic innovation frequently take the lead in their sectors, bringing about game-changing inventions that upend established market dynamics (Arokodare & Asikhia, 2020). According to the Resource-Based View hypothesis, strategic innovation increases operational efficiency, enabling companies to save expenses and simplify procedures. SMEs may improve productivity and output quality by using new technologies and creative approaches. This will boost profit margins and allow them to provide competitive pricing, strengthening their market position and promoting both cost leadership and uniqueness (Fathi et al., 2021).

Strategic innovation has a substantial impact on improving consumer engagement among Ethiopian SMEs. These companies may better match their products with client preferences by actively incorporating customers in their innovation processes through feedback channels and participatory design. In addition to increasing pleasure, this customer-centric strategy builds stronger bonds with clients, which increases advocacy and loyalty. Accordingly, SMEs have a better chance of gaining a long-term competitive edge when they use strategic innovation to engage customers (Ateş et al., 2020). Strategic innovation also gives Ethiopian SMEs the adaptability they need to deal with shocks and changes in the market. The capacity to react quickly to new trends and changing consumer behaviors is essential in a corporate environment that is changing quickly (Borodako, 2023).

B. Strategic Innovation and Human Capital

According to Schumpeter and Human Capital theories, strategic innovation significantly affects human capital in industrialized countries, altering how businesses employ and educate their workforce. Organizations may improve workers' abilities and competences and promote initiative and creative thinking by cultivating an innovative culture. This setting encourages active participation in creative processes, lifelong learning, and increased engagement and work satisfaction. Employees are more likely to participate in their professional and personal development when they believe their opinions are respected, which produces an informed and driven workforce (Chen et al., 2021). The need for new skills is also fueled by strategic innovation, which encourages companies to spend money on extensive training programs that emphasize both hard and soft skills, thus increasing an organization's total capacity for innovation (Abebe & Gemed, 2020).

Based on resources based theory, emphasizing strategic innovation significantly enhances cross-departmental collaboration and team cooperation among Ethiopian SMEs, promoting information sharing and collaborative problem-solving. A wider variety of concepts and solutions are produced when people with different specializations and backgrounds collaborate on creative initiatives. Employee human capital is enhanced by this collaborative approach, which also improves networks and interpersonal skills while supporting the creative process (Chi et al., 2020). Additionally, strategic innovation-focused Ethiopian SMEs often have lower turnover rates since workers are more likely to stick with companies that provide growth chances and significant project engagement. This innovative workplace is a powerful motivator for staff retention and skill development. Because of this stability, SMEs are able to make the most of their current human resources, establishing institutional knowledge that might spur future innovation (Chtourou Ben Amar & Ben Romdhane, 2020).

C. Effect of Human Capital on Competitive Advantage

According to Porter's Generic Competitive Strategies and Human Capital Theory, human capital which includes the abilities, skills, and knowledge of an organization's workforce is essential for gaining a competitive edge in industrialized nations. SMEs improve their capacity to innovate, adapt, and satisfy market needs by investing in human resources. A staff with a high level of education and expertise increases output and efficiency, allowing companies to provide better goods and services. Profit margins rise and brand impression improves as a result of this operational excellence (Bhatiasavi & Naglis, 2020). Diverse origins can encourage originality and creative problem-solving. Companies enable workers to think critically by encouraging a culture of ongoing learning and cooperation. This is crucial for carrying out strategic objectives and negotiating challenging market conditions (Datiko, 2024).

For Ethiopian SMEs, investing in human capital is essential because it lowers staff turnover and improves retention, two factors that are critical for preserving a competitive advantage. Employee commitment is higher when they perceive prospects for growth and feel appreciated by the company. Businesses can gain institutional knowledge and experience over time thanks to this stability, which enhances their capacity to carry out projects successfully and maintain performance. Ethiopian SMEs may cultivate loyal employees who promote long-term success and market competitiveness by fostering a healthy work atmosphere and providing opportunities for advancement (Distanont, 2020).

D. Mediation of Human capital between Strategic innovation and Competitive advantage

The role of mediation of human capital on innovation of strategy and competitive advantage, as supported by the Porter Generic Competitive Strategic Model and Human Capital theory, emphasizes the vital role that workforce capabilities play in turning innovative concepts into real competitive advantages in developed countries. In order to successfully execute new initiatives, SMEs that seek strategic innovations need personnel that are both talented and flexible. A company's creative initiatives and competitive results are connected by its human capital (Fathi et al., 2021). Strategic innovation frequently entails the introduction of novel procedures, goods, or services that call for specialized knowledge and abilities. As a result, companies must improve their human resources through focused training and development initiatives in addition to investing in innovation. This investment not only improves employee skills but also prepares them to engage in new initiatives, ultimately driving operational efficiency and establishing a competitive edge (Wahyuni, 2024).

The link between strategic innovation and competitive advantage in Ethiopian SMEs is significantly enhanced by promoting employee engagement through human capital development. When workers feel empowered and valued, they are more likely to take ownership of their roles in the innovation process. This increased engagement results in higher productivity and commitment, strengthening the organization's competitive position. Thus, human capital acts as a crucial intermediary, ensuring that the full benefits of strategic innovation are realized (Abebe & Gemed, 2020). To sum up, human capital has a crucial mediating impact an association among innovation strategy and competitive edge. Ethiopian SMEs may successfully use their creative ideas for enhanced performance by investing in workforce development, highlighting the importance of using human capital as a strategic enabler for success (Bekata & Kero, 2024).

2.4 HYPOTHESIS DEVELOPMENT

Based on theoretical and empirical studies, the following hypothesis was proposed for this study.

H1: Competitive advantage is significantly impacted by strategic innovation.

H2: Human capital is significantly impacted by strategic innovation.

H3: Competitive advantage is significantly impacted by human capital.

H4: The connection between competitive advantage and strategic innovation is mediated by human capital.

2.5 CONCEPTUAL FRAMEWORK

This conceptual framework shown under figure 1 compiled from theoretical and empirical review literature. In this conceptual framework strategic innovation considered as independent variable, competitive advantage variable as dependent variable and human capital as considered as mediating variable between strategic innovation and competitive advantage.

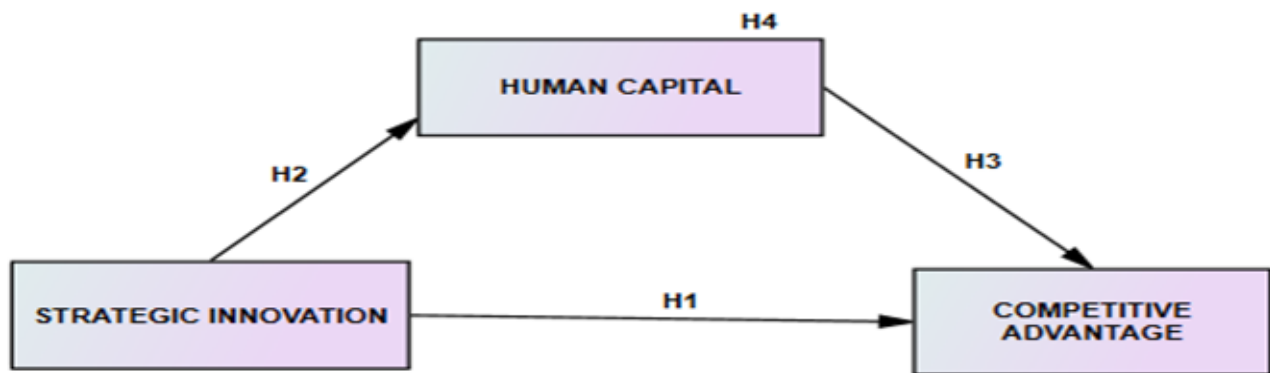


Fig 1 Conceptual framework

Source: Compiled from theoretical and empirical review literature in 2024

3. RESEARCH METHODOLOGY

This study's research methodology was created to examine the connections among competitive advantage, human capital, and strategic innovation in Ethiopian SMEs. In order to facilitate the collection and analysis of numerical data and enable a comprehensive examination of the constructs using statistical methods, a quantitative research strategy was employed. The sample respondents' data was gathered using a standardized questionnaire. In order to guarantee a comprehensive dataset and increase the validity and reliability of the results, a sample size of 384 respondents was selected from 950 SMEs utilizing non-probability, especially convenience. The researchers utilized Cochran's (2007) method, which works for huge populations, to calculate the sample size.

$$n = \frac{z^2 \cdot p \cdot q}{e^2}, \quad n = \frac{1.96 \times 1.96 \times 0.5(1-0.5)}{0.05 \times 0.05} \quad n=384$$

In this case, n is the sample size that has to be determined; p is the proportion or existence of the characteristics of the study ($p = 0.5$, maximum variability); $q = 1-p$; e is the error of acceptable margin ($\pm 5\%$ of accuracy); and $z = 1.96$ (95% level of confidence). Consequently, 384 respondents who were chosen by a systematic random sample procedure at hotels were included in the study. From 384 questionnaires distributed, 375 papers were correctly filled and returned which is used for data analysis.

The Kaiser-Meyer-Olkin (KMO) sampling adequacy test was used to determine the sample's suitability for factor analysis. A KMO score of 0.70 or above is deemed appropriate for doing factor analysis. In this investigation, the KMO value was 0.85, suggesting that the sample was suitable for the future analyses and confirming the data's robustness. Exploratory Factor Analysis (EFA) was used to determine the underlying structure of the components and to assess the validity and reliability of the measurement scales. The EFA found unique characteristics associated with the conceptions of competitive edge, innovation strategy and human capital. Factor loadings more than 0.40 were deemed important and items with lesser loadings were deleted to improve the scales and ensure they appropriately reflected the theoretical dimensions of each construct.

Following EFA, AMOS software was used to do structural equation modeling (SEM). SEM enabled the simultaneous analysis of many interactions while also providing a framework for assessing the predicted linkages between the components. Indices of fitness like Chi-Square, RMSEA, and Fit Index of Comparative (CFI) were used to identify fitness of whole model, and acceptable fit was established using defined standards. The scale development process involved a comprehensive review of relevant literature, operationalizing constructs with modified, previously validated measures. Strategic innovation items were inspired by Tidd and Bessant (2009), while human capital elements were based on Becker's (1993) framework, emphasizing skills and training. Competitive advantage items were derived from Porter's (1985) concepts, focusing on unique characteristics that enhance market positioning. Each item was pre-tested to guarantee clarity and relevance, resulting in a final set of scales with high reliability, with Cronbach's alpha coefficients above the suggested level of 0.70 per concept. This rigorous scale development approach verified that the measurements were valid and trustworthy, laying the groundwork for a thorough examination of the linkages among competitive edge, innovation of strategy, and human capital. To summarize, the study technique used a thorough quantitative approach, employing KMO, EFA, and SEM combined with AMOS software to systematically examine the constructions. The comprehensive scale construction based on related literature helped greatly to the validity and dependability of the findings, therefore boosting the overall robustness of the study.

4. RESULTS

4.1 Descriptive Statistics

Table 1: Descriptive statistics

Construct	Mean	Standard Deviation	Minimum	Maximum
Strategic innovation	3.85	0.66	2.00	5.00
Human Capital	3.82	0.68	2.00	5.00
Competitive Advantage	3.79	0.70	2.00	5.00

Source: SPSS Output, 2024

Table 1 describes the competitive advantage, human capital, and strategic innovation descriptive data analysis. There is broad agreement among respondents about the significance of strategic innovation, as evidenced by the highest mean score of 3.85 with a standard deviation of 0.66. With a mean of 3.82 and a standard deviation of 0.68, Human Capital comes in second, indicating a comparable degree of agreement. Perceptions of competitive advantage vary little, as seen by the mean of 3.79 and standard deviation of 0.70. Every construct gets a score between 2.00 and 5.00, indicating how relevant they are thought to be in the situation under study.

4.2 Multivariate Assumptions

Outliers and Missing data

There were no missing values in the examined data set, guaranteeing the assessment's completeness. Z scores were used to identify outliers using SPSS software, and it was found that respondents 66, 105, 223, and 350 had Z values higher than the ± 3 cutoff. This shows that their answers were outliers in the data set as they differed greatly from the mean. Finding these outliers is essential since their existence may distort the findings and have an impact on the research as a whole. Addressing these outliers will thus improve the precision and dependability of the conclusions drawn from the remaining data.

Normality Assessment

Table 2: Normalcy check

Variable	Min	Max	Skew	c.r.	kurtosis	c.r.
SI	1.600	5.000	-.674	-7.229	.313	4.052
HC	2.200	5.000	-.760	-4.482	.367	.667
CA	2.333	5.000	-.692	-1.536	-.393	-1.573

Source: AMOS, 2024

According to table 2, normality evaluation, the data mostly meet the requirements for a normal distribution. All of the variables' absolute skewness values are less than 1.0, indicating that the distributions are comparatively symmetrical. The small negative skewness of SA (-0.674) and SFS (-0.760), for example, suggests that they have larger left tails but are still within acceptable bounds. All of the variables' kurtosis values remain between -10 and +10, confirming their eligibility for normalcy. In particular, other variables such as ED (-0.625) and TR (0.455) exhibit modest kurtosis, but CO (0.785) suggests a more significant peak. All of these outcomes support the idea that the data is suitable for parametric statistical analysis since it complies with Collier's (2020) normalcy assumptions.

4.3 Data Adequacy Test

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.850
Bartlett's Test of Sphericity	Approx. Chi-Square	1418.650
	Df	91
	Sig.	.005

Source: Survey result, (2024)

Table 3 demonstrates the results of the Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) depicts adequacy of sample, which is crucial for figuring out whether the data is appropriate for factor analysis. The KMO score of 0.850, which is much higher than the permissible cutoff of 0.70, indicates a high degree of sampling adequacy and suggests an properness of sample for analysis of factors. This high score reflects strong correlations between the variables, indicating that the study was satisfactory in discovering relevant components. Additionally, Bartlett's Test of Sphericity yields a p-value of 0.005 and a Chi-Square result of 1418.650 with 91 degrees of freedom. These results confirm that the correlation matrix is not an identity matrix and demonstrate important association among variables. Together, the KMO and Bartlett's findings demonstrate that the data can be factor extracted successfully, enhancing the study's scientific rigor and providing a solid foundation for further exploratory component analysis.

Table 4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.52	31.232	31.232	4.52	31.232	31.232	3.01	22.449	22.449
2	1.34	9.780	42.055	1.34	9.780	42.055	2.17	15.489	37.940
3	1.28	9.088	52.121	1.28	9.085	52.121	1.98	14.168	52.121

4	.940	6.779	57.890						
5	.873	6.210	64.120						
6	.775	5.520	70.635						
Extraction Method: Principal Component Analysis.									

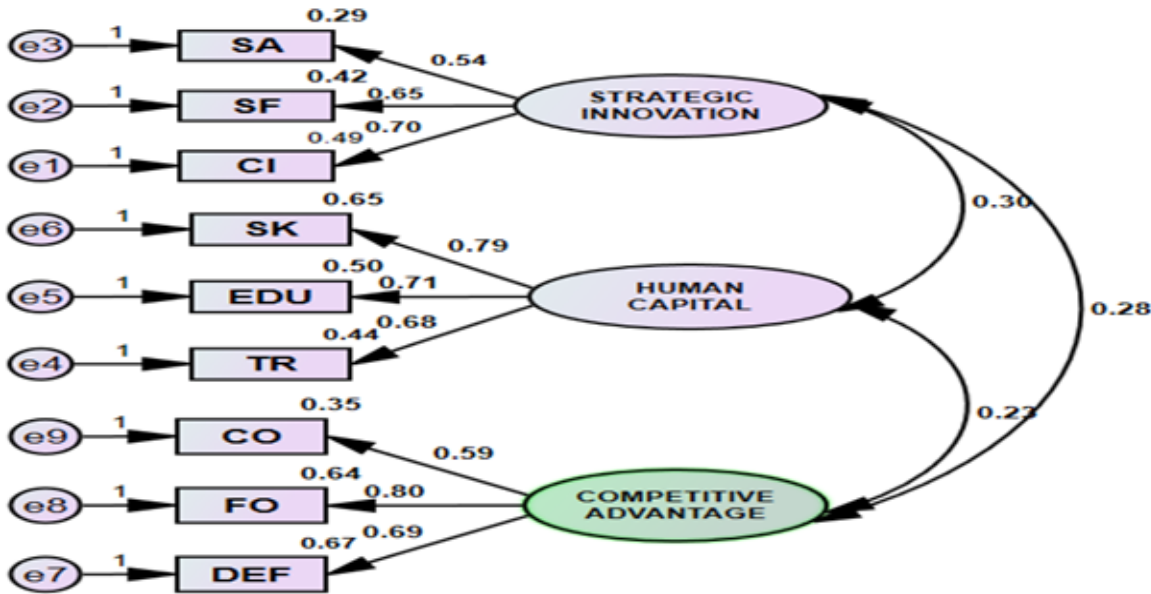
Source: Survey result, (2024)

Table 4 shows the results of the Principal Component Analysis (PCA) exploratory factor analysis's Total Variance Explained. The first component, accounting for 31.232% of the variance, is crucial for revealing the dataset's underlying structure. Even though they are smaller, the second and third components improve our comprehension of the complexity of the data by contributing 9.780% and 9.088%, respectively. The significance of the first three components for additional analysis and interpretation is shown by the fact that they collectively account for 52.121% of the variation. The factor structure's stability is confirmed by the extraction sums of squared loadings, which show values that are comparable to the initial eigenvalues. Components 4 through 6 provide a major contribution by capturing subtle characteristics of the variables, even if the key determinants dominate the analysis. These findings support theoretical frameworks by emphasizing how strategic innovation, employee engagement, and human capital development may provide Ethiopian SMEs a competitive advantage.

4.4 Enquiry for factor Confirmatory

To ascertain if a set of observed variables properly reflects the number of underlying latent components that have been hypothesized, a statistical technique known as confirmatory factor analysis (CFA) was employed. By allowing them to confirm or refute preexisting theories about the association among the determinants and the dimensions associated with them, it provides researchers with insight into the structure of the data. All covariance values were lower in Figure 2, which shows the CFA, suggesting that there was no multicollinearity between the components. Furthermore, every factor loading in figure 2 exceeds the acceptable threshold level of 0.5.

Figure 2: Confirmatory factor analysis



Source: AMOS output, (2024)

Table 5: Covariances

Covariance			Approximation	S.E.	C.R.	P	Hy.
Competitive advantage	<-->	Strategic innovation	.250	.234	7.818	***	H1
Human capital	<-->	Strategic innovation	.242	.021	8.25	***	H2
Competitive advantage	<-->	Human capital	.302	.035	7.701	***	H3

Source: Survey result, (2024)

Table 5 shows the covariances between competitive advantage, human capital, and strategic innovation, emphasizing the relationships between them. Competitive edge and innovation of strategy have a strong and notable association that supports Hypothesis 1 (H1), with a covariance of 0.250 and a critical ratio (C.R.) of 7.818. This is similar with the idea of innovation drives market performance by indicating that greater levels of strategic innovation are linked to improved competitive advantage. The significance of investing in human resources to promote innovation is further supported by the covariance among innovation of strategy and human capital, which is 0.242 with a C.R. of 8.25. With a C.R. of 7.701, the correlation between human capital and competitive advantage is even more noticeable at 0.302, supporting Hypothesis 3 (H3). This robust association suggests that attaining competitive advantage is directly impacted by efficient human capital management. The important connections between these factors highlight how important innovation and a trained workforce are to improving competitive positioning, especially for Ethiopian SMEs.

Table 6: Validity Concern

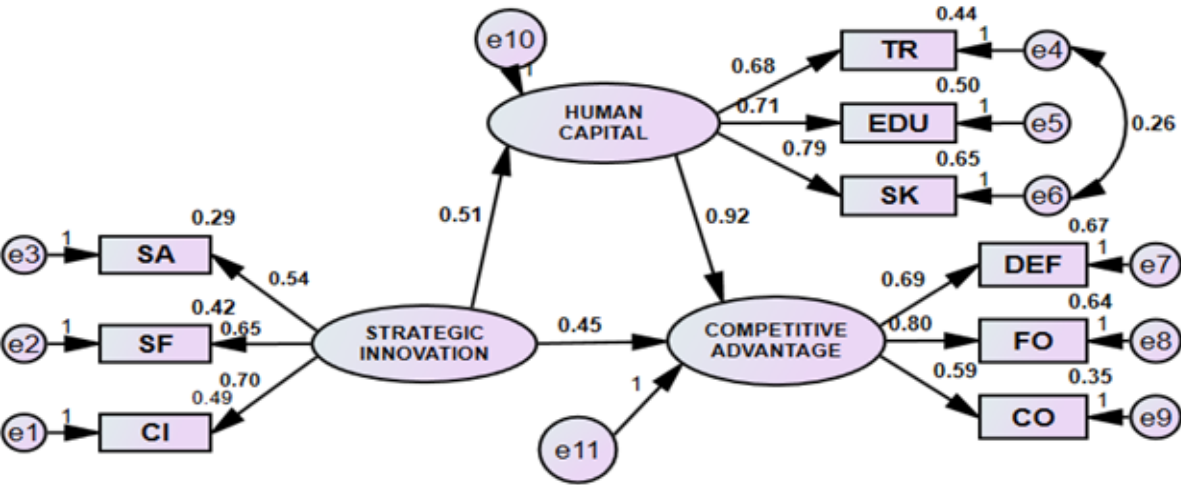
	CR	AVE	$\sqrt{\text{AVE}}$	MSV	MaxR(H)	IMS	TQMS	ECE
SI	0.730	0.638	0.798	0.223	0.851	0.673		
HC	0.752	0.651	0.806	0.140	0.760	0.171	0.686	
CA	0.790	0.600	0.774	0.269	0.797	0.385	0.193	0.6989

Note: SI=Strategic innovation; HC= Human capital; CA= Competitive Advantage

Table 6 outlines the validity concerns related to the constructs of SI, HC and CA by using Composite Reliability (CR), Average Variance Extracted (AVE), and Maximum Reliability (MaxR(H)). Acceptable inside steadiness is depicted by the CR values for all three constructions above the acceptable cutoff of 0.70. With a CR of 0.730, HC of 0.752, and CA of 0.790, SI in particular appears to be a reliable metric. Since the AVE values, which range from 0.600 to 0.651, are higher than the suggested minimum of 0.50 and demonstrate that the constructs account for a substantial amount of the variation, they provide additional evidence for the validity of these metrics. Furthermore, each construct's Maximum Reliability values with SI at 0.851, HC at 0.760 and CA at 0.797 fall within acceptable bounds. According to these results, the constructions retain a significant correlation with their indicators in addition to demonstrating dependability. Since the MSV values for each construct stay below the AVE values, they show that the constructions are different from one another. Each component represents distinct variation without undue overlap, improving discriminant validity of the model. Since AVE square root for every determinant is greater than the MSV; this supports the divergent validity of the constructs. Based on the analysis of AVE, MSV, and the square root of AVE values, all constructs (SI, HC, CA) demonstrate adequate divergent validity. This means that each construct is sufficiently distinct from the others, confirming that they measure different concepts.

4.5 Structural Equation Model

Figure 3: Structural equation model



Source: Survey result, (2024)

4.6 Model fit indices

Table 7: indices for Model Fit

Sig.	Chi-Sq	RMR	Fitness Goodness	Fitness Confirmatory	TLI	RMSEA
0.003	1.952	.040	0.928	0.917	0.910	.031

Source: Survey result, (2024)

Table 7 shows the fit indices of the model, which offer important information about how well the proposed model explains the relationships between competitive edge, innovation of strategy and human capital. The model's validity is validated by the significance level (Sig.) of 0.003, which indicates that it fits significantly better than a baseline model; despite its low value, the chi-squared statistic of 1.952 indicates a good fit, especially when compared to the other fit indices; the Root Mean Square Residual (RMR) value of 0.040, which is also good and shows that the observed and predicted covariance matrices differ little from one another. The Fitness Confirmatory Index of 0.917 and the Fitness Goodness Index of 0.928 further supports the model's strong fit. Given that these values are far higher than the widely accepted cutoff threshold of 0.90, it is likely that the model accounts for a substantial amount of the volatility in the data. Moreover, the Tucker-Lewis Index (TLI) of 0.920 validates the model's ability to fit the data efficiently while accounting for model complexity. Notably, the RMSEA value of 0.031 is below the recommended acceptable level of 0.06, depicting a tight match among the model and the data. When taken as a whole, these indices claim that the model is reliable and successfully depicts the connections between the constructs being examined.

Relative			Approx.	S.E.	C.R.	P	Ass.
Competitive Advantage	<---	Strategic innovation	.950	.190	7.958	***	H1
Human capital	<---	Strategic innovation	.840	.118	7.539	***	H2
Competitive Advantage	<---	Human capital	.332	.130	2.849	***	H3

Source: Survey result, (2024)

Table 8 explains the regression analysis's findings, which demonstrate the connections between competitive advantage, human capital, and strategic innovation. The significant path from strategic innovation to competitive advantage, with a coefficient of 0.950 and a critical ratio (C.R.) of 7.958, strongly supports Hypothesis 1 (H1). This suggests that firms that prioritize creative strategies are likely to outperform their rivals, demonstrating the significant beneficial influence that strategic innovation has on competitive advantage. The high coefficient indicates the relationship's strength as well as its applicability in promoting competitive performance in the study's setting. Furthermore, with a coefficient of 0.840 and a C.R. of 7.539, the regression analysis validates Hypothesis 2 (H2) by showing that strategic innovation has a considerable impact on human capital. This connection emphasizes how crucial strategic innovation is to improving workforce development and organizational capacities. Hypothesis 3 (H3) is further confirmed by the path from human capital to competitive advantage, which displays a coefficient of 0.332 with a C.R. of 2.849. This impact highlights the importance of human capital as a valued asset in gaining competitive advantage, even though it is not as strong as the preceding associations.

Table 9: Mediating role Effect

	Influence	Worth	Path Influence
Strategic innovation - Competitive advantage	Direct Influence	0.45	Direct influence stated
Strategic innovation - Human capital - Competitive Advantage	Indirect Influence	$0.51 * 0.92 = 0.47$	Indirect Influence Ensued
	Whole influence	0.92	Partial mediation

Source: Survey result, (2024)

Table 9 provides crucial insights into the dynamics of both dimensions by illustrating the mediating role of human capital in link among innovation of strategy and competitive edge. The total impact of innovation of strategy on competitive edge, the evaluation of mediation, and the direct and indirect impacts are all shown in the table. Competitive advantage is directly impacted by strategic innovation

by 0.45. According to this statistic, which indicates a significant and positive association, SMEs may improve their competitive position right away by putting strategic innovations into practice. This result highlights the significance of creative tactics as SMEs' main source of competitive advantage. The results show that strategic innovation significantly influences competitive advantage indirectly through human capital. By multiplying the path coefficients, which are 0.92 (the effect of human capital on competitive advantage) and 0.51 (the impact of innovation of strategy on human capital), the indirect effect is found to be 0.47. This highlights how important workforce development is and how important human capital is to turning the benefits of strategic inventions into competitive advantages. Innovation of strategy has an overall effect on competitive advantage of 0.88 when direct and indirect effects are included. This suggests a partial mediation effect, meaning that while innovation of strategy has a big direct influence, there is also a considerable mediated channel through human capital.

5. DISCUSSION

The conclusions of the study revealed the intricate relationships that exist between competitive advantage, human capital, and strategic innovation, especially when considering Ethiopian SMEs. The results highlight the importance of strategic innovation in today's rapidly evolving business environment and demonstrate that it is a key driver of competitive advantage. This is consistent with prior research, which implies that SMEs that adopt creative strategies are better positioned to respond to market swings and consumer needs. The high positive correlation identified between strategic innovation and competitive advantage suggests that organizations that prioritize innovation may successfully distinguish themselves from rivals. This finding is also similar with (Abebe& Gemed, 2020) finding. This study also revealed that strong relationship between strategic innovation and human capital since it fosters a culture of continuous learning and adaptability, enabling organizations to leverage their workforce's skills and creativity for sustained competitive advantage. This finding is also similar with the finding of (Chtourou Ben Amar & Ben Romdhane, 2020). These findings are also similar with theoretical relationship established based on Human Capital Theory, Schumpeter Theory of innovation and Resource Based View Theory.

Additionally, the role that human capital plays in moderating the association among competitive advantage and innovation of strategy offers crucial insights for organizational management. The findings imply that investing in human capital through training, development, and knowledge enhancement is critical for transforming creative methods into actual competitive advantages. This underlines the premise that strategic efforts require a trained and adaptive staff. The findings support the idea that SMEs should not only focus on establishing creative strategies, but also on nurturing their people resources, resulting in a synergistic impact that improves overall performance. Many SMEs in underdeveloped nations confront

particular hurdles, such as limited resources and infrastructure, which might impede their capacity to effectively adopt strategic innovations. The results highlight how crucial it is to comprehend local settings in order to improve innovation and human capital. In order to stimulate innovation and help SMEs attain sustainable growth, policymakers and executives should create settings that are encouraging and see human capital as a strategic asset.

Ethiopian SMEs should put in place focused programs like innovation incubators, skills development seminars, and mentorship efforts to improve human capital and promote strategic innovation. Tools for employee involvement may encourage a culture of idea exchange, and collaborations with nearby institutions can spur innovation and knowledge transfer. These programs support the study's conclusions by highlighting how crucial it is to invest in human capital in order to gain a competitive advantage. In order to support these initiatives, managers and legislators must acknowledge human capital as a critical asset. Both the Human Capital Theory and the Resource-Based View (RBV) emphasize how important having a trained staff is to long-term success.

6. CONCLUSION

The relationships among Ethiopian SMEs' competitive advantage, human capital, and strategic innovation are clarified by this study. The results show that SMEs that prioritize innovative strategies are better positioned to stand out in the place of market, underscoring the significance of strategic innovation as a main source of competitive edge. Furthermore, the considerable mediating impact of human capital emphasizes the significance of investing in staff development to effectively transform creative initiatives into actual competitive advantages. The findings imply that establishing long-term competitive advantage requires a synergistic approach that aligns strategic innovation with human capital development. This comprehensive viewpoint encourages businesses to regard human capital as a strategic asset, realizing that a competent and flexible staff is critical to driving innovation and organizational performance. Organizations may overcome hurdles and improve their competitive position by addressing factors, such as cultural attitudes toward entrepreneurship, economic conditions that impact the availability of resources, and regulatory frameworks that either encourage or discourage innovation.

The study guides future strategic innovation projects in other developing nations by emphasizing how important it is to combine creative tactics with human capital development in order to gain a competitive edge. Additionally, by identifying and resolving the particular contextual issues in each market, firms will be able to establish settings that encourage innovation and efficiently utilize the potential of their workforce. With an emphasis on human capital as a major source of competitive advantage, emerging economies may use insights from Ethiopian SMEs to inform plans that combine workforce development with innovation activities.

7. RECOMMENDATION

Ethiopian SMEs should have a clear innovation strategy that is in line with their overarching objectives, focusing on particular project targets and encouraging a creative culture, in order to improve their competitive edge. By praising and rewarding staff members for their innovative efforts, leaders may foster creativity. SMEs should place a high priority on continuous staff development in light of Table 9's findings, which show a considerable indirect effect of strategic innovation on competitive advantage through human capital. Putting in place training programs that emphasize both technical and vital soft skills, including problem-solving and leadership, can empower staff members and improve their capacity to adjust to shifting market conditions.

Regular assessments of human capital are essential to identify skill gaps and ensure that training initiatives align with both current and future market demands. SMEs should conduct frequent competency evaluations and performance reviews, alongside feedback surveys that actively seek employee input on their training experiences and needs. This systematic approach will pinpoint areas requiring improvement, thus aligning training programs with workforce goals and market needs. To address regional challenges, such as limited access to digital technologies, SMEs can partner with NGOs and local governments to develop initiatives like digital literacy programs and community internet access. Collaborating with nearby educational institutions will facilitate customized training programs that address specific skill shortages while fostering a collaborative environment that benefits both employees and the broader community. By adopting these recommendations, Ethiopian SMEs can leverage strategic innovation to enhance their competitive advantage, supported by a robust human capital framework.

8. FUTURE DIRECTIONS

To improve understanding and real-world applicability, future studies on strategic innovation, human capital, and competitive advantage should emphasize a variety of methodologies. Examining certain innovation tactics and how they directly impact the development of human capital across different sectors is a crucial issue. Researchers may provide specific recommendations for SMEs looking to improve their competitive advantage by examining the ways in which advancements in business models, processes, and products affect employee abilities. By identifying best practices and crucial success elements for long-term competitive advantage, longitudinal studies can reveal the long-term effects of strategic innovation and investments in human capital. A detailed assessment of how various innovations impact worker skills may be achieved by using a hybrid method that blends case studies and econometric modeling. This will encourage cooperation between researchers and SMEs for real-world implementation and ongoing improvement.

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Exploring the Impact of Financial Development on Economic Growth in East Africa: The Mediating Role of Institutional Quality and Information Communication Technology

By

Getachew Kebede Hailu¹; Wondaferahu Mulugeta Demissie (PhD)²; Etana Ayeru Fekede (PhD)³

Abstract

This study examines the impact of financial development (FD) on economic growth in East Africa—Ethiopia, Kenya, Tanzania, Uganda, Rwanda, Burundi, and Sudan—focusing on the mediating roles of institutional quality (IQ) and information and communication technology infrastructure (ICTI). Using panel data from 1980 to 2021, it applies dynamic econometric techniques, including Pooled Mean Group (PMG), Mean Group (MG), and Dynamic Fixed Effects (DFE) estimators. Results indicate that early financial development may initially hinder growth, but deeper financial integration enhances economic performance. IQ strengthens this relationship by fostering financial stability and regulatory efficiency, while ICTI's impact varies contextually. Cointegration tests reveal distinct short- and long-run dynamics, emphasizing the need for tailored financial policies. Dumitrescu-Hurlin causality tests show unidirectional causality from economic growth to FD, ICTI, and government expenditure, with bidirectional effects for financial inclusion and financial markets. These findings highlight the need for robust institutions and digital infrastructure to maximize FD benefits. Policymakers should prioritize institutional reforms and ICT investments to ensure inclusive, sustainable growth, aligning with the UN's SDGs and the AU's Agenda 2063.

Keywords: Financial Development, Economic Growth, Institutional Quality, ICT Infrastructure, Sustainable Development

¹ Department of Economics, Jimma University, Woldia University, Addis Ababa, Ethiopia

² Department of Economics, Ethiopian Civil Service University, Addis Ababa, Ethiopia

³ Department of Economics, Adama Science and Technology University, Addis Ababa, Ethiopia

1. INTRODUCTION

Financial development (FD) is crucial for economic growth (EG) in East Africa, though its impact is complex and non-linear. Research suggests an initial hindrance to growth at early stages, with positive effects emerging as institutional quality (IQ) and ICT infrastructure improve (Beck et al., 2023). This U-shaped relationship underscores the need to examine the interactions among FD, IQ, and ICT in the region (Abid & Bouri, 2023). While FD is often seen as a catalyst for EG, its effectiveness depends on financial system maturity and supportive institutions (Levine, 2005; Rajan & Zingales, 2003).

IQ enhances the FD-EG nexus by reducing transaction costs and fostering a stable economic environment (Acemoglu & Robinson, 2019), while ICT accelerates financial access and economic expansion (Aker & Mbiti, 2010). However, existing studies lack a comprehensive analysis of how FD, IQ, and ICT collectively shape EG, necessitating empirical scrutiny using advanced econometric techniques.

Empirical findings on FD and EG in East Africa remain inconclusive. Some studies indicate FD initially suppresses growth but accelerates it as financial institutions mature (Abid & Bouri, 2023). Weak institutions and inconsistent ICT further hinder FD's effectiveness, exacerbating regional disparities.

This study aims to:

1. Investigate FD's impact on EG, considering IQ and ICT;
2. Examine FD and the Financial Development Index (FDI) in relation to EG;
3. Investigate the mediating roles of IQ and ICT in the FD-EG nexus;
4. Analyze interactions between FD, IQ, and ICT and their combined influence on EG.

Utilizing panel data from Burundi, Ethiopia, Kenya, Sudan, Tanzania, Uganda, and Rwanda (1980-2021), the study applies Dynamic Fixed Effects (DFE), Pooled Mean Group (PMG), and Mean Group (MG) estimators, alongside the Dumitrescu-Hurlin causality test, to explore FD, IQ, ICT, and EG interconnections.

Findings will clarify FD's role in EG, offering policy insights for institutional reforms and ICT investments. These align with the UN's 2030 Sustainable Development Goals (SDGs) and the African Union's Agenda 2063 (United Nations, 2020).

Preliminary results suggest a U-shaped FD-EG relationship, where initial financial deepening may slow growth, but well-developed financial systems—supported by robust institutions and ICT—enhance economic performance. IQ mitigates market frictions, while ICT's impact varies by country. Causality

tests indicate a unidirectional link from EG to FD, ICT, and government expenditure, with bidirectional relationships in financial inclusion and markets.

Policymakers must prioritize institutional reforms and ICT investments to enable inclusive growth. Strengthening financial systems through regulatory improvements and digital innovations will enhance FD's contribution to long-term EG, fostering regional stability and global integration. These strategies are vital for achieving SDGs and Agenda 2063 objectives.

Subsequent sections will provide a detailed literature review, methodology, empirical results, discussion, and policy recommendations.

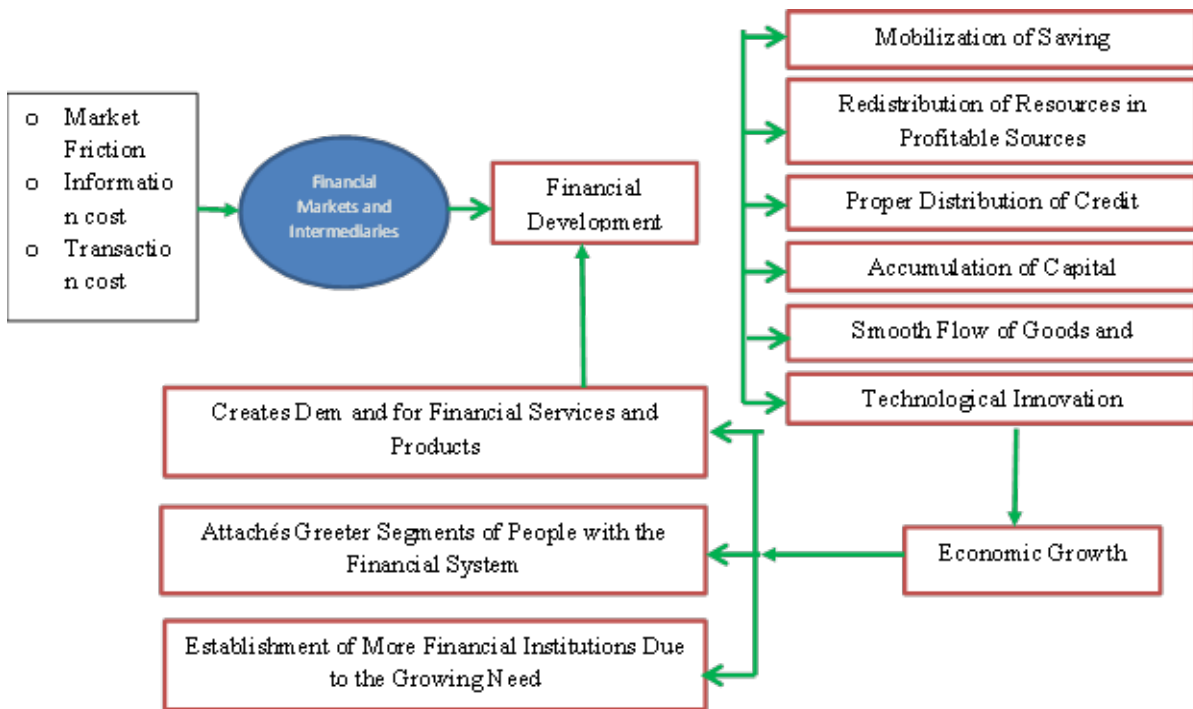
2. Review Literature

2.1. Theoretical framework

The nexus between financial development (FD) and economic growth (EG) is pivotal to East Africa's economic progress. Empirical studies affirm that enhanced access to credit and efficient financial markets stimulate growth; however, their efficacy depends on institutional quality (IQ) and information and communication technology (ICT) adoption (Beck et al., 2023). Strong institutions enhance financial efficiency by enforcing regulatory frameworks, mitigating uncertainties, and ensuring market stability (Acemoglu & Robinson, 2019). Institutional reforms in Rwanda and Kenya have strengthened financial systems, fostering economic expansion (World Bank, 2023), whereas weak institutions hinder FD's impact (Acemoglu & Robinson, 2010).

ICT adoption enhances financial inclusion by reducing transaction costs and broadening service accessibility. Digital platforms, notably M-Pesa in Kenya, have improved financial access, stimulating savings and investment (Jack & Suri, 2016). The synergy between ICT and strong institutions amplifies FD's influence, fostering sustainable economic growth (Sulemana & Dramani, 2020). This requires comprehensive regulatory frameworks and digital financial innovations aligned with broader development objectives.

Figure 1. Theoretical framework



Source: Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007)

2.2. Empirical Literature Review

Recent studies highlight the crucial role of financial development (FD) in driving economic growth, particularly in East Africa, where institutional quality (IQ) and ICT adoption serve as key mediators. Efficient financial systems, strengthened by institutional reforms, enhance credit accessibility and economic expansion (Beck et al., 2023). However, the impact of FD hinges on institutional strength, which ensures transparency and property rights protection, as observed in Kenya and Rwanda (Adediran et al., 2023).

IQ significantly mediates the FD-economic growth nexus by reducing transaction costs, optimizing resource allocation, and curbing corruption. Weak institutions, conversely, impede financial market efficiency (Abid & Bouri, 2023). Empirical evidence from Uganda and Tanzania underscores the benefits of institutional reforms in bolstering financial market performance (Muriithi et al., 2022).

ICT is instrumental in enhancing financial inclusion, particularly in regions with limited banking infrastructure. Mobile banking and digital payments have expanded financial services to underserved populations, fostering savings and investment (Kuteesa et al., 2023). ICT adoption enhances financial transparency and efficiency, amplifying FD's impact on economic growth.

The synergy between IQ, ICT, and FD drives economic growth, as robust institutions and widespread ICT adoption improve financial system efficiency (Li & Jiao, 2023). ICT-driven innovations further enhance FD's contribution to GDP growth by reducing transaction costs and increasing financial accessibility (Adjei et al., 2022).

In conclusion, FD is a critical driver of economic growth in East Africa, but its efficacy is maximized through institutional reforms and ICT advancements. Policymakers should prioritize strengthening institutional frameworks and promoting digital financial solutions to optimize FD's benefits (Beck et al., 2023; Kuteesa et al., 2023; Adediran et al., 2023).

2.3 Conceptual Framework

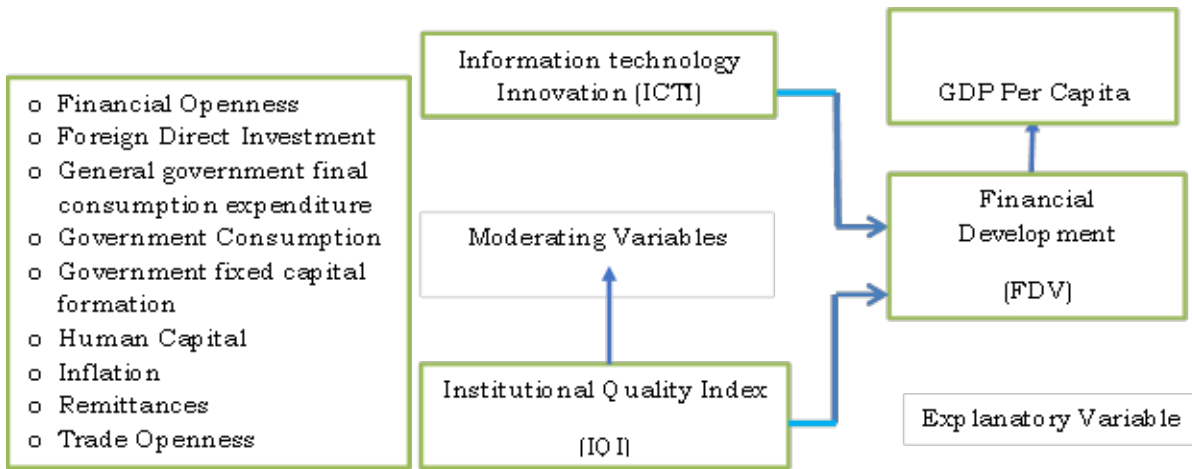
This research explores the relationship between financial development and GDP per capita, with financial development as the independent variable and GDP per capita as the dependent variable. The framework incorporates moderating factors such as institutional quality and technological innovation, recognizing their significant impact on this relationship (Asante et al., 2023).

Control variables—enrolment rates, foreign direct investment, government expenditure, and trade openness—are included to ensure that external influences do not distort the analysis of the direct effect of financial development on economic growth (Mehmood & Bilal, 2021). These controls refine the measurement, enhancing the precision of the observed relationship.

The conceptual framework offers a holistic view of the dynamics between financial development and economic growth, emphasizing the importance of institutional quality and technological innovation. These factors are crucial in strengthening financial systems and fostering economic outcomes in East Africa. The framework thus serves as a foundation for empirical analysis, providing insights into policy interventions that can stimulate sustainable growth in the region.

Figure 2. Conceptual Framework

Dependent independent Variables



Author's Combination (2024)

3. Research Methodology

This study employs a quantitative research design using panel data from Ethiopia, Kenya, Tanzania, Uganda, Rwanda, Burundi, and Sudan (1980–2021) to analyze the impact of financial development (FD), institutional quality (IQ), and ICT infrastructure (ICTI) on economic growth (Arellano & Bover, 2022). Data is sourced from PWT, WDI, and WGI (World Bank, 2023). The positivist approach integrates explanatory and descriptive methods to uncover causal relationships and economic dynamics in East Africa (Adjei et al., 2022; Li & Jiao, 2023).

East Africa is selected due to the researcher's interest in Ethiopia, regional economic integration, and its relevance for blockchain financial applications. A purposive sampling technique ensures diverse financial and ICT profiles for comparative analysis (Beck et al., 2021). Missing data is handled using multiple imputation (Baltagi, 2023).

Variable Measurement: FD is assessed using an index incorporating access, depth, and efficiency (Svirydzenka, 2021), while IQ is measured using the Institutional Quality Index (IQI), covering governance and regulatory indicators (Acemoglu & Robinson, 2022). ICTI is evaluated through an ICT Index, capturing mobile/internet penetration and digital financial services (Rodrik, 2022). Control variables include GDP per capita, remittances, and healthcare expenditure (Kim & Lin, 2023). Interaction terms between IQI and ICTI examine their combined effect on growth (Rodrik, 2022).

Econometric Methodology: The Pooled Mean Group (PMG) estimator is employed to assess both long-run and short-run impacts of FD, IQ, and ICTI on economic growth (Pesaran et al., 2023). Panel unit root tests (LLC, IPS) ensure stationarity (Baltagi, 2023), while Pesaran's CD test evaluates cross-sectional

dependence (Eberhardt & Teal, 2022). Stata is utilized for robust econometric analysis, ensuring accuracy in capturing East Africa’s financial growth dynamics (Roodman, 2022).

Table 1: Definition of Variables

Variables	Definitions	Sources of Data
GDP per capital	annual %	World Bank, WDI
Independent variables		
Financial development index	Index access, efficiency, depth	World Bank, WDI
Foreign Direct Investment Net	Net inflow of foreign direct investment as % of GDP	World Bank, WDI
Log of Domestic Credit	Logarithm of domestic credit to the private sector as % of GDP	World Bank, WDI
Log of Money Supply	Logarithm of broad money supply (M2)	IMF
Log of Inflation	Logarithm of consumer price index (CPI)	World Bank, WDI
Log of Government Expenditure	Logarithm of total government expenditure as % of GDP	World Bank, WDI
Log of Gross Capital Formation	Logarithm of gross capital formation as % of GDP	World Bank, WDI
Log of Trade Openness	Logarithm of the sum of exports and imports as % of GDP	World Bank, WDI
Log of Exchange Rate	Logarithm of the nominal exchange rate	IMF
Log of Remittance	Logarithm of remittances as % of GDP	World Bank, WDI
Log of Human Capital	Logarithm of a human capital index	World Bank, WDI
Institutional Quality Index	Index measuring governance indicators	World Bank Governance Indicators
ICT Index	Index assessing ICT infrastructure	ITU
Interaction of IQI and ICT	Combined effects of institutional quality and ICT	Calculated from IQI and ICT Index
Square of Financial Development Index	Square of the Financial Development Index	Calculated from the Financial Development Index
Square of Financial Institutions Development	Square of the Financial Institutions Development Index	Calculated from the Financial Institutions Index
Square of Institutional Quality Index	Square of the Institutional Quality Index	Calculated from the Institutional Quality Index
Square of ICT Index	Square of the ICT Index	Calculated from the ICT Index

Interaction of FD and IQI	Examines interactions of financial development and IQ	Calculated from FD and IQI values
Interaction of FD and ICT	Examines interactions of financial development and ICT	Calculated from FD and ICT values
Interaction of Squared FD and IQI	Explores interaction effects of squared indices on growth	Calculated from squared values
Interaction of Squared FD and ICT	Examines interactions of squared indices of FD and ICT	Calculated from squared values
Interaction of FDI, IQI, and ICT	Combined effects of FDI, institutional quality, and ICT	Calculated from FDI, IQI, and ICT values
Interaction of FD^2 , IQI^2 , $ICTI^2$	Interactions of squared values of FDI, IQI, and ICT	Calculated from squared values

3.1. Pooled Mean Group (PMG)

The Pooled Mean Group (PMG) estimator, introduced by Pesaran et al. (2001), is a widely adopted econometric method for analyzing the relationship between financial development and economic growth, particularly when short-run dynamics differ across countries, but long-run relationships are assumed to be homogeneous. This estimator is appropriate for examining East African economies, where countries share similar growth objectives, yet have distinct economic environments and institutional settings.

The Pooled Mean Group (PMG) estimator was chosen over Generalized Method of Moments (GMM) and Panel ARDL because it efficiently handles both long-run equilibrium and short-run heterogeneity, making it ideal for the dataset, which spans 42 years (T) across seven countries (N). PMG is best suited for long-panel data ($T > N$), whereas GMM is designed for short panels ($T < N$) and primarily captures short-run dynamics while removing long-run information. Unlike Panel ARDL, which requires a larger sample for reliable estimates, PMG ensures valid long-run relationships in small-N panels while allowing short-run coefficients to differ across countries. Additionally, PMG naturally accounts for endogeneity through an error correction mechanism, whereas GMM depends on instrumental variables, which can lead to weak identification. Furthermore, PMG effectively models non-stationarity and co-integration, addressing issues that GMM overlooks. Given the diverse financial structures of East African economies, PMG's ability to impose homogeneous long-run effects while capturing country-specific short-run variations makes it the most appropriate choice.

In the context of this study, GDP per capita (GDPPC) serves as the dependent variable, while financial development, institutional quality, and information and communication technology (ICT) are the key independent variables. The PMG model allows short-run coefficients to vary across countries, thus capturing the heterogeneity inherent in short-term economic fluctuations. However, it imposes

homogeneity on long-run coefficients, assuming that the countries in the region will eventually converge towards a common long-run equilibrium, despite short-run differences. This assumption makes the PMG approach particularly suitable for East Africa, where regional integration efforts and shared development goals suggest a potential for long-term convergence. In contrast, the Mean Group (MG) estimator, which allows for heterogeneity in both short- and long-run coefficients (Pesaran & Shin, 1995), may be better suited to regions with more pronounced structural differences.

The PMG approach not only accounts for long-run relationships but also incorporates short-run dynamics such as Foreign Direct Investment (FDI), domestic credit, money supply, inflation, and government expenditure. These variables are crucial for understanding how short-term economic factors influence long-term growth trajectories in East African countries. By incorporating both short- and long-term dynamics, the PMG method allows for a more nuanced understanding of the interrelationships between financial development, institutional quality, ICT, and economic growth.

The following semi-logarithmic Pooled Mean Group model is used in this study:

$$\begin{aligned} \Delta \text{GDPPC}_{it} = & \lambda_i(\text{GDPPC}_{it-1} - \beta'X_{it-1} - \gamma_1(\text{FD} \times \text{IQI})_{it-1} - \gamma_2(\text{FD} \times \text{ICT})_{it-1} - \gamma_3\text{FD}^2_{it} \\ & - \gamma_4(\text{FD}^2 \times \text{IQI})_{it-1} - \gamma_5(\text{FD}^2 \times \text{ICT})_{it-1}) + \sum_{j=0}^{p-1} \phi_{ij} \Delta X_{it-j} + \mu_i + \epsilon_t \end{aligned}$$

Here, the interaction terms (γ_1, γ_2) and squared terms ($\gamma_3, \gamma_4, \gamma_5$) which are essential for exploring the nonlinear and combined effects of financial development, institutional quality, and ICT on GDP per capita growth. The interaction terms capture the effects of financial development when combined with institutional quality and ICT, which may result in synergistic outcomes that drive growth in ways not fully captured by linear terms alone. The squared terms further explore the possibility of diminishing or increasing returns to financial development, depending on its level of integration with institutional and technological factors.

Recent studies provide strong support for the model's structure. Ahmed and Hossain (2023) find that financial development, when coupled with robust ICT infrastructure, has a positive and significant impact on economic growth in developing countries. Similarly, Bekele and Tadesse (2022) argue that the effectiveness of financial development is heavily influenced by the quality of institutions, with countries that have better governance systems showing stronger economic growth in response to financial liberalization. Mengistu and Ayele (2021) also emphasize the role of institutional quality in ensuring that financial development contributes to long-term growth, rather than exacerbating inequality or inefficiency.

The results derived from the PMG estimator are expected to offer valuable insights into how financial development, ICT, and institutional quality interact to influence the economic growth of East African countries. Policymakers can use these findings to design targeted interventions that leverage financial development, enhance institutional governance, and improve ICT infrastructure to foster sustained economic growth across the region.

4. Results and Discussion

4.1 Descriptive Statistics

This study investigates the relationships among critical economic variables, including GDP per capita (GDPPC), Foreign Direct Investment (FDI), Financial Development (FD), Domestic Credit (DC), and Money Supply (MS), which represent income disparities, capital accumulation, financial deepening, credit access, and liquidity. Inflation, Government Expenditure (GEX), and Gross Capital Formation (GCF) assess economic stability, public spending, and investment dynamics. Trade Openness (tradop), Capital Account Openness (kaopen), Remittances (rem), and Human Capital (hc) highlight global integration, capital flows, and human capital development. Additionally, the Institutional Quality Index (IQI) captures the role of governance and institutions in fostering sustainable growth (Barro, 2013; Borensztein et al., 1998; Cecchetti & Schoenholtz, 2022; Fischer, 1993; King & Levine, 1993; Rath, 2005).

The correlation matrix reveals that GDPPC is positively correlated with FDI, FD, and human capital, indicating that higher income levels attract foreign investment and enhance financial development. FDI is positively associated with GCF but negatively with DC, suggesting foreign investment reduces reliance on domestic credit. Furthermore, FD and DC exhibit a strong positive correlation, linking financial deepening with increased credit availability. Inflation has weak correlations with most variables, while GEX negatively correlates with GDPPC and GCF, suggesting higher public spending may not directly result in economic growth or increased investment. Strong correlations with trade openness, remittances, and capital flows highlight the importance of global economic integration in fostering development (Blanchard, 2023; Chinn & Ito, 2006; Edwards, 2023; Levine & Zervos, 2023; Rodrik, 2023; Sachs & Warner, 2022).

4.2. Econometric Analysis

This study applies advanced econometric methods to analyze the relationship between financial development and economic growth, addressing cross-sectional dependence, stationarity, and long-term relationships to ensure robust findings.

Cross-Sectional Dependence

This is examined using the Breusch-Pagan LM test, the Pesaran scaled LM test, and the Pesaran CD test. The results indicate weak dependence among the variables, with Breusch-Pagan (30.9977, $p = 0.0737$), Pesaran scaled LM (1.5427, $p = 0.1229$), and Pesaran CD (1.8581, $p = 0.0632$) suggesting slight correlation (Pesaran, 2021; Breusch & Pagan, 2020). Driscoll-Kraay standard errors are used to adjust for heteroskedasticity and autocorrelation, ensuring robust estimates.

Table 2: Cross-Sectional Dependency Test

Test	Statistic	d.f.	p-value
Breusch-Pagan LM	30.9977	21	0.0737
Pesaran Scaled LM	1.5427	-	0.1229
Pesaran CD	1.8581	-	0.0632

Panel Unit Root Tests

Stationarity is tested using the Levin-Lin-Chu and Im-Pesaran-Shin tests. Results indicate that logGDPPC, logDC, and logMS are non-stationary at levels but become stationary after first differencing (I(1)), consistent with economic theory. Conversely, loginf is stationary at I(0), supporting mean reversion (Baltagi, 2021; Engle & Granger, 1987).

Table 3: Panel Unit Root Test

Variable	Statistic (I(0))	p-value (I(0))	Statistic (I(1))	p-value (I(1))
logGDPPC	0.295	0.2280	-5.455	0.000
logDC	-1.171	0.867	-6.676	0.000
logMS	-1.151	0.869	-5.866	0.000
loginf	-3.661	0.000	-4.938	0.000
logGEX	-2.247	0.023	-2.001	0.022
logGCF	-1.622	0.334	-9.998	0.000
logtradop	-1.496	0.499	-8.685	0.000
logexr	-2.325	0.022	-2.023	0.022
logrem	-2.137	0.033	-1.834	0.033
loghc	-1.560	0.415	-4.008	0.000
FD	-7.2424	0.000	-10.7534	0.000

Cointegration Test

Long-term relationships among financial development, economic growth, and institutional factors are

examined using the Pedroni and Kao cointegration tests. Both the Phillips-Perron and Augmented Dickey-Fuller statistics reject the null hypothesis of no cointegration at the 5% significance level, suggesting a significant long-term equilibrium relationship (Pedroni, 2004; Apergis & Payne, 2023).

Table 4: Kao Cointegration Test

Statistic	Value	p-value
Modified Dickey-Fuller t-statistic	-3.8527	0.0001
Dickey-Fuller t-statistic	-2.3487	0.0094
Augmented Dickey-Fuller t-statistic	-1.7291	0.0419
Unadjusted Modified Dickey-Fuller t-statistic	3.7936	0.0001
Unadjusted Dickey-Fuller t-statistic	-2.3314	0.0099

Heteroskedasticity and Serial Correlation Tests

The Breusch-Pagan/Cook-Weisberg test confirms no heteroskedasticity ($\chi^2 = 2.12$, $p = 0.1449$), while the Wooldridge test detects first-order serial correlation, addressed by using panel-corrected standard errors (PCSE) (Breusch & Pagan, 1979; White, 1980).

Table 5: Heteroskedasticity and Serial Correlation Tests

Test	Variable	Null Hypothesis	Test Statistic (χ^2)	p-value
Breusch-Pagan/Cook-Weisberg	logGDPPC	Constant Variance (H_0)	2.12	0.1449

This econometric analysis provides compelling evidence of the significant relationship between financial development and economic growth. The stationarity tests indicate most variables are integrated of order one, and cointegration tests reveal a stable long-term relationship. Addressing cross-sectional dependence, heteroskedasticity, and serial correlation enhances the robustness of the results, offering valuable insights for policymakers aiming to leverage financial development as a tool for sustainable economic growth.

4.3 Discussion of Findings

4.3.1 Financial Development and Economic Growth in East Africa: Unraveling a U-Shaped Relationship

The analysis shows a U-shaped relationship between financial development (FD) and economic growth in East Africa, where growth stagnates initially but accelerates as financial development deepens (Aybar & Joyce, 2019). In the long run, FD positively impacts growth, with the Pooled Mean Group (PMG)

model revealing a significant positive coefficient for FD², supporting financial deepening theory (César et al., 2022). However, the Mean Group (MG) and Dynamic Fixed Effects (DFE) models show mixed results, underscoring the complexity of this relationship (Table 6).

In the short term, FD exhibits moderate positive effects on economic growth, consistent with studies on developing economies (Mitra, 2020). The rise of financial technology, such as mobile banking and mobile money, has greatly enhanced financial inclusion in East Africa, boosting economic activity through accessible services like real-time price information and electronic transactions.

The error correction term (ECT) indicates slow adjustment to long-term equilibrium aftershocks, pointing to inefficiencies and weak governance in the region, which hinder financial development's positive effects (Mitra, 2020).

Policy implications include focusing on improving financial service access and expanding credit, particularly early in development.

Table 6. Financial Development and Economic Growth in East Africa

Dependent variable logGDPPC	PMG		MG		DFE	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Long -run coefficient						
L. FD2	138.491	0.003*	-21.68135	0.565	237.836	0.810
ECT	-0.004	0.785	-0.036467	0.092***	0.004	0.805
Short -run coefficient						
ΔFD2	5.732	0.081 ***	5.986757	0.071***	3.582	0.029 *
No. of observations	287					

*p < 0.01 (1% significance level), ** p < 0.05 (5% significance level), *** p < 0.1 (10% significance level)

4.3.2. U-Shaped Relationship between Financial Development and Economic Growth: The Mediating Influence of Institutional Quality and ICT

The study highlights a U-shaped relationship between financial development (FD) and economic growth (EG), with significant effects observed in the Pooled Mean Group (PMG) model (L1. FD² = 2.799, p = 0.020), but not in the Mean Group (MG) and Dynamic Fixed Effects (DFE) models. This variation emphasizes the role of institutional quality (IQI) and information and communication technology (ICT) in mediating this relationship (Acemoglu et al., 2021). The PMG model shows a strong positive impact of

IQI on EG (L1. IQI = 0.129, $p < 0.001$), indicating that stronger institutions promote financial efficiency and reduce rent-seeking behavior, but this effect is not consistently replicated in other models (Bai et al., 2022) (Table 7).

ICT, while promising as a driver of FD and economic growth, shows mixed results. The PMG model suggests a non-significant relationship between ICT and EG, which is consistent with studies that highlight barriers like insufficient digital literacy and infrastructure (Kim & Lin, 2022). Sharma et al. (2023) argue that ICT can facilitate financial intermediation, but its success hinges on improving human capital and digital inclusion.

The study also finds slow adjustment in the financial sector ($EC = -0.077$, $p = 0.438$), highlighting concerns about the pace of financial reforms. This finding aligns with Molla et al. (2022), who suggest that integrating education and infrastructure with financial liberalization can enhance economic convergence. Additionally, Sassi et al. (2023) caution that relying on aggregated indicators may obscure sectoral and regional disparities, urging the use of more granular data for better insights.

Given these methodological inconsistencies, policymakers should approach the U-shaped hypothesis carefully. The effectiveness of FD on EG depends on institutional quality and ICT infrastructure readiness, emphasizing the need for targeted reforms. Future research should explore disaggregated indicators and additional mediating factors like education and energy access (Adeniyi et al., 2021).

In conclusion, this study underscores the complex relationship between FD and EG, emphasizing the critical roles of institutional quality and ICT. Future empirical studies should refine econometric models to account for regional and sectoral differences, enabling more effective policy recommendations.

Table 7. U-Shaped Relationship between FD and EG: Mediating Roles of Institutional Quality and ICT

Dependent variable	PMG		MG		DFE	
logGDPPC						
D.logGDPPC	Coef.	P>z	Coef.	P>z	Coef.	P>z
__ec						
FD2						
L1.	2.799	0.020*	31.84	0.76	-144.629	0.295
L3.	1.942	0.118	-18.12	-0.77	-5.05015	0.928
IQI						
L1.	0.129	0.000*	-0.08	-0.21	-0.22169	0.711
L2.	-0.011	0.707	-0.13	-0.44	0.247103	0.658
ICTI						

L1.	0.016	0.171	-0.26	-1.25	0.544027	0.49
L2.	0.000	0.960	0.31	1.75	0.003338	0.994
SR						
_ec	-0.077	0.438	-0.09	-0.63	0.015128	0.28
FD2						
D1.	0.691	0.462	2.96	1.88	1.012646	0.301
IQI						
D1.	0.011	0.195	0.01	0.73	0.004019	0.541
ICTI	-0.003	0.691	-0.01	-0.81	0.002254	0.673
_cons	0.564	0.394	0.58	0.63	-0.10228	0.273

*p < 0.01 (1% significance level), ** p < 0.05 (5% significance level), *** p < 0.1 (10% significance level)

4.3.2. U-Shaped Relationship between FD and EG: Interaction with ICTI and Institutional Quality

The relationship between financial development (FD) and economic growth (EG) is complex and nonlinear, with recent studies emphasizing the roles of institutional quality and ICT infrastructure in shaping this dynamic. In the long term, financial development follows a U-shaped curve, with its positive impact on economic growth intensifying as financial systems mature. This is supported by a significant positive coefficient for FD², highlighting the key role of financial systems in capital allocation, investment stimulation, and transaction cost reduction (Beck et al., 2021). However, as economies reach a certain level of development, the positive effects of financial development may diminish, as indicated by the diminishing returns captured by the squared term (Rajan & Zingales, 1998). The interaction between financial development and institutional quality further enhances growth, with robust governance structures amplifying the positive impact of financial development on economic growth (Laeven & Levine, 2008). Nonetheless, the influence of institutional quality on financial development is context-dependent, as seen in the negative coefficient for FD²IQI in the MG model (Table 8).

In the short run, financial development remains an important driver of economic growth, although its effect is weaker compared to the long run. The coefficient for FD² indicates a continued positive impact on growth, but with a more muted effect (King & Levine, 1993). The interaction between financial development and ICT infrastructure, however, shows a negative coefficient, suggesting that in the short term, ICT infrastructure may inhibit the growth-enhancing effects of financial development. This could be due to a lack of effective integration between the financial sector and ICT, which may cause inefficiencies (Gisselquist, 2017). Over time, as ICT infrastructure matures and becomes more integrated with financial systems, its positive effects on economic growth are likely to become more pronounced.

These findings offer valuable policy insights for achieving the Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. Both institutional quality and ICT infrastructure are critical for maximizing the economic benefits of financial development. Policymakers should focus on improving the quality and efficiency of financial services rather than simply expanding financial systems (Beck et al., 2021). Strengthening institutional frameworks to ensure transparency, accountability, and financial inclusion is essential (La Porta et al., 2021). Governments should also adopt strategies for ICT development that ensure the effective integration of digital infrastructure with financial systems (World Bank, 2022). Continuous monitoring and evaluation of financial sector reforms will enable timely adjustments, ensuring that financial systems continue to support sustainable economic growth (Pesaran et al., 2001). In conclusion, achieving sustainable economic growth requires a comprehensive approach that considers the long-term effects of financial development, complemented by strong institutions and robust ICT infrastructure.

Table 8. U-Shaped Relationship between FD and EG: Interaction with ICTI and Institutional Quality

Dependent variable logGDPPC	PMG		MG		DFE	
logGDPPC	Coef.	P>z	Coef.	P>z	Coef.	P>z
Long run						
FD2						
L1.	481.761	0.000*	-4.147	0.220	-1.481	0.252
FD2IQI						
L1.	1.893	0.050*	-0.285	0.897	0.458	0.365
FD2ICTI						
L1.	-49.065	0.000*	1.835	0.229	0.000	
F2Q2ICT2						
L1.	0.872	0.789	-0.086	0.526	0.000	
Short run						
Error correction	0.747	0.000*	0.729	0.000*	0.999	0.000*
FD2	363.115	0.000*	-1.436	0.660	0.665	0.496
FD2IQI	1.080	0.206	1.478	0.020*	0.778	0.042
FD2ICTI	-36.731	0.000**	0.526	0.686	0.645	0.101
F2Q2ICT2	0.556	0.002	0.580	0.398	-0.016	0.175
FD2						
D1.	-360.20	0.000*	4.405	0.121	0.000	
FD2IQI	0.349	0.317	1.478	0.020*	0.778	0.042*
FD2ICTI						

D1.	37.500	0.000*	0.087	0.927	-0.205	0.613
F2Q2ICT2						
D1.	-0.710	0.001*	-0.609	0.184	0.004	0.746
FD2						
L2.	-1.309	0.556	-0.985	0.562	-0.818	0.434
FD2IQI						
L2.	0.478	0.682	0.387	0.748	-0.360	0.402
FD2ICTI						
L2.	-0.418	0.774	-0.010	0.995	-0.824	0.048*
F2Q2ICT2						
L2.	-0.151	0.617	0.222	0.310	0.023	0.104
_cons	1.626	0.073*	1.742	0.041*	0.009	0.918

Source: Own computation (2024), *p < 0.01 (1% significance level),** p < 0.05 (5% significance level),*** p < 0.1 (10% significance level)

4.4. Causality test

The Pairwise Dumitrescu-Hurlin Panel Causality Test (Table 9) reveals complex interrelationships among financial development, economic growth, ICT, and institutional quality in East Africa. The Zbar statistics at significance levels of 1%, 5%, and 10% confirm these linkages.

A significant causality from economic growth (logGDPPC) to squared financial development (FD²) is found at the 1% level (Zbar.stat = 1.637, p-value = 0.0001), suggesting a nonlinear relationship: financial development initially fosters growth, but its marginal effect diminishes beyond a threshold, aligning with the findings of Beck et al. (2000). The absence of causality from FD² to logGDPPC (p-value = 0.233) supports the finance-growth paradox (Rajan & Zingales, 2003), indicating that further financial expansion does not yield additional growth benefits, underlining the need for cautious financial sector management to avoid instability.

Economic growth also has a robust causal relationship with ICT development (logGDPPC → ICTI), with a Zbar.stat of 4.709 (p-value = 0.0000), confirming the role of ICT in driving economic performance by enhancing financial inclusion and market efficiency (Aker & Mbiti, 2010). The second lag of economic growth (L2 logGDPPC) significantly influences ICT development (Zbar.stat = 2.728, p-value = 0.0064), reinforcing the importance of past economic performance for future ICT infrastructure, which in turn boosts economic growth (Schwab, 2016). This feedback loop is particularly relevant for East Africa, where digital banking and mobile money are transforming the financial landscape (Mbiti & Weil, 2011).

The causality from economic growth to financial institutions (FI) and financial markets (FM) is marginally significant at the 10% level ($Z_{\text{bar.stat}} = 1.872$ and 1.890 , $p\text{-values} = 0.0612$ and 0.0587), suggesting that growth fosters the expansion of these sectors, essential for financial inclusion and further economic development (Honohan, 2004). However, these effects are weaker compared to those observed with ICT, emphasizing that institutional and regulatory frameworks are crucial for optimizing financial system performance.

Policy implications are clear: the connections between economic growth, ICT, and financial institutions underscore the need for strategic investments in ICT infrastructure and financial reforms to sustain growth. Additionally, the nonlinear relationship between financial development and growth indicates that financial sector deepening should be carefully managed to prevent overextension. Policymakers should focus on digital finance initiatives and ensure financial system resilience, in line with SDGs Goal 8 on inclusive economic growth and Goal 9 on resilient infrastructure (UN, 2015).

In conclusion, the Pairwise Dumitrescu-Hurlin Panel Causality Test highlights intricate relationships among financial development, economic growth, ICT, and institutional quality in East Africa. Targeted policies balancing financial expansion with sustainability, prioritizing ICT development, and implementing institutional reforms are essential for aligning economic growth with the SDGs and Agenda 2063.

Table 9. Pairwise Dumitrescu Hurlin Panel Causality Test

Direction	Zbar.stat	Prob
L. logGDPPC \square FD2	1.637	0.0001*
FD2 \square logGDPPC	1.194	0.233
logGDPPC \square FD	1.410	0.1585)
L2. logGDPPC \square FD2	1.637	0.1016***
logGDPPC \square ICTI	4.709	0.0000*
logGDPPC \square GEX	3.435	0.0006*
L2. logGDPPC \square ICTI	2.728	0.0064*
L2. ICTI \square L2. logGDPPC	3.208	0.0013*
logGDPPC \square FI	1.872	0.0612***
FI \square logGDPPC	1.1240	0.261
logGDPPC \square FM	1.890	0.0587***
FM \square LogGDPPC	1.3475	0.178

Note: The superscripts ***, ** and * denote the statistical significance at 1%, 5% and 10% levels, respectively

5. Summary, Conclusions and Policy Implications

5.1. Summary

This study investigates the dynamic relationship between financial development (FD) and economic growth (EG) in East Africa, emphasizing the mediating roles of institutional quality (IQ) and information and communication technology (ICT). Empirical findings reveal a U-shaped relationship, suggesting that financial development alone does not guarantee economic progress unless complemented by strong governance and ICT penetration. Initially, FD may lead to inefficiencies due to weak institutions and regulatory gaps; however, as governance improves and ICT adoption increases, FD fosters growth (Beck & Levine, 2023).

Institutional quality enhances financial efficiency by reducing transaction costs and improving investor confidence, ensuring optimal capital allocation (Acemoglu & Robinson, 2022). Furthermore, ICT-driven financial inclusion expands access to banking services, particularly through mobile technology, reinforcing financial deepening and economic stability (Kuteesa et al., 2023). Panel causality tests confirm bidirectional causality between FD and EG, indicating that financial sector expansion stimulates economic growth, which in turn strengthens financial markets and technological advancements. These findings necessitate a holistic policy framework integrating financial, institutional, and technological strategies.

5.2. Conclusions

Findings underscore that FD's impact on EG is contingent upon governance structures and digital financial services. Without sound institutions and technological advancements, FD may lead to resource misallocation, speculative activities, and financial instability. However, when complemented by robust institutions and ICT, FD emerges as a catalyst for sustainable economic transformation. Thus, East African economies must adopt a multi-dimensional approach, incorporating institutional reforms, FinTech innovations, and regional cooperation to optimize FD's contribution to economic prosperity.

5.3. Policy Recommendations

To enhance financial development's effectiveness in fostering economic growth, a synergistic policy framework is required, integrating regulatory, technological, and economic strategies.

1. Strengthening Institutional Quality and Financial Governance

- Enhance regulatory frameworks to promote transparency, reduce market inefficiencies, and mitigate financial mismanagement (World Bank, 2023).

- Implement anti-corruption measures to strengthen public confidence in financial institutions and improve capital market efficiency.
- Develop financial dispute resolution mechanisms to prevent systemic risks and ensure a stable investment climate.

2. Leveraging ICT for Financial Inclusion and Efficiency

- Expand mobile banking and digital payment systems to bridge financial access gaps, particularly in rural areas (IMF, 2023).
- Increase broadband penetration to facilitate digital transactions and financial literacy programs, ensuring the widespread use of FinTech solutions (Kuteesa et al., 2023).
- Encourage the adoption of blockchain technology for secure, transparent financial transactions, reducing fraud risks and enhancing market efficiency.

3. Enhancing Regional Financial Integration

- Harmonize banking regulations across East African economies to enable seamless cross-border transactions and financial market stability.
- Develop regional investment frameworks to attract intra-African capital flows and enhance economic resilience (UNECA, 2023).
- Establish interconnected stock exchanges to improve market liquidity and promote diversified investment opportunities.

4. Promoting Inclusive Financial Policies

- Expand microfinance initiatives to support SMEs and informal sector enterprises, ensuring broad-based economic growth (Beck et al., 2022).
- Implement gender-responsive financial policies to enhance women's participation in formal banking and entrepreneurship.
- Provide incentives for FinTech startups to foster financial innovation and competition, improving service delivery and cost efficiency.

5. Developing a Resilient and Sustainable Financial Ecosystem

- Establish macroprudential regulations to mitigate financial instability and systemic crises (BIS, 2023).

- Promote green finance by integrating environmental, social, and governance (ESG) criteria into financial decision-making.
- Institutionalize long-term financial education programs to enhance savings culture and investment literacy among the population.

5.4. Future Research Directions

Further research should explore sector-specific FD impacts, comparing East Africa's financial trajectory with other emerging markets. Additionally, examining the role of financial regulation in preventing speculative bubbles and ensuring sustainable economic growth is essential. Future studies could also integrate artificial intelligence in financial analytics, providing insights into predictive modeling and financial risk assessment.

This study provides robust empirical evidence that financial development's impact on economic growth in East Africa is contingent upon institutional quality and ICT advancement. Policymakers must adopt a synergistic, multi-sectoral approach that aligns financial governance with technological transformation and regional integration. By implementing these strategies, East African economies can harness financial development as a sustainable driver of inclusive and long-term economic growth.

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Export Challenges of Fresh Fruit and Vegetables: Empirical Evidence from Ethiopia

By

Dawit Negussie Tolossa (PhD)¹, Desalegn Berhane Asgedom (PhD)²

Abstract

Export activities are essential for the economic growth and sustainable development of nations, including Ethiopia, where agriculture significantly contributes to GDP and employment. Despite favorable conditions for exporting fresh fruits and vegetables, the sector faces numerous challenges that limit its potential. This study examines the barriers Ethiopian exporters encounter, such as insufficient infrastructure, limited access to financial resources, inadequate quality management, and a lack of marketing expertise. Additionally, strict international quality standards and inefficiencies in cold chain logistics further complicate export efforts. The analysis identifies that economic, human resource, and marketing barriers substantially impact export challenges, while competition and financial barriers are less significant. Recommendations for improvement include stabilizing the economic environment, enhancing human resources, and developing effective marketing strategies. Strengthening quality standards, streamlining regulations, and encouraging innovation are also crucial. These findings provide valuable insights for policymakers and stakeholders in Ethiopia's fresh produce sector. By implementing targeted interventions, it is possible to overcome existing barriers and unlock the country's full export potential. Future research could further investigate these dynamics in different contexts.

Keywords: Export, Challenges, Fresh fruits and Vegetables, Ethiopia

¹ Rift Valley University,

² Corresponding Author: Adigrat University
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1. Introduction

For many nations, internationalization or export growth may be a practical choice (Dean et al., 2000). Ethiopia aims to increase the export of fruits and vegetables to the world, especially the European market. Ethiopia now exports fruit and vegetables, but the proportion of those exports to the continent's overall ACP (African, Caribbean, and Pacific states) exports is less than expected (Tekleberhan, 2012).

Due to the favorable environmental conditions, almost all sub-tropical, tropical and temperate horticulture crops can be grown in Ethiopia. Commercial exporters can plant and export fresh fruits, vegetables, and green items to the EU and Middle Eastern markets. Ethiopia's principal horticulture exports are fresh fruits, mixed vegetables, cut flowers, and triple-concentrated tomato sauce. In Ethiopia, the horticulture sector employs approximately 120 businesses, of which more than 100 are prosperous exporters (Lubelo, 2010).

Due to its suitable and beneficial climate, affordable labor, and location close to the European and Middle Eastern markets, Ethiopia is relatively advantageous in various fruits and vegetables. However, compared to the nation's food grains, the production and export of fruits and vegetables are significantly less advanced (EIA, 2012). According to the Ethiopian Central Statistics Authority (CSA) report, fruit and vegetable production covered around 12,576 hectares in 2011. Compared to food crops, this represented approximately 0.11 percent of the total area under cultivation in the same year (Degafe T., 2013).

As mentioned earlier, the nation has enormous potential for producing fresh fruits and vegetables, and the government has prioritized the sector and has since been working to develop it further. The main projects include developing a business-friendly strategy to attract investors to the industry, establishing the Ethiopian Horticulture Producers Exporters Association in 2006, launching the Horticulture Development Agency in 2008, offering tax breaks to investors who commit to the region for at least five years, and working to resolve infrastructure issues like road, water, and electricity (Degafe T., 2013). Despite the nation's capacity for production and the government's efforts to advance, there are still several significant obstacles that growers and exporters of fruits and vegetables must overcome.

According to the World Bank (2004), freight risk is a significant concern. Exporters cite high transportation costs due to a monopoly by Ethiopian Airlines, which accounts for 80 to 85 percent of their revenue. Consequently, high freight costs compel exporters to limit shipments to high-value fruits and vegetables in small quantities. Unpredictable weather conditions, such as heavy rainfall, exacerbate these challenges. Additionally, inadequate access to long-term loans with favorable terms, limited investment in horticultural R&D, and insufficient infrastructure for roads, power, water, and

telecommunications further hinder the sector's growth.

Degafe (2013) highlights further issues, including the lack of credit facilities and input supplies for rural smallholder farmers, which negatively affect production volume and quality. The absence of an organized market information system, low production quality, and poorly managed post-harvest services are significant barriers. Small-scale growers dominate fruit and vegetable exports, but they often fail to meet the stringent standards of the European Union and Middle Eastern markets, limiting their competitiveness.

Furthermore, few industry investors make it difficult for the nation to perform better and gain a more significant portion of the global market. Additionally, a poor connection between local smallholder farmers and exporters worsens the situation. Despite the absence of research and development, the industry needs more human resources, particularly horticultural specialists. There have only been a few graduates with sector studies specializations and limited practical experience in the last few years. Finally, there is a lack of coordination among the needs to be more department stakeholders.

Export remains a cornerstone of Ethiopia's economic growth and sustainable development (Lemma & Ali, 2018). With substantial potential in fresh fruit and vegetable exports, Ethiopia's agriculture sector contributes significantly to GDP and employment. However, the sector faces persistent challenges, including inadequate infrastructure, constrained access to finance, substandard quality management, insufficient marketing knowledge, and inefficient cold-chain logistics. Addressing these issues is imperative for unlocking the full potential of Ethiopia's fresh produce exports.

Thus, this study aims to examine the export challenges of fresh fruits and vegetables in Ethiopia, identify the underlying causes, and suggest strategies to overcome these challenges to ensure the sustainable export of fresh fruits and vegetables. The findings of this study will offer valuable information, insights, and recommendations to policymakers, stakeholders, and entrepreneurs involved in Ethiopia's fresh fruits and vegetables value chain.

2. Literature Review

The export of fresh fruits and vegetables from Ethiopia faces numerous challenges that hinder its full potential. Various studies and reports have identified critical issues affecting this sector (Centre, 2020). Ethiopian exporters encounter substantial barriers in accessing international markets, primarily due to the stringent regulatory requirements associated with global trade. These include rigorous quality standards, costly certifications, and complex compliance with phytosanitary measures. The financial and operational burdens of meeting these requirements can discourage many exporters, particularly small-scale producers (Sisay, 2018).

The lack of adequate infrastructure and efficient logistics systems is a significant bottleneck. Poor transportation networks, limited cold storage facilities, and inefficient customs procedures contribute to delays and losses. These logistical deficiencies directly impact the quality and shelf-life of highly perishable goods like fruits and vegetables, reducing their market value (Boja, 2023).

Insufficient investment in research and development (R&D) compounds the sector's challenges by stifling innovation and the adoption of best practices. This gap limits the industry's ability to enhance productivity, adopt modern farming techniques, and meet evolving market demands (Sisay, 2018). Ethiopian vegetable and fruit commercial growers face challenges in export marketing, primarily due to macro-environmental barriers, and addressing these issues can improve export volume and sales (Sisay, 2018).

Exporting fresh vegetables, such as snap beans to Europe, presents unique hurdles, including pest infestations, pesticide residue concerns, and harmful organisms. Noncompliance with technical standards due to insufficient capacity and resources exacerbates these difficulties, limiting market access (Fulano et al., 2021).

Ethiopian vegetable and fruit commercial growers face challenges such as management commitment, technological advancement, financial, transport system, and low awareness of stakeholders, among others (Sisay, 2018). Limited access to finance remains a critical bottleneck for Ethiopian exporters. Many small-scale farmers and exporters lack the financial resources to invest in technology, enhance production processes, or expand operations. This financial constraint undermines their competitiveness in the international market and restricts their growth potential (Vereshchagina, 2023).

Addressing these challenges requires a multifaceted approach, including improving infrastructure, enhancing access to finance, increasing R&D investment, and ensuring robust policy support. Targeted interventions, such as establishing specialized trade facilitation programs, incentivizing private sector investments in logistics, and fostering public-private partnerships, can create a more conducive environment for Ethiopia's fresh produce exports. By tackling these issues, Ethiopia can better realize its potential in the global fresh fruit and vegetable market.

3. Analysis

Factor analysis

Factor analysis is a powerful statistical technique used to understand a dataset's underlying structure or patterns. It is widely utilized in various fields, including psychology, sociology, marketing, and finance, to name a few. The primary purpose of factor analysis is to identify the latent variables, also known as

factors, that explain the observed correlations among a set of variables.

Exploratory Factor Analysis (EFA):

In EFA, the primary objective is to explore the underlying structure of a dataset without any preconceived notion about the number or nature of factors. It is used when the researcher wants to identify the latent factors that best explain the observed patterns in the data. EFA helps determine how many factors are needed to account for the variance in the variables and how these variables are grouped. It is a data-driven approach that allows the factors to emerge from the data.

Confirmatory Factor Analysis (CFA):

Conversely, CFA is used to confirm or validate a specific factor structure hypothesized by the researcher based on theory or prior research. Unlike EFA, the researcher starts with a predefined factor structure, specifying which variables load onto each factor. The primary goal of CFA is to test the fit of the hypothesized model with the observed data. It helps determine whether the data supports the proposed factor structure and whether the relationships between the observed variables and the latent factors are consistent with the researcher's theoretical assumptions.

Partial Least Squares Structural Equation Modeling (PLS-SEM)

Partial Least Squares Structural Equation Modeling (PLS-SEM) have become widely used in explaining theoretical models within the social and behavioral sciences (Worthington & Whittaker, 2006). Partial Least Squares Structural Equation Modeling (PLS-SEM) has emerged as a popular method for analyzing complex relationships in export performance studies. Barclay, Thompson, and Higgins (1995) introduce PLS-SEM as an effective causal modeling approach. Further advancements in the methodology are discussed by Chin (2010) and Hair, Ringle, and Sarstedt (2011), who highlight its advantages in handling small sample sizes and non-normal data.

The application of PLS-SEM in marketing and business research is well documented. Hair et al. (2019) provide guidelines for reporting PLS-SEM results, while Kock (2015) addresses common method bias issues in PLS modeling. Additionally, Kwong-Kay Wong (2013) and Watkins (2018) explore exploratory factor analysis and measurement model validation within the PLS-SEM framework.

Structural Equation Modeling in Marketing Research

Fornell and Larcker (1994) contribute foundational work on structural equation modeling (SEM), particularly concerning measurement error and model validity. Their research is further supported by Worthington and Whittaker (2006), who provide best practices for scale development in marketing and

social sciences. More recent contributions by Henseler, Ringle, and Sinkovics (2009) examine the use of PLS-SEM in international marketing, particularly in export performance analysis. This methodological approach continues to gain traction due to its flexibility and predictive capabilities in business research (Roldán & Sánchez-Franco, 2012).

The literature highlights multiple factors influencing the export performance of fresh fruits and vegetables in Ethiopia. Logistical challenges, quality compliance, financial constraints, and market research gaps are major obstacles that require strategic interventions. Methodologically, PLS-SEM has proven to be a robust tool in analyzing these complex relationships, offering valuable insights into export dynamics. Future research should focus on integrating PLS-SEM with other econometric models to provide a more comprehensive understanding of the sector's challenges and opportunities.

The following section is a widely accepted reporting style of PLS analysis, as suggested by previous studies (Chin, 2010). First, the validity and reliability of the measurement model are assessed, and the structural model is validated.



Figure 1. Structural Model (n = 5000 bootstrapped samples) outer loading and Cronbach's alpha

The SEM-PLS included the 10 factors. However, the two factors were not included in the model. The reason is that each has one indicator.

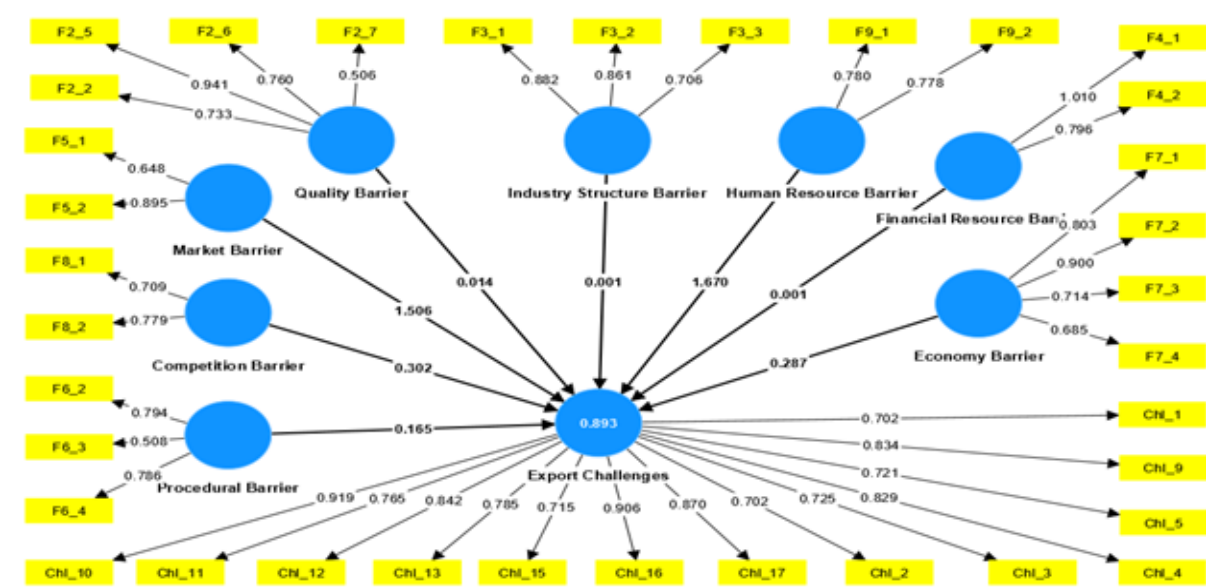


Figure 2. Structural Model (n = 5000 bootstrapped samples): outer loadings, f-square, and R-square

Coefficients of Determination (R²) the R² indicates the variance explained of the endogenous variable by the exogenous variable. The R² value ranges from 0 to 1, which indicates higher levels of predicting accuracy. Hair et al. (Joe F. Hair et al., 2011) articulated those values of 0.75, 0.50 or 0.25 as substantial, moderate and weak. At the same time, Chin (1998) articulated the values of 0.67, 0.33, and 0.19 as substantial, moderate, and weak.

The measurement model includes variables, indicators, loadings, Cronbach's alpha, composite reliability (rho_a), VIF, composite reliability (rho_c), and the average variance extracted (AVE).The loadings represent the strength of the relationship between the indicators and their corresponding variables. The values range from 0.5 to 1.01, where higher values indicate stronger relationships. Based on the table, all indicators have loadings above the recommended value of 0.5.

Cronbach's alpha is a measure of the internal consistency reliability of the indicators within each variable. It ranges from 0 to 1, where higher values indicate higher reliability. The table shows that all variables have Cronbach's alpha values above the recommended value of 0.7, except for the Quality Barrier variable, which has a value of 0.842.

Composite reliability (rho_a) and composite reliability (rho_c) are alternative measures of reliability that consider the shared variance between the indicators. They range from 0 to 1, where higher values indicate higher reliability. Based on the table, all variables have composite reliability values above the recommended value of 0.7, except for the Market Barrier variable, which has a CH0.787 (appears to be

a typing error; it could be 0.787).

VIF (variance inflation factor) measures the multicollinearity between the indicators within each variable. It ranges from 1 to infinity, where higher values indicate higher multicollinearity. The recommended value is below 5, and based on the table, all variables have VIF values above 1, but they are all below the threshold value of 5.

The average variance extracted (AVE) represents the variance each variable explains of its indicators relative to the measurement error. It ranges from 0 to 1, where higher values indicate higher convergent validity. The recommended value is above 0.5, and based on the table, all variables have AVE values above this threshold, except for the Procedural Barrier variable, which has a value of 0.502.

Overall, the results suggest that the measurement model has adequate reliability and convergent validity, except for some indicators that may need to be revised or removed to improve the model fit.

Reliability and Validity

The measurement model of the study was further assessed based on the outer loadings, Cronbach's alpha, composite reliability, average variance extracted (AVE), and discriminant validity (Joseph F. Hair et al., 2019). According to (Kwong-Kay Wong, 2013), the factor loadings for the extracted factor were all above the critical value of 0.5 for all the items, and composite reliability was tested to confirm the constructed reliability. The result indicated that all the values were greater than 0.708 (Kock, 2015).

Reliability Analysis

According to Mark (1996), "Reliability is defined as the extent to which a measuring instrument is stable and consistent. The essence of reliability is repeatability. If an instrument is administered repeatedly, will it yield the same results"? The two most commonly used methods for establishing reliability include Cronbach Alpha and Composite Reliability (CR). The Cronbach alpha and composite reliability results are presented in the Table below. The Cronbach's Alpha ranged from 0.711 to 0.958, whereas Composite Reliability statistics ranged from 0.713 to 0.957. Both indicators have reliability statistics over the required threshold of 0.708 (Joe F. Hair et al., 2011).

Table 4.33 provides information on the reliability of different variables in a research study as measured through Cronbach's alpha, composite reliability (CR) using rho_a and CR using rho_c, and average variance extracted (AVE).

Cronbach's alpha is a commonly used measure of internal consistency reliability, which assesses the extent to which items on a scale measure the same construct. The values presented in the table range

from 0.711 (for CB) to 0.958 (for EC), indicating high levels of internal consistency reliability for all variables.

CR is another measure of reliability that considers the unobserved constructs or factors that may influence scale scores. The table presents two types of CR, one using rho_a and the other using rho_c, which use different assumptions about the scale factors. Both measures provide high levels of reliability for all variables, ranging from 0.716 (for CB) to 0.96 (for EC) using rho_a and 0.713 (for CB) to 0.957 (for EC) using rho.

Finally, the table reports the AVE, which assesses how much a variable or scale captures the underlying construct. The values presented range from 0.502 (for PB) to 0.827 (for FRB), indicating that, on average, the variables capture roughly 50% to 83% of the underlying construct. Overall, the table provides evidence of high levels of reliability and validity for the variables in the research study, suggesting that they are suitable for use in analyzing the constructs of interest.

Table 1. Reliability analysis

Variables	Cronbach's alpha	CR (rho_a)	CR (rho_c)	AVE
EC	0.958	0.96	0.957	0.635
QB	0.842	0.866	0.832	0.564
ISB	0.855	0.869	0.859	0.672
FRB	0.891	0.928	0.904	0.827
MB	0.734	0.787	0.753	0.61
PB	0.749	0.774	0.745	0.502
EB	0.857	0.87	0.86	0.609
CB	0.711	0.716	0.713	0.554
HRB	0.756	0.756	0.756	0.607

Note: CR (rho_a)= Composite reliability (rho_a), CR (rho_c)= Composite reliability (rho_c), AVE= The average variance extracted, EC= Export Challenges, QB= Quality Barrier, ISB= Industry Structure Barrier, FRB= Finance Resource Barrier, MB= Market Barrier, PB= Procedural Barrier, EB= Economy Barrier, CB= competition Barrier, HRB= Human Resource Barrier

Validity

Table 5 below shows that Fornell and Larcker’s (Fornell & Larcker, 1994) guideline also disclosed that the AVE values for each construct exceeded 0.50, demonstrating the statistical significance of all items of the measurement model and is consistent (Barclay, D., Thompson, R., dan Higgins, 1995). In addition, the range of AVE lies between 0.588 – 0.773 for all study variables.

Therefore, figure 1 (model) displays that all the nine constructs of export challenges, quality barrier, industry structure barrier, finance resource barrier, market barrier, procedural barrier, economy barrier, competition barrier, and human resource barrier, were statistically significant with a value < 0.05 .

The Fornell-Larcker criterion table is a matrix that displays the square root of the Average Variance Extracted (AVE) of each construct in the diagonal and the correlations between constructs in the off-diagonal cells. The AVE is a measure of internal consistency, and a construct's AVE should be higher than the correlations with other constructs to demonstrate discriminant validity.

In this table, the diagonal values (square roots of AVEs) are all higher than the correlation values in the off-diagonal cells, suggesting that the constructs have satisfactory discriminant validity. For example, the AVE for the EC construct is 0.797, which is higher than its correlation with all other constructs. The same pattern holds for all other constructs, indicating that they are all distinct and do not measure the same underlying construct.

Overall, the Fornell-Larcker criterion table provides evidence of sufficient discriminant validity between the constructs.

The given outer loadings represent the relationship between the observed variables and the latent factors in a structural equation model. The T-statistics and p-values provide information about the statistical significance of the loadings.

Based on the analysis of the outer loadings, it can be observed that all the observed variables have strong positive relationships with their corresponding latent factors. The T-statistics for all the loadings are very high, ranging from 5.765 to 22.089, indicating that the relationships are highly significant.

The p-values for all the loadings are very low (0.000), confirming the significance of the relationships. This indicates that the observed variables are good indicators of their corresponding latent factors and can be used to measure the underlying factors in the model.

It is also observed that the mean and standard deviations of the observed variables are close to their corresponding sample means and standard deviations, indicating that the data is well-fit to the model. Overall, the outer loadings analysis suggests that the structural equation model is a good fit for the data and can be used to test the hypothesized relationships.

Based on the above arguments and a review of related literature, the following hypothesis was Formulated

Hypothesis:

- H1: Product quality barrier has a significant relationship with the export challenge.
- H2: The industry structure barrier has a significant relationship with the export challenge.
- H3: The financial resource barrier has a significant relationship with the export challenge.
- H4: The marketing barrier has a significant relationship with the export challenge.
- H5: Procedural barrier has a significant relationship with the export challenge.
- H6: Economic barriers have a significant relationship with the export challenge.
- H7: The competition barrier has a significant relationship with the export challenge.
- H8: The human resource barrier has a significant relationship with the export challenge.

Structural model assessment and Hypothesis testing

Following the assessment of the measurement model, the next step is evaluating the structural path for the evaluation of path coefficients (relationships amongst study constructs) and their statistical significance.

Table 2. Path coefficients – Mean, STDEV, T values, p values

Hypotheses	O (β 1)	M	STDEV	T	P
CB > EC	-0.002	0.008	0.089	0.026	0.979
EB > EC	0.231	0.239	0.112	2.073	0.038
FB > EC	0.007	0.003	0.072	0.092	0.926
HRB > EC	0.412	0.415	0.109	3.769	0.000
ISB > EC	0.146	0.120	0.119	1.228	0.220
MB > EC	0.394	0.395	0.094	4.21	0.000
PB > EC	-0.053	-0.045	0.08	0.658	0.511
QB > EC	-0.129	-0.118	0.075	1.724	0.085

Note: O= Original sample (beta Coefficient), M= Sample mean, STDEV= standard deviation, O/ STDEV= T statistics, P= P value, EC= Export Challenge, CB= competition Barrier, EB= Economic Barrier, FB= Financial Barrier, HRB= Human resource Barrier, ISB= Industry structure Barrier, MB= Marketing Barrier, PB= Procedural Barrier, QB= Quality Barrier

The table displays the path coefficients, means, standard deviations, t-values, and p-values for several hypotheses being tested. Each hypothesis tests the relationship between a particular variable and EC (the dependent variable).

The mean represents the average value of each variable being tested. The standard deviation shows the

variation or dispersion in the data, with larger values indicating greater variability.

The t-value is a statistical measure that indicates whether the relationship between the two variables is significant. The t-value is calculated as the path coefficient divided by its standard error, and a higher t-value suggests a stronger relationship.

The p-value indicates the level of statistical significance of the relationship between the two variables. A p-value less than 0.05 (commonly considered the cutoff for statistical significance) shows a significant relationship between the two variables.

The results show hypotheses have significant relationships with EC: $EB > EC$, $HRB > EC$, $MB > EC$, and $QB > EC$. The other three hypotheses ($CB > EC$, $FB > EC$, and $PB > EC$) do not have significant relationships with EC. The results also show that $MB > EC$ has the strongest relationship with a t-value of 4.21 and a very low p-value.

Path Coefficient

The path Coefficient is the coefficient linking the construct in the structural model. It represents the hypothesized relationship or the strength of the relationship. The path coefficient close to +1 indicates a strong positive relationship (and vice versa for negative values). The closer the estimated coefficients are to 0, the weaker the relationships. Very low values close to 0 generally are not statistically significant.

Whether a coefficient is significant depends on its standard error obtained by bootstrapping to enable computing the empirical t values and p values for all structural path coefficients. Commonly used critical are 1.65 (significant level = 5%) and 1.96 (significant level = 5%).

The individual path coefficient can be interpreted as the standardized beta coefficients in an ordinary least squares (OLS) regression.

A one-unit change of exogenous construct changes the endogenous construct by the size of the path coefficient when everything else remains constant (Joe F. Hair et al., 2011).

P values: most researchers use p values to assess significance levels. When assuming a significance level of 5%, the p-value must be smaller than 0.05 to conclude that the relationship under consideration is significant at a 5% level. When assuming a significant level of 1%, the p-value must be smaller than 0.01 to indicate a significant relationship.

Hypothesis Testing

H1 evaluates whether the Competition barrier significantly affects export challenge. The results revealed

that the competition barrier has an insignificant impact on the Export challenge ($\beta_1 = -0.002$, $t=0.026$, $p=0.979$). Hence, H1 was not supported. The results are presented in Table 5. The structural model is shown in Figure 1.

H2 evaluates whether economic barriers significantly affect export challenges. The results revealed that the economic barrier significantly impacts the export challenge ($\beta_1 = 0.231$, $t= 2.073$, $p < 0.038$). Hence, H2 was supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H3 evaluates whether the Financial barrier significantly affects export challenges. The results revealed that the competition barrier has an insignificant impact on the Export challenge ($\beta_1 = 0.007$, $t=0.092$, $p=0.926$). Hence, H3 was not supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H4 evaluates whether the Human resource barrier significantly affects export challenge. The results revealed that the human resource barrier has a significant impact on the export challenge ($\beta_1 = 0.412$, $t= 3.769$, $p < 0.000$). Hence, H4 was supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H5 evaluates whether the Industry structure barrier significantly affects export challenge. The results revealed that the Industry structure barrier has an insignificant impact on the Export challenge ($\beta_1 = 0.146$, $t=0.120$, $p=0.220$). Hence, H5 was not supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H6 evaluates whether the Market barrier significantly affects export challenges. The results revealed that the Market barrier has a significant impact on the export challenge ($\beta_1 = 0.394$, $t= 4.210$, $p < 0.000$). Hence, H6 was supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H7 evaluates whether procedural barriers significantly affect export challenges. The results revealed that procedural barrier has an insignificant impact on the Export challenge ($\beta_1 = -0.045$, $t=0.658$, $p=0.511$). Hence, 7 was not supported. The results are presented in Table 5. The structural model is presented in Figure 1.

H8 evaluates whether the Quality barrier significantly affects export challenges. The results revealed that the Quality barrier has an insignificant impact on the Export challenge ($\beta_1 = -0.129$, $t=1.724$, $p=0.085$). Hence, H8 was not supported. The results are presented in Table 5. The structural model is presented in Figure 1.

Table 3 Hypotheses result in summary

Hypotheses	$\beta 1$	SE	T	P	Results
H1 CB->EC	-0.002	0.089	0.026	0.979	Not Supported
H2 EB->EC	0.231	0.112	2.073	0.038	Supported
H3 FB->EC	0.007	0.072	0.092	0.926	Not Supported
H4 HRB->EC	0.412	0.109	3.769	0.000	Supported
H5 ISB->EC	0.146	0.119	1.228	0.220	Not Supported
H6 MB->EC	0.394	0.094	4.21	0.000	Supported
H7 PB->EC	-0.053	0.08	0.658	0.511	Not Supported
H8 QB->EC	-0.129	0.075	1.724	0.085	Supported

Note: B= Beta coefficient, SE= standard Error, T=t-statistics, P=probability (P) value, *Relationships are significant at $P < 0.001$, EC= Export Challenge, CB= competition Barrier, EB= Economic Barrier, FB= Financial Barrier, HRB= Human resource Barrier, ISB= Industry structure Barrier, MB= Marketing Barrier, PB= Procedural Barrier, QB= Quality Barrier

The goodness of fit (SRMR)

Standardized Root Mean Square Residual is the difference between the observed and model-implied correlation matrix. It assesses the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of the (model) fit criterion. A value less than 0.10 or 0.08 (Schermelleh-Engel et al., 2003) (Hu and Bentler, 1999) is considered a good fit. This threshold can be used to indicate model fit.

The table compares two models: the saturated and the estimated models. The saturated model is the one that represents the data perfectly, with no error or variance. In contrast, the estimated model has been developed using a statistical estimation method to model the data.

The first metric in the table is SRMR (Standardized Root Mean Square Residual), which measures the discrepancy between the model's predicted covariances and the observed covariances. The SRMR score is 0.09 for both models, indicating a good fit.

The second metric is d_ULS (Degree of Unbiasedness of Structural Coefficients), which measures the accuracy or reliability of the estimated coefficients. The d_ULS score is 5.081 for both models, indicating that the coefficients are unbiased and, therefore, reliable.

The third metric is d_G (Degree of Determinacy), which measures the extent to which the data determines the model and how much additional information is required to make the model more precise. The d_G score is 5.032 for both models, indicating that the data highly determines the models.

The fourth metric is the Chi-square test statistic, which measures the model's goodness of fit. The Chi-square score is 1492.326 for both models, indicating a good fit.

The final metric is NFI (Normed Fit Index), which measures the proportion of the variance in the observed variables accounted for by the model. The NFI score is 0.539 for both models, indicating a relatively poor fit.

The two models have almost identical metric scores, suggesting they are equally valid data modeling options. However, the NFI score indicates that there is still considerable room for improvement in the model's fit.

Collinearity assessment

Collinearity arises when two indicators are highly correlated. Collinearity among latent variables is assessed through variance inflated value (VIF). According to Hair, Ringle, and Sarsted (Joe F. Hair et al., 2011), $VIF \geq 5$ indicates a potential collinearity problem.

The goodness of fit (SRMR)

Standardized Root Mean Square Residual is the difference between the observed and model-implied correlation matrix. It assesses the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of the (model) fit criterion. A value less than 0.10 or 0.08 (Hu and Bentler, 1999) is considered a good fit.

4. Conclusion

The analysis of the reliability and validity of the measurement model confirms the robustness of the constructs used in this study. The Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) metrics demonstrate high internal consistency and reliability across the variables. The discriminant validity, assessed through cross-loadings and the heterotrait-monotrait (HTMT) ratio, further substantiates the distinctiveness of the constructs, ensuring that each one uniquely contributes to the overall model.

The hypotheses testing reveal significant relationships between certain barriers and export challenges, particularly highlighting the economic, human resource, and marketing barriers as key influencers. These findings suggest that addressing these specific barriers could potentially alleviate some of the challenges faced by exporters. Conversely, other barriers, such as competition, financial, and procedural barriers, were found to have insignificant impacts, indicating that they may not be as critical in the context of this study.

Overall, the study provides valuable insights into the factors affecting export challenges, with the model fit analysis indicating a good fit. These results can inform policymakers and business strategists in developing targeted interventions to support exporters. Future research could further explore these relationships in different contexts or with additional variables to deepen the understanding of export challenges.

5. Recommendation

The significant relationship between economic barriers and export challenges suggests a need for focused policies to stabilize and enhance the economic environment. Governments and trade organizations should collaborate to provide economic incentives, subsidies, or financial support to exporters, particularly in volatile markets. Additionally, creating financial safety nets and leveraging bilateral trade agreements can mitigate economic risks for exporters.

Given the substantial impact of human resource barriers, training and development programs should be implemented to enhance the skills and competencies of those involved in the export process. This could include specialized training in international trade regulations, market analysis, and logistics management. Introducing certification programs and fostering knowledge exchange through global partnerships could further enhance workforce expertise.

The strong influence of market barriers indicates the necessity for initiatives that improve market access for exporters. This can be achieved through trade agreements, the reduction of tariffs, and participation in international trade fairs and expos to showcase products. Developing digital trade platforms and enhancing e-commerce infrastructure can further broaden market access.

Strengthening Marketing Strategies: To overcome the marketing barrier, exporters should invest in more robust marketing strategies, including digital marketing, market research, and brand development. Exporters should also consider diversifying their market presence to mitigate the risks associated with dependence on a few markets. Collaborating with marketing consultants and leveraging data-driven insights can help tailor strategies to target specific international markets.

Although not all findings were statistically significant, addressing quality barriers remains essential. Exporters should focus on meeting international quality standards and certifications to enhance product acceptance in foreign markets. Support from government agencies in achieving these standards can be crucial. Investing in advanced quality control technologies and integrating traceability systems can also improve compliance and consumer trust.

The insignificant impact of procedural barriers suggests that existing regulations may not be overly

burdensome, but continuous monitoring and improvement of these processes are recommended. Streamlining customs procedures and reducing bureaucratic hurdles can further facilitate smoother export operations. Establishing a centralized export support hub can enhance regulatory compliance and efficiency.

Encouraging Competitive Positioning: While competition barriers were not found to be significant, staying competitive in the global market is crucial. This involves innovation, maintaining cost competitiveness, and understanding competitor strategies. Policies that encourage innovation and provide support for research and development can be beneficial. Exporters should also explore value-added processing to differentiate their products and enhance competitiveness.

Although financial barriers did not show a significant impact, ensuring that exporters have access to adequate financing options is important. This could include offering low-interest loans, export credits, and financial risk mitigation services. Creating export insurance schemes can protect exporters against unforeseen losses.

Exporters should continuously monitor the global market landscape and be ready to adapt to changes. This includes being aware of emerging market trends, shifts in consumer preferences, and changes in international trade policies. Developing an adaptive strategy framework can help exporters respond proactively to dynamic market conditions.

Encouraging partnerships between government bodies, the private sector, and international trade organizations can create a supportive ecosystem for exporters. This collaborative approach can lead to more comprehensive strategies that address the multifaceted challenges faced in the export process. Forming industry alliances and engaging in joint ventures can further strengthen export capabilities.

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Navigating Ethical Leadership Influence on Organizational Citizenship through Commitment in Ethiopian Healthcare

By

Kenenisa Lemi¹, Wako Jio Gelgelo², Shashi Kant³

Abstract

The purpose of this study is to look at the link among organizational citizenship behavior (OCB) and ethical leadership in Ethiopia, with an emphasis on the function of organizational commitment as a mediator. It emphasizes the need to comprehend how ethical leadership might impact employee behavior and commitment in healthcare settings. A quantitative technique was used, which included a survey of 385 employees from various health institutions in Ethiopia. The Kaiser-Meyer-Olkin (KMO) test was used in the study to establish the appropriate sample size for factor analysis. Confirmatory factor analysis (CFA) was used to confirm the measurement model and determine the components' validity and reliability. To investigate the links between ethical leadership, organizational commitment, and OCB, structural equation modeling (SEM) was used in conjunction with the AMOS tool. The results show that ethical leadership has a strong beneficial impression on OCB, with a total influence of 0.31, implying complete mediation by organizational commitment. This demonstrates that organizational commitment is the sole means by which ethical leadership influences OCB. The findings suggest that ethical leaders play an important role in promoting employee engagement, motivating people to take activities that benefit the firm. The research emphasizes the value of ethical leadership in developing a dedicated workforce that actively contributes to business goals. It recommends that firms focus ethical leadership development in order to improve employee engagement and civic practices. Future study might examine longitudinal studies to measure the long-term influence of ethical leadership on behavior and organizational commitment, as well as investigate comparable associations in different cultural contexts.

Keywords: Ethical Leadership, Organizational Citizenship Behavior, Mediation, Organizational Commitment

¹ Associate Professor, Department of Management, Jimma University; Ethiopia

² PhD Scholar, Department of management, Bule Hora University; Ethiopia

³ Corresponding Author: Assistant Professor, Department of management, Bule Hora University; Ethiopia

1. INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The importance of ethical leadership in businesses in the increasingly interconnected global economy cannot be overstated. Ethical leadership is defined by fairness, honesty, and a commitment to ethical values. It is crucial in shaping organizational culture and shaping employee behavior. According to Taamneh et al. (2024), this effect also include Organizational Citizenship Behavior (OCB), which is the voluntary acts that staff members do to promote the efficient functioning of the business. Particularly in developing nations such as Ethiopia, where businesses face unique opportunities and challenges, the connection between ethical leadership and open and corporate banking is crucial (Chavali & Thirumal Reddy, 2021). The concept of ethical leadership emerged in the later half of the 20th century when organizations began to recognize the impact of leadership behavior on employee happiness and corporate governance. Scholars such as Brown and Treviño (2006), referenced by Ali et al. (2024), have laid the groundwork for understanding how ethical leaders foster commitment, trust, and a sense of belonging among employees (Nemr & Liu, 2021).

There are still a lot of practical problems, despite the growing body of research on OCB and ethical leadership. Less attention on ethical concerns in leadership styles diminishes employee loyalty and leads to less-than-ideal organizational performance, a problem Ethiopian businesses often face (Adawiyah et al., 2022). While prior research has demonstrated links among OCB, organizational commitment, and ethical leadership, several uncertainties remain, particularly for the Ethiopian context (Adawiyah et al., 2022). Empirical research on the ways in which cultural variables impact these connections and the particular processes via which ethical leadership (Chavali & Thirumal Reddy, 2021). Ethiopia's expanding social and economic growth is creating a growing demand for ethical leadership in the nation. However, there are certain barriers that stand in the way of Ethiopian organizations implementing ethical leadership in an effective and real-world manner (Saudin, 2024). The cultural context in which leadership is practiced is a major challenge. In Ethiopian businesses, conventional leadership ideologies might place an emphasis on hierarchy and power above ethical (Adula et al., 2023).

Mediation is critical for understanding the influence of ethical leadership on organizational citizenship behavior (OCB), especially in the context of Ethiopian healthcare. This link is complicated, since ethical leadership may not simply transfer into OCB without taking into account underlying psychological causes (Al-Okaily, et al., 2024). Organizational commitment is a crucial mediator in this study because it reflects employees' emotional and psychological bonds with their organization, which influences their propensity to engage in discretionary actions that benefit the firm (Taamneh et al., 2024). For first of all, ethical leadership develops a culture of trust and integrity, which encourages corporate dedication. When

leaders act ethically, employees are more likely to feel appreciated and supported, resulting in enhanced loyalty and devotion to the firm (Adula et al., 2023). This commitment serves as a catalyst, inspiring employees to go above their official job duties, so improving OCB. Without this mediating impact, the direct association between ethical leadership and OCB may remain unclear, as employees may be unable to engage in such activities unless they have a strong commitment to their firm (Saudin, 2024). Second, in the Ethiopian healthcare setting, where resources are scarce and problems are common, developing a dedicated staff is critical for enhancing service delivery and patient outcomes (Chavali & Thirumal Reddy, 2021). Employees that are devoted are more likely to engage in OCB behaviors such as assisting coworkers, being inventive, and taking on more duties (Adula et al., 2023). This is especially important in healthcare settings, as cooperation and collaboration are essential for providing quality patient care (Adawiyah et al., 2022). To review, using organizational commitment as a mediator enables researchers to capture the complex dynamics of ethical leadership and OCB.

2. STATEMENT OF PROBLEM

The study is progressively emphasizing the importance of ethical leadership in promoting Organizational Citizenship Behavior (OCB) and strengthening organizational commitment. While ethical leaders can foster substantial levels of employee engagement, dedication, and proactive citizenship behaviors which leads to a vibrant workplace culture and improved overall performance, many organizations, particularly in Ethiopia, struggle to achieve this ideal scenario (Fantahun et al., 2023). Despite understanding the benefits of ethical leadership, many Ethiopian organizations struggle to successfully adopt these ideals, resulting in poor OCB and decreased organizational engagement (Al-Okaily et al., 2024). In addition, the extant research has inconsistent evidence on the influence of ethical leadership on OCB, with results changing dramatically across settings (Huang, 2021). Some studies show a substantial beneficial link, whereas others show conflicting or contradictory results, especially in settings where ethical conduct is not supported by corporate rules. This mismatch highlights a crucial knowledge gap in understanding how contextual variables impact the link between OCB and ethical leadership. Compounding the problem is the prevalence of research undertaken in Western environments, which may not effectively reflect Ethiopian organizations' distinctive cultural and socioeconomic traits (Huang, 2021).

As a result, theoretical frameworks that take into account regional dynamics and cultural differences are critically needed. Furthermore, there is a significant dearth of information regarding how organizational commitment mediates the link among ethical leadership and OCB. Despite its acknowledged relevance, the particular processes of this mediation are unknown, preventing academics and practitioners from adopting focused measures to improve OCB and increase ethical leadership (Al-Okaily et al., 2024). Furthermore, Ethiopia's unique geopolitical climate provides variables that greatly influence ethical

leadership dynamics. The interaction of political, economic, and conventional leadership ideologies can complicate the practical implementation of ethical leadership concepts, posing empirical obstacles.

Ethical considerations are frequently the result of efforts to comply to traditional leadership conventions, which leads to employee unhappiness and, as a result, low organizational commitment and OCB. In conclusion, the obvious issue statement is the necessity to explore the link between OCB, organizational commitment, and ethical leadership, particularly in the Ethiopian environment. This study aims to solve these gaps using a thorough mixed-methods approach, identifying the elements that drive organizational commitment and OCB and providing insights for successful implementation of ethical leadership in Ethiopian firms. The findings will add to theoretical debate and provide practical recommendations for leaders wanting to improve the ethical atmosphere in their firms, as well as pave the way for future study on ethical leadership in varied situations.

3. THEORETICAL FOUNDATION

Many theories offer insightful perspectives when examining the connection between ethical leadership, organizational commitment, including Organizational Citizenship Behavior (OCB). The "Social Learning Theory," which holds that people pick up habits by seeing and copying role models—especially those in leadership roles—is one of the most relevant (Sendjaya et al., 2020). This notion holds that ethically upright leaders inspire their staff members to follow in their footsteps by modeling ethical behavior. Because workers tend to imitate the ethical norms set by their leaders, this hypothesis is fundamental to our understanding of how ethical leadership might affect the development of OCB between employees (Al-Okaily, et al., 2024).

"Transformational Leadership Theory" is another pertinent paradigm that highlights how leaders inspire and motivate followers to put the needs of the business ahead of their own. Respect and trust are nurtured by transformational leaders, and this may strengthen corporate commitment and motivate staff to participate in OCB. Employee engagement and civic behaviors may be greatly increased by transformational leaders through the promotion of ethical ideals and their alignment with company goals (Hermawanto et al., 2022).

In this sense, "Social Exchange Theory" is also quite important. According to this idea, connections inside companies are based on reciprocal exchanges, and when workers believe their leaders are ethical and helpful, they are more willing to participate in open communication and business. When workers believe they are treated fairly and ethically, they feel obligated to return the favor by acting ethically and responsibly. This approach emphasizes how crucial ethical relationships and trust are to developing a loyal workforce (Ahmad et al., 2023).

Additionally, "Organizational Support Theory" sheds light on how employees' commitment and actions are influenced by their views of organizational support. When companies place a high priority on ethical leadership, it sends a message to staff members that their welfare is important, which increases their commitment to and desire to participate in OCB (Mohanty & Panigrahi, 2022). This idea emphasizes how ethical leadership and employee conduct are mutually dependent, and it highlights how company culture influences employee attitudes.

"Social Learning Theory" serves as this study's primary theoretical framework (Sendjaya et al., 2020). This decision is supported by its emphasis on the processes by which ethical leadership affects worker conduct. It offers a strong foundation for comprehending how subordinates may pick up and integrate ethical principles from their superiors. This is especially important in Ethiopia, where ethical issues may be subordinated to more conventional leadership methods. The study's goal is to investigate how ethical leaders may effectively model behaviors that promote organizational commitment with OCB, leading to a more ethical organizational culture, by using this theoretical lens. This emphasis on social learning will direct the study's investigation into the mechanisms by which ethical leadership influences workers' conduct, providing knowledge that can improve organizational performance in Ethiopia through theory and practice (Sendjaya et al., 2020).

4. DEFINITION AND ORIGIN OF CONCEPTS

"Ethical leadership" is the process of exhibiting norm based community acceptable conduct for wellbeing of supporters by leader own ethics, morals. Integrity, justice, and a dedication to ethical principles are qualities of ethical leaders, who instill ethical values in their companies. The phrase "ethical leadership" came into vogue in the late 20th century, especially after the early 2000s business scandals that brought attention to the importance of ethical behavior in executives. The concept of ethical leadership was codified by scholars like Brown and Treviño (2006) cited by Ali et al., (2024), who connected it to theories of transformative leadership and social responsibility. Their research paved the way for our current knowledge of how ethical leaders affect workplace cultures and employee conduct.

The term "organizational citizenship behavior" describes voluntary, above-and-beyond actions taken by staff members that improve the organization as a whole but are not expressly acknowledged by official incentive programs. Helping coworkers, being on time, and positively promoting the company to outsiders are examples of OCB actions (Malekar, 2022). Organ popularized the term "OCB" in the 1980s and highlighted the role that these optional actions have in the success of a business (Al-Okaily, et al., 2024). His studies showed how OCB enhances organizational performance and fosters a collaborative work atmosphere. Altruism, conscientiousness, and civic virtue are just a few of the aspects that have been added to OCB throughout time to represent the diverse range of contributions made by employees

outside of traditional job titles (Malekar, 2022) .

The term "organizational commitment" describes an employee's psychological bond with their company, which includes their identification with the company's objectives and core values, their desire to stay with the company, and their readiness to put in effort on the company's behalf. Increased work satisfaction and lower employee turnover are allied with high levels of organizational commitment (Fosić et al., 2023). In the 1970s, Meyer and Allen (1991) cited by Fosić et al., (2023), presented a three-component model that comprised emotional, normative and continuation commitment. This work laid the groundwork for the notion of organizational commitment (Al- & Al-qahtani, 2020).

5. EMPIRICAL LITERATURE REVIEW

5.1 Ethical Leadership and OCB

Brown et al. (2005) cited by Ali et al., (2024)revealed that followers' attitudes and actions are positively impacted by ethical leadership in one of the seminal research in this field. In their study, they underlined that ethical leaders create a ethical atmosphere in the workplace and motivate staff members to take on civic responsibilities that advance the company. According to Neubert et al. 2009 cited by Al Halbusi et al.,(2021) provide more empirical support for this claim by examining the ways in which ethical leadership affects OCB. According to their research, ethical leaders encourage a culture of open communication and trust, which helps staff members feel like they belong. Research by Gollagari et al., (2022) built on these conclusions in a cross-cultural context by looking at ethical leadership in various organizational contexts. Their research showed that, across a range of cultural backgrounds, ethical leadership was consistently associated with greater levels of OCB, indicating that ethical leaders' effect cuts across cultural divides. This study emphasizes how ethical leadership concepts may be applied anywhere to promote positive employee behaviors, independent of the company or cultural setting. Shinwari et al., (2024) study showed that ethical leadership increases organizational commitment, which in turn causes OCB to rise.

Also, empirical research has investigated how particular OCB aspects are affected by ethical leadership. According to a research by Podsakoff et al. (2000) cited by Dwiyanti et al., (2024), civic virtue, conscientiousness, and benevolence are only a few of the aspects of OCB that are positively impacted by ethical leadership. This all-encompassing strategy emphasizes the complexity of OCB and the vital role ethical leaders play in encouraging these behaviors in their workforce. Even though a large amount of investigation has revealed that leaders ethics has a favorable influence on OCB, other studies point to contextual elements that may mitigate this link. For example, research by Wilgetlanguju et al., (2024) revealed that how important it is to take contextual factors into account when analyzing the relationships

between OCB and ethical leadership.

5.2 Ethical Leadership and Organizational Commitment

Brown et al. (2005) cited by Ali et al., (2024) conducted a landmark study in this field, arguing that a culture of trust and respect, fostered by ethical leadership, favorably improves followers' organizational commitment. According to their research, employees are more likely to adopt ethical ideals and form a deeper emotional bond with the company when executives exhibit such conduct. Mayer et al. (2009), who investigated the ways in which ethical leadership promotes organizational commitment, offer more empirical support. According to their research, ethical leaders help staff members feel that the company is treating them fairly, which is important for encouraging loyalty. These results are expanded upon by research conducted by Yunanto et al., (2021). According to their research, there is a general relationship between greater levels of organizational commitment and ethical leadership. This cross-cultural viewpoint supports the notion that ethical leadership behaviors may effectively increase commitment in a variety of business contexts by bridging cultural divides. A study by Jun et al., (2024), organizational commitment is significantly predicted by one's level of confidence in the leadership. Employee loyalty to the company grows when they have faith in their leaders to operate ethically and justly.

According to a study by Jun et al., (2024), their results confirmed that ethical leadership raises organizational commitment, which encourages workers to perform better and be more satisfied with their jobs. The direct influence of leaders' ethics on organizational commitment eventually leads to improved organizational performance, as this study demonstrates. Wilgetlanguju et al., (2024) noted that the environment of the company and the state of the economy outside the business might affect how well ethical leadership fosters commitment.

5.3 Organizational Commitment and OCB

Organ (1990) carried out one of the first research in this field, proposing that because of their emotional connection to the company, dedicated workers are more likely to display OCB (Malekar, 2022). Meyer and Allen (1991) cited by Fosić et al., (2023), who created a three-component model of organizational commitment—*affective*, *continuation*, and *normative* commitment—provided more empirical support. According to their research, OCB was most strongly predicted by *affective* commitment, or an emotional bond with the organization. Workers that exhibit strong emotional commitment are more inclined to take independent actions that advance the organization because they have a personal stake in its success. In order to further explore this association, Podsakoff et al. (2000) cited by DwiYanti et al., (2024) looked at a number of OCB characteristics, including *conscientiousness*, *civic virtue*, and *altruism*. According to their research, more organizational commitment was linked to more participation in every component

of OCB (Malekar, 2022).

Also, the mediating role of work satisfaction in the association concerning organizational commitment and OCB was investigated by Shinwari et al., (2024) research. According to their research, OCB is supported by organizational commitment, which also raises work satisfaction. Workers that have a strong sense of commitment to their company are probably more satisfied with their job, which encourages them to act in ways that help their coworkers and the company as a whole. Corporate environment and culture may be able to modify the association between OCB and commitment, according to a research by Wilgetlanguju et al., (2024). The favorable impacts on OCB are enhanced in cultures that are supportive and promote commitment, suggesting that the organizational environment is a critical factor in determining employee behavior.

5.4 Ethical Leadership, OCB and Organizational Commitment Mediation

According to Shinwari et al., (2024) carried out one of the seminal research analyzing this mediating link and discovered that ethical leadership dramatically increases organizational commitment, which in turn causes greater OCB. Their study highlighted that employees are more likely to have a sense of identity and belonging to the company when leaders act ethically. The study of Yunanto et al., (2021), who examined the mediating function of organizational commitment in the link between ethical leadership and OCB across several cultural contexts, provides additional empirical evidence. According to their findings, ethical leadership raises organizational commitment, which in turn raises OCB.

Also, Wilgetlanguju et al., (2024) investigated the relationships between organizational commitment, OCB, and ethical leadership. They proposed that ethical leadership fosters respect and trust in staff members, which strengthens their loyalty to the company. Additionally, a research by Neubert et al. 2009 cited by Al Halbusi et al.,(2021)expanded on the mediating function of organizational commitment. Employees who thought their bosses were ethically upright were more likely to become deeply committed, which raised OCB, according to their research. It was shown by the study that ethical leadership fosters ethical environments that increase commitment and motivate staff members to go above and beyond the call of duty. Study conducted by Shinwari et al., (2024) suggested that the environment and culture of the business might mitigate the influences of ethical leadership on commitment and OCB. The benefits of ethical leadership on commitment and OCB are probably going to be greater in settings where ethical behavior is supported by corporate rules and norms.

6. CONCEPTUAL FRAMEWORK

For navigating ethical leadership influence on organizational citizenship through commitment in ethiopian healthcare following conceptual framework was propose in figure 1 base on theoretical foundation and

reviewed literature.

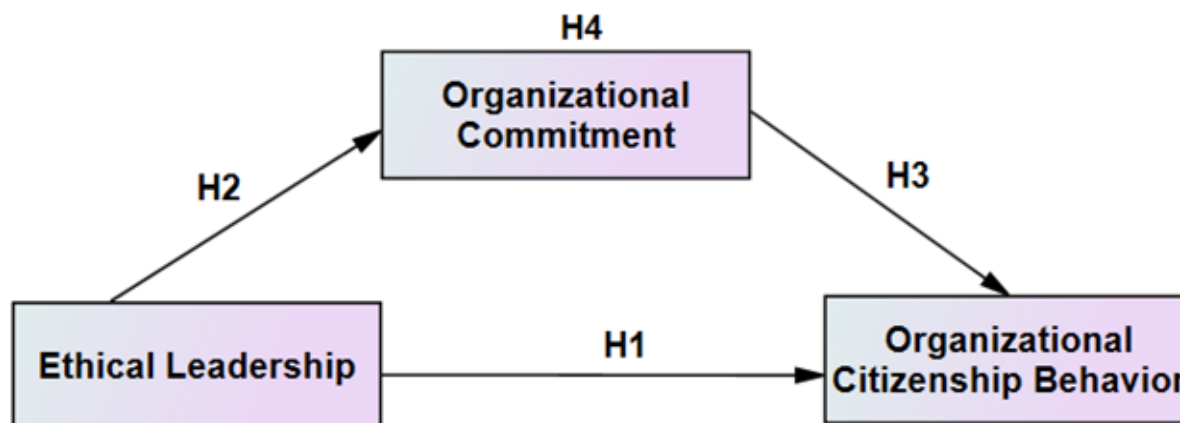


Figure1. Conceptual Framework

Source: Base on theoretical foundation and reviewed literature, 2024

7. RESEARCH METHODOLOGY

Through the mediation of organizational commitment, this study used a quantitative research methodology to study the explanatory relationships among constructs. Using a stratified random selection approach, a sample of 390 health professionals from Guji zone, Ethiopia, was selected from a variety of Ethiopian organizations to guarantee representativeness across different sectors and organizational sizes. Based on previously published research, validated scales for measuring the concepts of organizational commitment, ethical leadership, and OCB were incorporated into the questionnaire's development. Before doing an exploratory factor analysis (EFA), the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were performed to verify the validity and reliability of the scales. The sample size was considered sufficient for factor analysis if the KMO vworth was greater than 0.6. After that, EFA was carried out to determine the constructions' underlying factor structures. To expand the clarity and consistency of the scales, items with factor loadings below 0.5 were removed, following the recommendations of the exploratory factor analysis.

This study's methodology included many essential stages to guarantee the data analysis was robust and reliable. Initially, missing values were dealt methodically via listwise deletion, which allowed for the removal of any incomplete cases without jeopardizing the dataset's integrity. Outlier identification was performed using the z-value approach. Data points having a z-score larger than ± 3 were eliminated from further analysis to reduce their effect on the results. Descriptive statistics were then used to characterize the dataset's principal properties, providing information on the central tendency as well as variability of the variables under investigation. This stage paved the way for comprehending the general distribution

of the data. Normality testing was next done using the Kolmogorov-Smirnov Test, which indicated that the data approached a normal distribution and hence justified the use of parametric statistical techniques in further investigations. To test validity, the study looked at divergent validity, which involved examining the correlations between several constructs to verify that they were sufficiently distinct from one another. This included assessing correlation coefficients and confirming that constructs designed to measure various ideas did not have large correlations, hence validating the measurement model's validity. Additionally, exploratory factor analysis (EFA) was used to establish concept validity by discovering the dataset's underlying factor structure.

7.1 Scale Development

A thorough assessment of relevant literature served as the foundation for developing the scales. The scale for ethical leadership was modified from Brown and Treviño's (2006) cited by Ali et al., (2024), Ethical Leadership Scale, which includes aspects like honesty, equity, and ethical direction. In order to make sure that every dimension was fairly represented in the finished instrument, organizational commitment was measured using Meyer and Allen's (1991) cited by Fosić et al., (2023), three-component model, which comprises emotional, continuity, and normative commitment. Lastly, the Podsakoff et al. (2000) scale was used to evaluate OCB. This scale measures a number of characteristics, including civic virtue, conscientiousness, and altruism. By use of AMOS software, Structural Equation Modeling (SEM) was conducted to inspect the proposed associations amongst the constructs. Sem was conducted after the validity issues were checked by factor analysis conducted with help of Exploratory Factor analysis (EFA). SEM made it probable to evaluate both direct and indirect linkages, giving rise to a thorough knowledge of the ways in which organizational commitment and ethical leadership impact OCB. To ensure that the model adequately reflected the data, its fit was evaluated using parameters like Likelihood ratio, Root Mean Square Error of Approximation (RMSEA), and Comparative Fit Index (CFI).

8. DATA ANALYSIS

In the beginning, missing values were handled with carefully using list-wise deletion, which allowed for the elimination of any incomplete cases without endangering the dataset's integrity. Outliers were identified using the z-value technique. Data points with a z-score greater than ± 3 were removed from further analysis to minimize their impact on the results. Descriptive statistics were then employed to define the dataset's main qualities, revealing information on the central tendency and variability of the variables under inquiry. This stage laid the groundwork for understanding the overall distribution of the data. Identified outliers based on Box plot were removed as per figure 2 and figure 3.

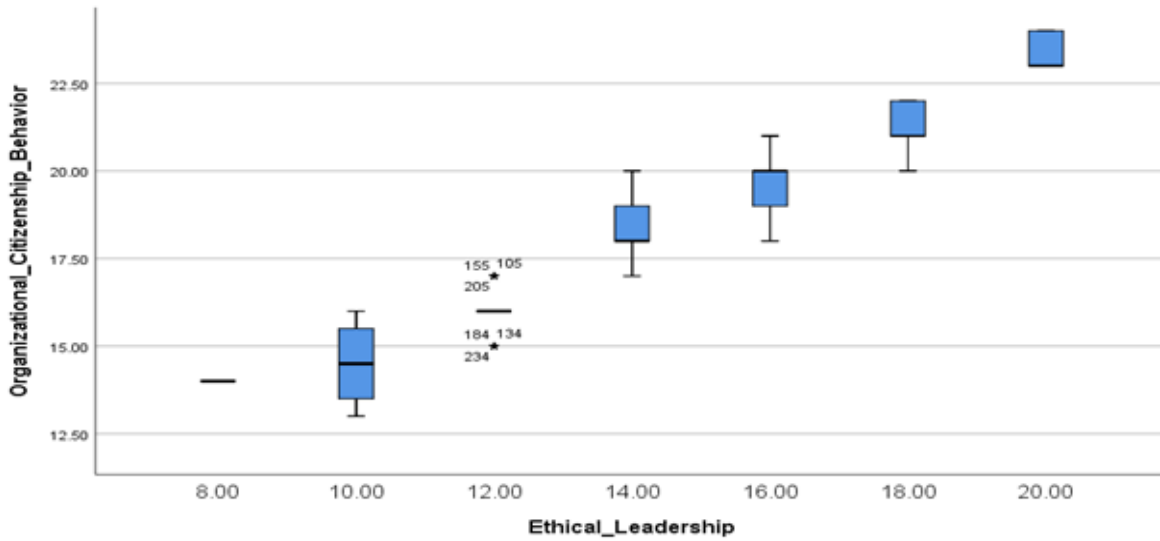


Figure 2. Box Plot

Source:SPSS Output, 2024

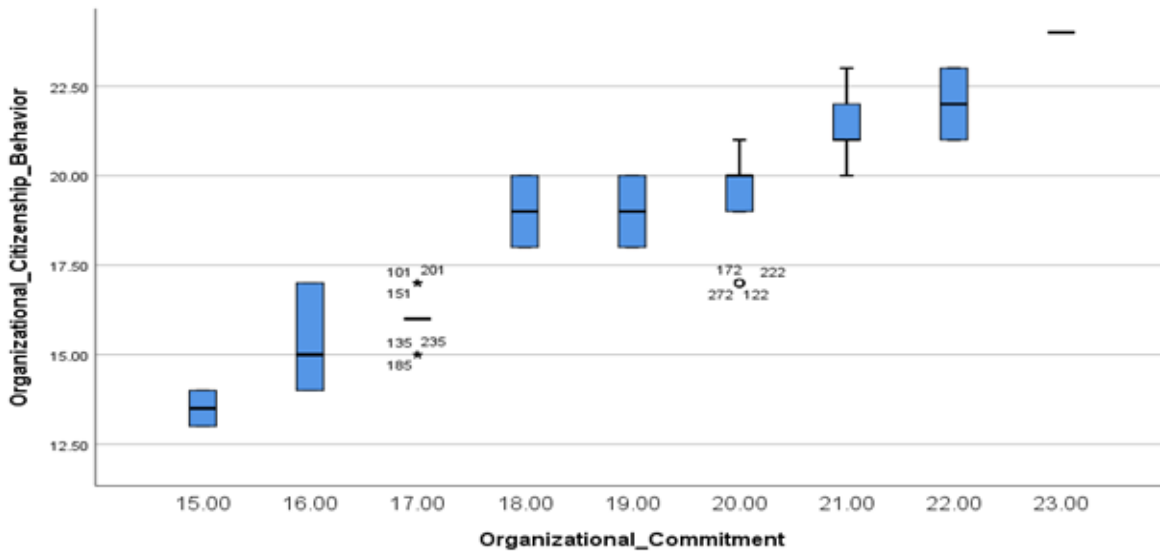


Figure 3. Box Plot

Source:SPSS Output, 2024

8.1 Normality Testing

Normality testing was then performed by means of the Kolmogorov-Smirnov Test, which revealed that the data approached a normal distribution, justifying the use of parametric statistical approaches in

further research.

Table 1: One-Sample Kolmogorov-Smirnov Test

		Ethical Leadership	Organizational Commitment	Organizational Citizenship Behavior
N		390	390	390
Normal Parameters ^{a,b}	Mean	15.1569	19.1231	19.0031
	Std. Deviation	2.65565	1.79770	2.33664
Most Extreme Differences	Absolute	.221	.173	.161
	Positive	.154	.093	.113
	Negative	-.221	-.173	-.161
Test Statistic	.221	.173	.161	
Asymp. Sig. (2-tailed)	.000c	.000c	.000c	
a. Test distribution is Normal.				
b. Calculated from data.				
c. Lilliefors Significance Correction.				

Source: SPSS Output, 2024

The findings of the One-Sample Kolmogorov-Smirnov Test showed in table 1 that the distributions of Ethical Leadership, Organizational Citizenship Behavior and Organizational Commitment vary considerably from normality. With a sample size of 390 for each variable, the test statistics revealed the following: Ethical Leadership, 0.221 with a p-value of 0.000; Organizational Commitment, 0.173 with a p-value of 0.000; and Organizational Citizenship Behavior, 0.161 with a p-value of 0.000. These p-values, which are all smaller than the standard alpha level of 0.05, provide strong evidence against the null hypothesis of normality. This suggests that none of the three structures follow a normal distribution. The most dramatic differences were reported in Ethical Leadership, Organizational Commitment and OCB, with absolute values of 0.221, 0.173, and 0.161, respectively. These findings recommend that the data distributions for these constructs are likely skewed or have other non-normal properties, which should be addressed when doing additional statistical studies.

8.2 Descriptive Statistics

Table 2. Descriptive statistics

Construct	Mean	Standard Deviation	Minimum	Maximum
Ethical Leadership	3.45	0.76	2.00	5.00
Employ Commitment	3.67	0.82	2.50	5.00
Organizational Citizenship	3.80	0.70	2.00	5.00

Source: SPSS Output, 2024

The descriptive statistics manifested in table 2. The average score for ethical leadership was 3.45, with a standard deviation of 0.76. This shows that respondents have a modest level of agreement with their leaders' ethical conduct. The score range of 2.00 to 5.00 indicates that perspectives vary, with some employees reporting lower levels of agreement. This variation may represent variances in individuals' experiences with leadership, revealing areas where ethical behaviors should be improved. The mean score for organizational commitment was slightly higher, at 3.67, with a standard deviation of 0.82. This implies a generally favorable degree of commitment among employees, showing that many have a strong emotional relationship to their company. However, the greater standard deviation indicates a variety of experiences, with some individuals displaying lesser levels of dedication. The minimum score of 2.50 and highest score of 5.00 highlight this variability, implying that while many employees are devoted, there are still significant gaps in participation that might be filled. Finally, organizational citizenship conduct obtained the highest mean score of 3.80 and standard deviation of 0.70. This suggests that respondents usually see themselves as participating in good discretionary actions that help their firm. The minimum score of 2.00 and the maximum score of 5.00 indicate that, while many employees actively contribute to a healthy workplace culture, there are also instances of poor involvement.

Table 3. Data Adequacy Measure

Kaiser Meyer Olkin Extent of Adequate. Sample		.908
Sphericity Test of Bartlett	Chi-Square (Relative)	19484.673
	Degree of freedom	780
	p-value	.000

Source: SPSS Output, 2024

The data adequacy parameters used to assess the eligibility of sample to conduct factor analysis is shown in Table 3. A value of 0.908 was obtained for the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, suggesting a very high degree of adequacy for factor analysis. Strong correlations between the variables are often seen as representing that the size of sample is enough for the study when the KMO value is greater than 0.8. More confirmation was also given by the Bartlett Sphericity Test, which had a degree of freedom of 780 and a Chi-Square value of 19,484.673. The correlation matrix's significant

difference from an identity matrix is confirmed by the corresponding p-value of .000, suggesting that the variables are probably connected and appropriate for component analysis. All things considered, these results confirm that the sample was suitable for the ensuing exploratory factor analysis, guaranteeing the validity and reliability of the conclusions.

Table 4: Sum Variance Illuminated

Sum Variance Explained									
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Sum	% of Variance	Cumul %	Sum	% of Variance	Cumul %	Sum	% of Variance	Cumul %
1	2.7	26.7	26.76	2.7	26.7	26.7	8.7	21.9	21.9
2	1.9	14.9	41.71	1.9	14.9	41.7	6.0	15.0	37.0
3	1.3	10.9	52.68	1.3	10.9	52.6	4.6	11.6	48.6

Source: SPSS Output, 2024

The Principal Component Analysis (PCA) results are summarized in Table 4. With an eigenvalue of 2.7 in this study, the first component accounts for 26.7% of the variance in total. This implies that a substantial amount of the underlying data structure is captured by this component. With an eigenvalue of 1.9, the second component adds 14.9% to the total variance explained, making the cumulative variance explained 41.7%. With an eigenvalue of 1.3, the third component contributes 10.9%, making the total proportion 52.6%. These results show that more than half of the variance in the dataset can be explained by the first three components taken together.

The rotation sums optimize the way each variable loads onto the specified components, which further improves the factors' interpretability. According to the rotation findings, the first component contributes a considerable 21.9% of the variation to the overall structure, with the second and third variables making up 15.0% and 11.6% of the variance, respectively. Overall, the PCA findings indicate that the analysis reveals three main components, each of which significantly affects the variance in the data. This suggests a distinct underlying structure that might direct additional interpretation and research of the connections between the concepts under study. While the succeeding factors offer more information on the subtleties of the underlying constructs, the first factor's significance in capturing the primary dimensions of the data is highlighted by the fact that it accounts for a significant variance.

8.3 Confirmatory Principle component Examination

Confirmatory principle component examination is a sort of statistics that is used to validate the principle

component arrangement of a group of directed proxies. Studies can assess hypotheses using CFA based on the underlying frame job and correlatives among observable proxies. The investigation used CFA under table 3 to assess the hypothesis that there is a relationship between the proxies that are being guided and the latent ideas that support them.

Table 5: Covariances

Covariance			Estimate	S.E.	C.R.	P	Hy.
Organizational Commitment	<-->	Ethical Leadership	.563	.094	5.989	.00	H2
Organizational Commitment	<-->	Organizational Citizenship Behavior	.493	.056	8.803	.00	H3
Ethical Leadership	<-->	Organizational Citizenship Behavior	.652	.105	6.209	.00	H1

Source: AMOS Output, 2024

The covariance estimates between the constructs are shown in Table 5. Organizational commitment and ethical leadership have a first covariance estimate of 0.563, a critical ratio of 5.989, and a p-value of .00. Strong evidence for Hypothesis 2 (H2), which holds that ethical leadership has a beneficial influence on organizational commitment, can be seen in this connection. The statistical significance of the link is indicated by the significant p-value, implying that employees are more likely to become more committed to the organization when leaders exhibit ethical behavior. There is a 0.493 second covariance estimate, a critical ratio of 8.803, and a .00 p-value between Organizational Citizenship Behavior and Organizational Commitment. Hypothesis 3 (H3), according to which organizational commitment improves with time, is supported by this study. Strong relationships are indicated by the high C.R. value, and the significance level further attests to the fact that loyal workers are more likely to take actions that advance the company.

In conclusion, a critical ratio of 6.209, a p-value of .00, and an estimated covariance of 0.652 are found among OCB and Ethical Leadership. The hypothesis that ethical leadership has a favorable influence on OCB is supported by this high association (H1). The statistical significance of the significant p-value suggests that ethical leaders are important in motivating their staff to demonstrate good citizenship. The association is not just robust but statistically significant. According to these results, ethical leadership fosters organizational commitment, which supports OCB. The robust statistical significance of these associations highlights the need of promoting ethical leadership behaviors in companies to develop devoted workers who actively support the success of the company.

Table 6: Validity Concern

	CR	AVE	√AVE	MSV	MaxR(H)	EL	OC	OCB
EL	0.732	0.643	.801	0.219	0.852	0.654		
OC	0.758	0.657	.802	0.132	0.763	0.171	0.665	
OCB	0.793	0.603	.776	0.274	0.797	0.383	0.193	0.684

Note: OC= Organizational Commitment; EL= Ethical Leadership; OCB= Organizational Citizenship Behavior

Source: AMOS Output, 2024

Important metrics pertaining to discriminant validity are included in Table 6. The purpose of discriminant validity is to evaluate the distinctness of ideas that are assumed to be unrelated. Ensuring that every construct measures a distinct feature of the theoretical framework is crucial. The Average Variance Extracted (AVE) for each construct should be more than 0.5 to be considered discriminantly valid; this means that the construct accounts for more than half of the variation in its indicators. This requirement is met in this instance by all three constructs, EL (0.643), OC (0.657), and OCB (0.603), indicating that they are able to sufficiently capture the variance of their respective items. The Maximum Shared Variance (MSV) is next examined and contrasted with the AVE values. The square root of the AVE for every concept must be higher than the correlations between that construct and other constructs in order to meet the discriminant validity criteria (MSV). The AVE values have the following square roots: nearly 0.802 for EL, roughly 0.811 for OC, and roughly 0.776 for OCB. These results (e.g., EL's MSV is 0.219, OC's is 0.132, and OCB's is 0.274) are higher than the MSV for each construct, indicating that the constructs are, in fact, different from one another. Additionally, all constructions' Composite Reliability (CR) values are higher than the permissible cutoff point of 0.7, showing strong internal consistency. With CR values of 0.732 for EL, 0.758 for OC, and 0.793 for OCB, the study's measurements are confirmed to be reliable.

To assess divergent validity using Table 6, we calculate the Average Variance Extracted (AVE) and Maximum Shared Variance (MSV) for each construct. The AVE for Ethical Leadership (EL) is 0.643, with an MSV of 0.219. The AVE surpasses the MSV, indicating significant divergent validity for EL. Similarly, Organizational Commitment (OC) has an AVE of 0.657 and an MSV of 0.132, which supports its divergent validity because the AVE exceeds the MSV. Finally, Organizational Citizenship Behavior (OCB) has an AVE of 0.603 vs an MSV of 0.274, indicating good divergent validity. Overall, all three constructs show substantial divergent validity, demonstrating their distinction from each another.

8.4 Mediation Analysis

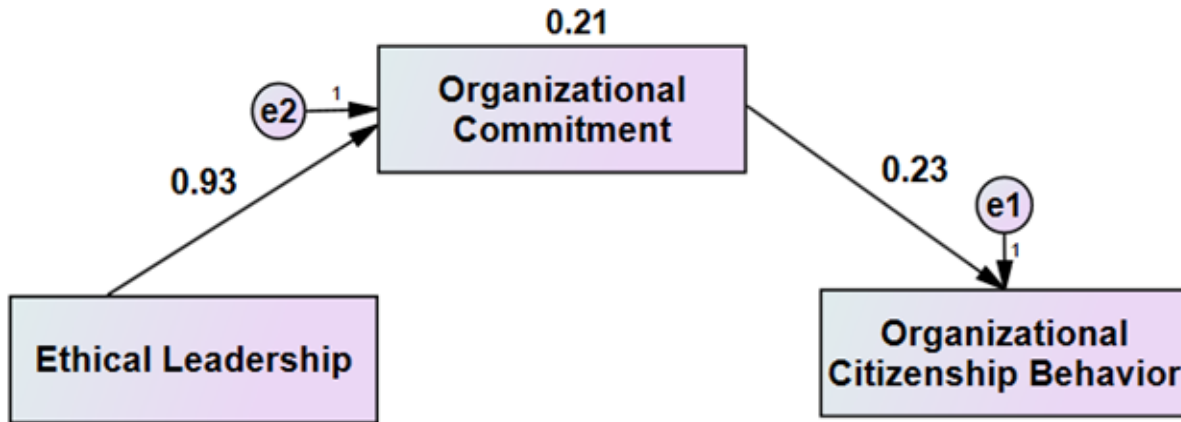


Figure 4. Structural Equation Model

Source: AMOS Output, 20224

Model fit indices

Table 7: Model Fitness

Sig.	Chi-Sq	RMR	GFI	PNFI	TLI	RMSEA
0.003	2.163	.037	0.929	0.925	0.921	.029

Source: AMOS Output, 2024

The model fitness indicators are shown in Table 5. When a model fits the data considerably better than a model with no associations, the significance level (Sig.) is stated as 0.003. Chi-Square (Chi-Sq) values range from 2.163 to 2.163, where lower values correspond to a better match between the actual data and the model. The model's adequacy is further supported by the Root Mean Square Residual (RMR) value of .037, which shows a low degree of difference between the observed with forecast covariance matrices. Also, the stated Goodness of Fit Index (GFI) is 0.929, surpassing the widely recognized cutoff of 0.90, signifying that a significant percentage of the data variation can be explained by the model. A parsimonious model that maintains a decent fit with the data is suggested by the Parson's Normed Fit Index (PNFI), which is reported as 0.925. The model's fit is additional sustained by the Tucker-Lewis Index (TLI), which has a value of 0.921. A number closer to 1 denotes a better fit. Last but not least, the model's close fit to the data is demonstrated by the Root Mean Square Error of Approximation (RMSEA) value of 0.029, that is founded under acceptable range that is below 0.05.

Table 8: Regression Consideration

Association			Approx.	S.E.	C.R.	P	Ass.
Organizational Commitment	<---	Ethical Leadership	.716	.405	1.767	.06	H2
Organizational Citizenship Behavior	<---	Organizational Commitment	.651	.197	3.304	.00	H3
Organizational Citizenship Behavior	<---	Ethical Leadership	.563	.105	5.361	.00	H1

Source: AMOS Output, 2024

The outcomes of the regression analysis are shown in Table 8. For assessing the study's hypotheses, the estimates, standard errors (S.E.), critical ratios (C.R.), and p-values are essential. With a normalized estimate of 0.716, the first regression result shows a association among organizational commitment with ethical leadership. A marginally significant link is shown by the critical ratio of 1.767 and the p-value of .06, which offers some support for Hypothesis 2 (H2), which holds that organizational commitment is favorably influenced by ethical leadership. While the p-value is somewhat higher than the standard cutoff of 0.05, the substantial impact size suggests that ethical leadership is a major factor in raising organizational commitment. The impact of organizational commitment on organizational citizenship behavior is investigated in the second regression finding. With a p-value of 0.00 and a critical ratio of 3.304, the standardized estimate of 0.651 offers strong evidence in favor of Hypothesis 3 (H3). This result supports the hypothesis that dedicated workers are more likely to take actions that advance the organization by confirming the relationship between OCB and organizational commitment.

Lastly, a normalized estimate of .563 from the regression analysis shows that ethical leadership has a direct influence on OCB. A p-value of 0.00 and a critical ratio of 5.361 provide significant evidence for Hypothesis 1 (H1), which asserts that OCB is positively impacted by ethical leadership. This strong correlation suggests that ethical leaders successfully motivate staff members to take on optional civic duties in addition to their assigned duties. Finally, the regression results offer strong support for Hypotheses 1 and 3, demonstrating the beneficial correlations between organizational commitment and OCB and ethical leadership. While Hypothesis 2 indicates that ethical leadership does increase organizational commitment, it does so in a negligible way, indicating that further research may be necessary to properly understand this link.

Table 9. Mediating Effect

	Influence	worth	Path Influence
Ethical Leadership - Organizational Citizenship Behavior	Direct Influence	.10	Direct
Ethical Leadership - Organizational Commitment - Organizational Citizenship Behavior	Indirect Influence	.93*.23=.21	Indirect
	In Sum	.31	Full Mediation

Source: AMOS Output, 2024

The results of mediating function are summarized in Table 9. The correlation coefficient among Ethical Leadership and OCB is 0.10, with a disclaimer stating that this correlation is negligible. This implies that ethical leadership does not directly cause OCB and that the influence of ethical leadership on OCB alone is not statistically significant when looking at the link between the two variables alone. The table 7, however, emphasizes how organizational commitment, a byproduct of ethical leadership, has an indirect impact. Multiplying the route estimates of Organizational Commitment to OCB (0.23) and Ethical Leadership to Organizational Commitment (0.93) yields an indirect influence of 0.21. This strong indirect impact supports the mediating function of organizational commitment in this connection by showing that when ethical leadership cultivates organizational commitment, it subsequently improves OCB. The total influence, which is shown as 0.31, indicates that full mediation has occurred. This indicates that organizational commitment is the only way that ethical leadership has an influence on OCB. The results imply that ethical leaders are essential in fostering employee commitment, which encourages individuals to take independent actions that advance the company. In conclusion, Table 9's mediation analysis offers strong proof that organizational commitment completely mediates the connection among OCB and ethical leadership. This underlines how decisive it is to backing ethical leadership behaviors in order to strengthen company commitment, which in turn encourages higher employee participation in civic engagement.

9. DISCUSSION

The results show that Ethical Leadership has a direct affect on OCB, with a path influence of 0.10, which is statistically insignificant. This data implies that ethical leadership may not be adequate to directly promote OCB. However, when the indirect influence of Ethical Leadership through Organizational Commitment is examined, a stronger association appears. According to the path analysis, Ethical Leadership has a considerable influence on Organizational Commitment, which in response favorably influences OCB, for a total indirect influence of 0.21. This implies a complete mediation effect, emphasizing the crucial role of Organizational Commitment in translating the impacts of Ethical Leadership into improved OCB.

These findings support “Social Learning Theory”, which states that people learn behaviors through observation and modeling. Ethical leaders act as role models, advocating principles that indirectly motivate workers to engage in citizenship behaviors by instilling a sense of dedication to the business. Employees who believe their leaders are ethical are more likely to have a strong connection to their firm, which leads them to engage in collectively beneficial behaviors such as aiding colleagues and going above and beyond their job responsibilities. In addition, the findings are consistent with “Transformational Leadership Theory”, which stresses the role of leaders in inspiring and motivating followers. Ethical Leadership, a type of transformational leadership, pushes employees to absorb the organization's values and goals. The use of Organizational Commitment as a mediator implies that leaders who demonstrate ethical behavior foster a supportive atmosphere, increasing workers' emotional and psychological attachment to the organization. This dedication leads to greater levels of OCB because dedicated employees are more likely to participate in good work behaviors. Additionally, “Social Exchange Theory” gives a framework for comprehending the processes in play. According to this notion, employees form reciprocal ties with their businesses based on perceived advantages. Ethical Leadership may be considered as a type of organizational support that increases employee engagement. When workers feel supported and respected by ethical leaders, they are more inclined to reciprocate through OCB, highlighting the relevance of Organizational Commitment as a mediator.

Finally, "Organizational Support Theory" supports these conclusions. This hypothesis contends that when employees believe their organization values their contributions and cares about their well-being, they are more likely to acquire a strong feeling of commitment. Ethical leadership adds to this view by creating an environment in which people feel valued. As their commitment grows, individuals are more likely to engage in OCB, resulting in a positive feedback loop between leadership, commitment, and behavior. In conclusion, whereas Ethical Leadership has a negligible direct effect on OCB, its influence is greatly boosted by Organizational Commitment, revealing a complete mediation effect. This emphasizes the importance of creating a motivated workforce to reap the advantages of ethical leadership, strengthening the theoretical frameworks of Social Learning, Transformational Leadership, and Social Exchange, and Organizational Support theories in explaining these dynamics.

10. CONCLUSION

In conclusion, this research offers strong proof of the important impact that ethical leadership has on organizational commitment with organizational citizenship behavior (OCB). The results show that ethical leadership cultivates a strong feeling of commitment in workers, which is necessary to motivate them to take initiative and do things that are advantageous to the company. The study concluded that organizational commitment fully mediates the association among ethical leadership and OCB, despite

the fact that the direct impact of ethical leadership on OCB was found to be negligible. This finding emphasizes the crucial role that commitment plays as a conduit for the transmission of ethical leadership into positive employee behaviors. These observations highlight how important it is for businesses to give ethical leadership development top priority in order to improve worker engagement and output. Organizations may foster a supportive work environment that fosters employee engagement and eventually increases overall corporate behavior (OCB) by developing leaders who model ethical conduct. Additionally, the results point to useful ramifications for organizational practices and policies including inclusive decision-making committees and recognition programs that are meant to strengthen commitment. Notwithstanding several drawbacks, such as the cross-sectional design and dependence on self-reported data, this study makes a significant contribution to the field of organizational behavior research. Future studies should examine the temporal dynamics of these connections and the impact of contextual variables on the efficacy of ethical leadership. The study's overall findings highlight the significance of ethical leadership in developing a dedicated workforce that actively supports corporate success, opening the door for more research into the intricate relationship that exists between commitment, leadership, and employee behavior.

11. RECOMMENDATIONS

Several recommendations for firms looking to improve organizational commitment, ethical leadership, and organizational citizenship behavior (OCB) may be made in context of findings. First, companies have to provide importance to developing ethical leadership through extensive training initiatives. The main goal of these programs ought to be to provide leaders the tools they need to lead by example and convince their teams of the value of ethics. Organizations may cultivate a healthy work environment that promotes employee dedication and discretionary behavior by cultivating ethical leadership. Organizations should also create explicit ethical principles and guidelines that specify acceptable conduct at all levels. It is imperative that workers get frequent communication and reinforcement of these rules via seminars and conversations. This will help to ensure that staff members are aware of the expected behaviors and feel equipped to make ethical judgments. Providing a safe space for staff to freely address ethical conundrums can bolster this dedication even more. Systems of recognition and rewards that emphasize ethical behavior and corporate dedication should be put in place by organizations. Honoring staff members who live up to these ideals can inspire others to follow suit, strengthening the OCB and commitment culture. Such appreciation can come in a number of forms, such as prizes, public acclaim, or chances for career advancement.

12. FUTURE DIRECTIONS

To increase comprehension and relevance, future studies in the fields of organizational commitment,

ethical leadership, and OCB should focus on a number of important issues. Initially, longitudinal research may offer significant perspectives on the ways in which these dimensions' interactions change over time. Researchers may get a profound thoughtful of the lasting impacts of ethical leadership on OCB and pinpoint crucial times for action by monitoring shifts in ethical leadership practices with employee commitment. Future research should also take into account how contextual elements like industry, organizational culture, and geographic location affect the relationships between OCB, commitment, and ethical leadership. Examining the ways in which these factors interact can provide a more nuanced understanding of the ways in which ethical leadership appears in various contexts and cultural contexts, adding a diverse viewpoint to the body of current work. Investigating different mediators and moderators that could affect the connections between these constructs is a potentially fruitful avenue. Examining the functions of organizational justice, work happiness, and confidence in leadership, for example, may reveal more intricate paths by which ethical leadership influences OCB and commitment. Comprehending these relationships may provide firms a more all-encompassing structure for cultivating employee engagement.

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Perceived Organizational Politics and Job satisfaction: Evidence from Public Sector Employees working in University of Gondar Hospital

By

Demis Alamirew Getahun¹

Abstract

This study aimed to assess the impact of perceived organizational politics on employee job satisfaction at the University of Gondar Hospital. A quantitative research approach with an explanatory design was adopted. A total of 233 staff members from the hospital were surveyed using a standardized questionnaire. The model's fitness, along with convergent and divergent validity, was evaluated using Confirmatory Factor Analysis (CFA). The average job satisfaction score among health workers was 2.55, indicating general dissatisfaction with their work. The hypothesis testing revealed that all components of perceived organizational politics—Go Along to Get Ahead, General Political Behavior, and Pay and Promotion Policies—had a statistically significant negative effect on job satisfaction.

Keywords: Organizational politics, go along to get ahead, general political behavior, Pay and promotion policies, job satisfaction

1. Introduction

The intricate dynamics of contemporary work environments have become a subject of considerable research area, particularly within the critical context of public sector organizations such as hospitals. Individuals within these organizations possess diverse values, attitudes, ideas, and beliefs, and these differences significantly shape their perceptions of organizational issues (Khan et al., 2020; Rughoobur-Seetah, 2022). This discrepancy in perspectives often fosters organizational politics (Asrar-ul-Haq et al., 2019). Specifically, the perception of self-serving behavior exhibited by managers and peers referred to as perceived organizational politics (POP), has a profound impact on employee job satisfaction (Ferris et al., 2002; Khodakarami & Chan, 2020).

The most recent conceptualization of POP identifies three distinct factors (Kacmar & Carlson, 1997). The first is General Political Behavior (GPB), which refers to actions individuals take primarily for personal gain to achieve their desired outcomes. High levels of perceived political behavior can create a toxic work environment, marked by mistrust, which can significantly reduce their job satisfaction (Pettigrew et al., 2023). In contrast, a positive work environment, free from excessive political enforcement, correlates with higher employee morale. Conversely, when employees perceive their workplace as politically charged, lead to role ambiguity, it can bring anxiety, leading to a decline in job satisfaction (Harris & Ogbonna, 2023).

The second factor is Go Along to Get Ahead (GAGA), which describes situations where individuals conform or remain silent to advance their personal interests. Organizations that promote conforming behavior may lead to dissatisfaction among employees who feel pressured to suppress their authentic selves to align with organizational norms (Schneider et al., 2023). This discrepancy between personal values and organizational norms can negatively affect employee morale. Employees who engage in political behavior may also experience heightened stress and a sense of isolation, particularly if they feel their contributions are being undermined (McGowan et al., 2023).

Pay and Promotion Policies (PPP) represent the third factor, where the organization's policies and practices themselves exhibit political behavior (Kacmar & Carlson, 1997). Research consistently shows that job satisfaction increases when compensation and promotion policies are transparent and merit-based. Employees feel valued when they believe that decisions regarding pay and promotions are fair and transparent (Bourne & Sweeney, 2022). On the other hand, ambiguous or unfair policies can lead to feelings of injustice and, subsequently, decreased job satisfaction (Kacmar et al., 2022). Discriminatory practices in such policies can lower employee motivation and contribute to dissatisfaction (Cohen et al., 2023; Heiserman & Simpson, 2023).

Despite the widespread acknowledgment of organizational politics and its empirical support, the issue remains unresolved (Muiruri, 2023). This problem is particularly pertinent in healthcare settings due to the direct link between staff morale and the quality of take care of patients (Liao et al., 2021; Buchanan et al., 2011). As highlighted in prior research, high levels of perceived organizational politics can breed mistrust and dissatisfaction among employees, eroding their job satisfaction (Kacmar & Ferris, 1991; Afsar et al., 2019). These perceptions in healthcare environments are particularly detrimental to long-term sector operations. Employee engagement and commitment are likely to diminish when decisions are perceived as biased and merit-based principles are violated (Bennett et al., 2020). This is a critical concern, given that job satisfaction in healthcare directly correlates with employee retention and the

quality of take care of patients (Kanten & Tumer, 2016).

Studies show that employees in healthcare settings who perceive high levels of organizational politics experience job-related stress, which can result in burnout and increased turnover rates (Kanten & Tumer, 2016; Raza et al., 2022; Bhanugopan et al., 2021; Morrison, 2009; Farah et al., 2022). Similarly, heightened perceptions of politics correlate with lower job satisfaction, which adversely affects patient outcomes and employee well-being (Khazarian, 2018; Liao et al., 2021). In modern healthcare settings, trust and cooperation are critical for effective teamwork and quality of take care of patients. When organizational politics disrupt these essential elements, it can lead to negative consequences, such as escalating conflict and reduced job performance (Buchanan et al., 2011; Afsar et al., 2019).

Paarima et al. (2024) found that perceptions of organizational politics among healthcare workers are positively related to job stress and negatively related to job satisfaction. Similarly, studies in Nigeria revealed that there is a significant correlation between organizational politics and employee job satisfaction, suggesting that organizational politics indeed influences job satisfaction (Ojiabo & Alagah, 2017). Essentially, higher levels of organizational politics are associated with lower levels of job satisfaction among employees. This is particularly evident in poorer nations, which often face challenges like inadequate infrastructure, low levels of awareness, and fewer employee benefits, all of which contribute to unresolved issues surrounding job satisfaction (Farnaes et al., 2018). In the Ethiopian context, this issue is particularly critical, as the quality of healthcare is highly dependent on a committed, motivated, and satisfied workforce. Therefore, understanding the dynamics of perceived organizational politics is essential for both academic insight and the development of effective management strategies to enhance employee satisfaction and retention.

Although numerous studies in Ethiopia have explored the factors influencing job satisfaction, (Temesgen et al., 2018; Mengistu & Bali, 2015; Mekuria & Geleto, 2015; Gualu et al., 2017; Geleto et al., 2015; Deriba et al., 2017; Bekru et al., 2017; Tadese et al., 2016), the health sector, particularly hospitals are little explored areas. Specifically, the influence of general political behavior, going along to get ahead, and pay and promotion policies have given little attention to be examined as a predictor of job satisfaction in the health sector. Therefore, this study examined the impact of organizational politics on job satisfaction within the health sector, particularly at the University of Gondar Hospital, providing insights to improve employee retention and healthcare quality.

1.1. Research Questions

- To describe the extent of perceived organizational politics with its dimensions and job satisfaction at the University of Gondar Hospital.
- To investigate the impact of general political behavior on employee job satisfaction in the hospital.
- To examine the influence of "going along to get ahead" on employee job satisfaction in the hospital setting.
- To examine the effect of pay and promotion policies on employee job satisfaction in the hospital.

2. Literature Review

The complex nature of interpersonal dynamics in the workplace has made organizational politics a

central topic in organizational behavior studies, with scholars focusing on its causes, effects, and various facets (Ferris et al., 2021; Schriesheim et al., 2019; Zhang et al., 2020). Although no single definition of organizational politics exists, it is commonly understood as the use of power within an organization to achieve personal goals, often at the expense of others (Miller & Rose, 2008; Kurchner-Hawkins & Miller, 2006; Porter et al., 2003). Organizational policies, procedures, and culture significantly influence political behavior, which is not formally sanctioned by the organization (Kapoutsis&Thanos, 2016).

2.1. Theories of Organizational Politics

Organizational politics theory, developed by Ferris and King (1991), focuses on employees' perceptions of political behavior in the workplace. Three key theories support this study: Person-Organization Fit Theory (P-O), Social Exchange Theory, and Equity Theory.

P-O fit refers to the alignment between an individual's values and those of their organization. Studies show that higher compatibility leads to better outcomes, such as increased commitment, satisfaction, and lower turnover (Aumann, 2004). Research indicates that P-O fit significantly influences individual performance, organizational commitment, and job satisfaction (Farooqui&Nagendra, 2014).

Social exchange theory suggests that social behavior is an outcome of an exchange process, where people aim to maximize benefits and minimize costs (Cherry, 2023). In organizations, employees invest resources like expertise and knowledge, and in return, they expect rewards such as salary increases, promotions, and recognition. However, when employees perceive unfair treatment or a lack of benefits, it can reduce productivity and negatively impact job satisfaction (Perrewé et al., 1991; Lai et al., 2014).

Equity theory focuses on fairness in the workplace. It suggests that employees compare their inputs and rewards to those of others and seek fairness (Stacey, 1996). Distributive justice, which involves fair distribution of rewards, and procedural justice, which focuses on fair decision-making processes, are key concepts in equity theory (Robbins et al., 2011). Perceived inequities may motivate employees to reduce performance (Faulk, 2002).

2.2. Job Satisfaction

Job satisfaction refers to how employees perceive their roles, reflecting their mood and optimism based on their work experiences (Gull & Azam, 2012). In the healthcare industry, it involves healthcare workers' emotional, cognitive, and behavioral reactions to their workplace, duties, and organizational culture, directly impacting their well-being and patient care quality. Job satisfaction is categorized into intrinsic and extrinsic factors. Intrinsic satisfaction is derived from meaningful work that benefits others, and it is influenced by career development opportunities (Buchan et al., 2023). Extrinsic satisfaction is based on compensation, benefits, and a supportive work environment, where competitive pay and resources play a key role in overall job satisfaction (Kumar & Saha, 2023).

2.3. Relationship between Organizational Politics and Employees' Job Satisfaction

The relationship between organizational politics and job satisfaction has been widely studied across sectors. Vigoda& Cohen (2002) found that perceived organizational politics (POP) among Israeli public sector workers negatively correlated with job satisfaction and positively correlated with turnover intentions. Similarly, Akanbi&Ofoegbu (2013) highlighted significant differences between general political behavior and job satisfaction. Studies in Sri Lanka's banking sector (Kodisinghe, 2010) and the

telecom industry (Luqman et al., 2015; Gull & Zaidi, 2012) confirmed that higher POP levels reduce job satisfaction. In the healthcare sector, Nigerian studies (Ojiabo & Alagah, 2017) and research on nurses (Paarima et al., 2024) found that POP increases job stress and decreases satisfaction. Considering the above evidences, the following hypothesis has developed.

H1: organizational politics has a negative effect on health workers job satisfaction.

2.4. Relationship between Components Organizational Politics and Job Satisfaction

Perceptions of organizational politics are conceptualized into three factors, with General Political Behavior (GPB) being the first. GPB refers to self-serving actions to achieve personal goals. High political behavior can create a toxic environment, fostering mistrust and lowering job satisfaction (Pettigrew et al., 2023). Employees in such environments may feel mistreated, leading to lower morale, anxiety, and job dissatisfaction (Hochwarter et al., 2018; Harris & Ogbonna, 2023). In extreme cases, these feelings can escalate to stress and burnout (Treadway et al., 2019). Taking into account the preceding reasoning, the study proposes the following hypothesis:

H2: General political behavior has a negative effect on health workers job satisfaction

The second factor, "go along to get ahead" (GAGA), refers to situations where individuals conform to political norms to achieve desired outcomes. While this may yield short-term benefits like promotions, it often compromises long-term satisfaction and authenticity (Ferris et al., 2016; Chen et al., 2021). Employees who prioritize political alignment over personal values may feel disengaged, while those valuing authenticity may experience dissatisfaction and stress due to perceived pressure to conform (Schneider et al., 2023; McGowan et al., 2023). This dynamic can lead to isolation and a sense of undervaluation, further reducing job satisfaction. In light of the above argument, the study brings for the following hypothesis:

H3: Go along to get ahead has a negative effect on health workers job satisfaction.

The third factor, Pay and Promotion Policies (PPP), refers to how an organization's policies and practices can be perceived as political behaviors (Kacmar & Carlson, 1997). Compensation and promotion systems have a significant impact on employee motivation and job satisfaction. Employees who perceive fair treatment tend to feel valued and respected (Bourne & Sweeney, 2022). Transparent compensation practices are critical in fostering trust and fairness, both of which are strongly correlated with job satisfaction (Haffar et al., 2019). Weller & Rieg (2021) suggests that companies with clear promotion paths boost employee morale and retention by ensuring workers feel recognized for their contributions. However, when employees experience discrimination, it diminishes motivation and leads to dissatisfaction (Cohen et al., 2023). In light of the aforementioned argument, this study advances the following hypothesis:

H4: Pay and promotion policies have negative effect on health workers job satisfaction.

2.5. Conceptual Framework

From the empirical survey, the researcher understood that there is some controversy between these study variables. Therefore, this study aimed to investigate the Perceived Organizational Politics and Job satisfaction: Evidence from Public Sector Employees working in University of Gondar Hospital (see

Figure 1).

Independent variables

Dependent variable

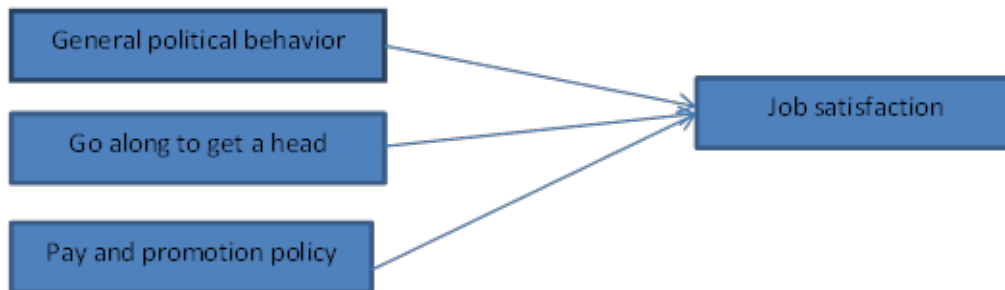


Figure 1: conceptual Framework

3. Methodology

This study utilized quantitative research, focusing on numerical data to explore relationships and differences between variables (Sekaran&Bougie, 2016). An explanatory research design was used to examine cause-and-effect relationships. Confirmatory Factor Analysis (CFA) was conducted with AMOS software to assess the model fitness, including convergent and divergent validity. The population consisted of 4,212 hospital employees, with 1,050 academic health educators and 3,162 non-academic health workers.

Yamane's formula was used to estimate the appropriate sample size from a finite population (Israel, 1992). The representative sample size from the staff of the University of Gondar Hospital workers was calculated using the following formula:

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

Where,

N = Population of study =4212

e= 95% level of significance or margin of tolerable error at 5%

n= sample size required

$$\text{Thus, } n = \frac{4212}{1+4212(0.05)^2} = \frac{4212}{1+4212(0.0025)} = \frac{4212}{10.53} = 365$$

Initially, purposive sampling was employed to select health educators and non-academic health workers, excluding medical doctors due to their demanding schedules. Data collectors, with prior experience, reported that medical doctors often did not return the questionnaires because they worked at private hospitals and clinics outside of their formal roles.

Subsequently, a proportionate stratified random sampling technique was applied. This approach divided the population into two categories: health educators and non-academic health workers (Creswell, 2010). Within each category or "stratum," participants were randomly selected. The proportionate sampling ensured that the sample was representative of the overall population by selecting individuals based on

the relative size of each category within the hospital’s staff. This method allowed for equal chances of selection for each potential respondent. The sample of respondents was selected from the sampling frame shown in Table1.

Table 1: Proportional Sample Selection

Nature of Classification	Total number of employees	Selected sample size
health educators	1050	1050/4212*365=90.9
Non academic health workers	3162	3162/4212*365=274
	Total	364.9=365

3.1. Instrumentation

The questionnaire was divided into three sections. Section A collected demographic information about the respondents. Section B assessed perceptions of organizational politics across three dimensions: general political behavior, go along to get ahead, and pay and promotion policies. To measure these perceptions, the researcher used the Perceptions of Organizational Politics Scale (POPS), developed by Gull and Zaidi (2012) and Kacmar& Carlson (1997). This scale comprises three dimensions: general political behavior (with 2 items and one additional item), go along to get ahead (with 7 items, of which three were removed due to being below the 0.05 threshold), and pay and promotion policies (with 6 items, of which one item was removed). Job satisfaction was measured using 5 items modified from previous research (Kim & Park, 2014). All items were ranged from 1 strongly disagree to 5 strongly agree.

4. Data Analysis

4.1. Characteristics of respondents

The demographic profile of respondents showed that 48.9% were male and 48.5% female. Most respondents (29.2%) were aged 25-30, followed by 27.5% aged 31-35, 23.6% aged 36-40, and 7.7% older than 40. Regarding education, 48.3% held a bachelor's degree, and 32.6% had a college diploma. In terms of job nature, 64.4% were non-academic health workers, and 26.6% were health educators. For work experience, 41.2% had 6-10 years, 23.2% had 1-5 years, and 10.4% had 16-20 years.

Of the 365 distributed questionnaires, 73 were discarded due to errors, 59 outliers were removed, leaving 233 valid responses for analysis.

4.2. Factor Loading & Mode Fitness of Constructs

Figure 2 illustrates the structural relationships among four latent variables: general political behavior (3 items), go along to get ahead (4 items), pay and promotion policy (4 items), and job satisfaction (4 items). Structural Equation Modeling (SEM) was used to analyze the measurement model. Goodness-of-fit indices, calculated using AMOS, confirmed the model's validity, aligning with Confirmatory Factor Analysis (CFA) standards.

The model's goodness of fit was assessed using multiple indices. The chi-square test ($\chi^2 = 152.812$, $df = 113$, $p < 0.05$) met the minimum threshold. Additional fit indices confirmed a strong model fit: Comparative Fit Index (CFI) = 0.983, Tucker-Lewis Index (TLI) = 0.980, Incremental Fit Index (IFI) = 0.989, Normed Fit Index (NFI) = 0.944, Relative Fit Index (RFI) = 0.932, Goodness of Fit Index (GFI)

$= 0.938$, and Adjusted Goodness of Fit Index (AGFI) $= 0.914$, all exceeding the acceptable threshold of >0.90 or >0.80 . The Root Mean Square Error of Approximation (RMSEA) $= 0.031$ also fell within the conventional standard (<0.08), indicating a well-fitting model (Brown & Cudeck, 1993). The Hoelter's Critical N (CN) score of this study, according to the HOELTER estimation, was 237 at .05 and 259 at .01, which shows the sample size adequacy of the data. Hoelter proposed that a value of over 200 adequately represented the sample data. Therefore, the sample size of the study to analyze the final research output ($N = 233$) was satisfactory according to Hoelter's benchmark.

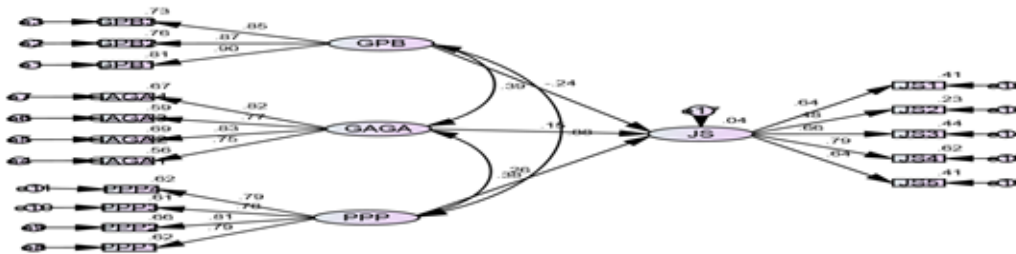


Figure 2: CFA of the Model

The following table shows that the complete standardized factor loading for each item in the measurement model exceeded the 0.50 level, meeting the minimum cut-off values suggested by Hair et al., (2010). This indicates that these items significantly reflect the dimensions of the latent variables. Consequently, the sub-scales of each latent variable effectively represented the designed model, as all items exceeded the minimum cut-off point of 0.5 (see Table 2)

“ R^2 is the squared standardized factor loading, indicating the extent to which a factor can explain the variations in a manifest variable” (Albright & Park, 2009). For instance, the latent variable general political behavior explains 85 to 90 percent of the variance for its three items, while going along to get ahead accounts for 75 to 83 percent of the variance for all four items. Similarly, pay and promotion policy explains 78 to 81 percent, and job satisfaction explains 40 to 79 percent.

Moreover, all indicators had a significant association, as their factor loadings exceeded 0.50, thereby meeting the minimum threshold values suggested by Hair et al. (2010). Other scholars, such as Mahembe & Engelbrecht (2013) and Sahin (2010), also employed the minimum acceptable cut-off value of ≥ 0.3 .

Table 2: Factor Loading (FL), R^2 and Cronbach Alpha Value (α) of Construct Items

General Political Behavior	FL	R 2	go along to get ahead	FL	R2	Pay and	FL	R2	Job	FL	R2
GPB 1	0.90	0.81		0.75	0.56	PPP1	0.79	0.62	JS1	0.64	0.41
GPB2	0.87	0.76		0.83	0.69	PPP2	0.81	0.68	JS2	0.48	0.23
GPB3	0.85	0.73		0.77	0.59	PPP3	0.78	0.61	JS3	0.66	0.44
				0.82	0.67	PPP4	0.79	0.62	JS4	0.79	0.62
									JS5	0.64	0.41

JS5=Job satisfaction item 5; JS4=job satisfaction item4; JS3=Job satisfaction item3; JS2=Job satisfaction item 2; JS 1=Job satisfaction item1. PPP=Pay and promotion policy item 4; PPP= Pay and promotion policy item3; PPP= Pay and promotion policy item2; PPP= Pay and promotion policy imt1. GAGA4=go along to get ahead item4; GAGA3= go along to get ahead item3; GAGA2= go along to get ahead item2; GAGA1= go along to get ahead item 1. GPB3=General Political Behavior item3; GPB2= General Political Behavior item2;GPB1= General Political Behavior item1.

4.3. Convergent and Discriminate Validity

4.3.1. Construct validity

Construct validity consists of two types: convergent validity and discriminant validity (Campbell & Fiske, 1959). Convergent validity refers to the agreement among multiple measures of the same concept (Bagozzi& Phillips, 1991). In this study, constructs were validated using AMOS (Confirmatory Factor Analysis, CFA). A standardized loading factor ≥ 0.40 indicates unidimensionality (Ngadiman et al., 2013).

Convergent validity was assessed through Composite Reliability (CR) and factor loadings. Statistically significant regression weights (critical ratio > 1.96) and factor loadings > 0.5 confirmed convergent validity (Anderson &Gerbing, 1988; Hair et al., 2010). All perceived organizational politics components met this threshold, with factor loadings ranging from 0.48 to 0.90. Similarly, job satisfaction scales exceeded the minimum threshold (factor loadings > 0.48), ensuring robust measurement validity (Ngadiman et al., 2013) (see Table 2).

4.3.2. Discriminate validity of variables

Discriminant validity assesses the extent to which measured variables differ from one another. It can be evaluated using methods such as the chi-square difference test, O-sorting, and average variance extracted analysis (Teo et al., 2009; Zait&Bertea, 2011). In this study, the chi-square difference test was applied through Confirmatory Factor Analysis (CFA). Two models were compared: one with uncorrelated constructs (Model 1) and another with correlated constructs (Model 2, linking GPB, GAGA, PPP, and JS). A statistically significant result ($p < 0.05$) confirms discriminant validity, ensuring the constructs are distinct (Sagars, 1997). This approach ensures the reliability of the measurement model.

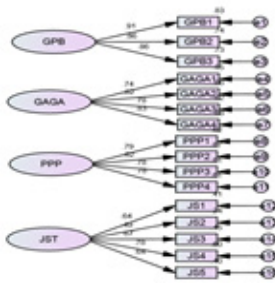


Figure 3: Model1 uncorrelated Chi-square Difference

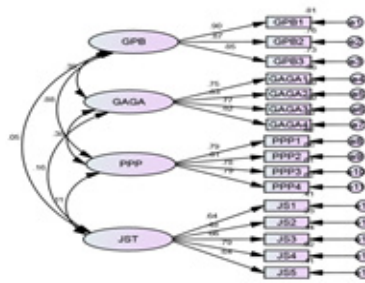


Figure 4: Model2 the correlated Chi-square Difference

Table 3: Chi-Square Difference Test

Model 1 (X1)		Model 2 (X2)	
Chi-square	417.403	Chi-square	159.290
Degree of Freedom	104	DF	=98
Probability level	0.000	Probability	=0.000
X1-x2=			
417.403-159.290=258.113			
Df1-Df2			
104-98=6			

As presented in Table 3, the chi-square difference test results for Model 1 of Figure 3 showed a chi-square value of 417.403, with 104 degrees of freedom and a probability level of 0.000. In the second model (Model 2 of Figure 4), the chi-square value, degrees of freedom, and probability levels were 159.290, 98, and 0.000, respectively. According to the established criteria, if the p-value of the chi-square test is below 0.05, then discriminant validity is satisfied (Sagars, 1997). Thus, the chi-square difference test results indicate a highly significant difference ($p < 0.05$), suggesting that the four major variables are unique and distinct, reflecting the behavior of discriminant validity.

4.4. Prevalence of Perceived Organizational Politics

Table 4 presents the mean and standard deviation of perceived organizational politics and job satisfaction. In this study, “a 5-point Likert scale was employed to evaluate the variables, reflecting the extent of

performance from low to high. This scale has five ranges: 1-1.80 for strongly disagree, 1.81-2.60 for disagree, 2.61-3.40 for neutral, 3.41-4.20 for agree, and 4.21-5 for strongly agree” (Sozen&Guyen, 2019). Accordingly, Table 4 indicated that the mean value of general political behavior falls within the range of disagreement, while the mean values for pay and promotion policy, as well as going along to get ahead, indicated that respondents' attitudes are neutral, with approximate values of 2.53, 2.64, 2.73, and 2.55, respectively. On the other hand, the mean value of the dependent variable, “employee job satisfaction,” is 2.55, suggesting that respondents tend to disagree regarding their job satisfaction in the hospital. This indicates that they were generally dissatisfied with their work.

Table 4: Extent of Perceived Organizational Politics

Constructs	N	Mean	Std. Deviation
General Political behavior	233	2.5365	1.16532
go along to get ahead	233	2.7365	.73716
Pay and Promotion Policy	233	2.6477	.70457
Job Satisfaction	233	2.5536	.66663
Valid N (listwise)	233		1.16532

4.5. Hypotheses Test Decision

The first task in this study is to determine which of the proposed hypotheses should be accepted or rejected by examining the p-values of the relevant independent variables in the coefficient table. Thus, the following choices were made, and a discussion has been made, depending on the p-values of each perceived organizational politics dimension and their impact on employee job satisfaction.

H1: Perceived organizational politics has a negative effect on employee job satisfaction

The Confirmatory Factor Analysis (CFA) result of the standardized regression weights (path coefficients) indicated that the path relating to perceived organizational politics and employee job satisfaction had a standardized regression weight (β) of 2.791 at a significance level of ($P < 0.05$). This means that perceived organizational politics are a significant determinant of employee job satisfaction. The work of very few studies, such as Vigoda& Cohen (2002), is consistent with the findings of this study. However, the works of Kodisinghe (2010), Gull &Zaidi (2012), and Ojiabo and Alagah (2017) deviated from the current study.

H2: General political behavior has a negative effect on health workers job satisfaction

Research indicates that overall political behavior has a noteworthy adverse impact on workers' job satisfaction. The results, shown in the table below, indicate that the GPB p-value was less than the significance level of 5%. As general political activity has a statistically significant negative effect on employees' job satisfaction, the null hypothesis can be rejected and the alternative hypothesis accepted at $\beta=-0.528, P<0.05$. Luqman et al., (2015) provide empirical support for the notion that telecom employees who perceive a higher level of general political activity are more likely to be dissatisfied with their jobs. Other scholars such as Durnali & Ayyildiz (2019), Ugwu et al., (2020), Munyeka & Setati (2022), and Goyal et al., (2015) also confirm this. Similarly, Akanbi & Ofoegbu (2013) found that general political behavior and work satisfaction differed significantly.

H3: - Go Along to Get Ahead Statistically has a negative Effect on health workers job satisfaction

Studies have shown that going along to get ahead has a statistically significant negative effect on employees' job satisfaction. According to Table 5, the p-value result shows that going along to get ahead has a negative significant effect on employees' job satisfaction, since its p-value was less than the significance level of 5%. From a theoretical point of view, going along to get ahead is one of the major predictors of employee job satisfaction ($\beta = -.739$, $P < .05$). Thus, in this research, the findings indicate that going along to get ahead significantly determines employees' job satisfaction. The finding of the study was also in line with the other existing research findings of Shahzadi et al., 2014; Munyeka, & Setati, 2022), these scholars in their study confirmed that Go Along to Get Ahead has a negative and significant effect on employees' job satisfaction.

H4: - Pay and promotion policy have a negative effect on health workers job satisfaction

The literature shows that pay and promotion policies have a statistically significant negative effect on employees' job satisfaction. The under mentioned table indicates that with a significance value less than 0.05, the result demonstrates that pay and promotions policy show are significant factors in employee job satisfaction ($\beta = -.718$, $P < .05$). Hence, the alternative hypothesis (H1) is accepted. Kodisinghe (2010) found that perceived organizational politics have a negative effect on job satisfaction, which is in line with the work of (Kosteas, 2011; Akanbi et al., 2013; Munyeka & Setati, 2022). The results are summarized in the following table.

Table 5: Regression Weights (Direct effect between variables)

Hypo.	Path	Direction	Estimate	S.E.	C.R.	P	Decision
H1	<---	Organpolitbehavior	2.791	.026	108.402	***	Support
H2	<---	NPB	-.528	.012	-43.278	***	Support
H3	JobSat <---	GAGA	-.739	.019	-38.295	***	Support
H4	JobSat <---	PPP	-.718	.020	-35.540	***	Support

Where: NPB=General Political Behavior, GAGA= Go Along to Get Ahead, PPP=pay and promotion policy, JobSat=Job satisfaction.

5. Discussion

The discussion focused on the effect of perceived political behavior on job satisfaction. Perceived political behavior has three sub-components: general political behavior, going along to get ahead, pay, and promotion policies. In this discussion section, the study's conclusions were addressed by both empirical evidence and theoretical foundations.

The study was supported from the theoretical foundations of equity theory, along with personal-

organization fit and social exchange theories (Farooqui&Nagendra, 2014; Perrewé et al., 1991; Lai et al., 2014; Robbins et al., 2011) providing a solid foundation for exploring the relationship between perceived organizational politics and employee job satisfaction in all organizations including health sectors.

The first objective of this study was to describe the prevalence of perceived organizational politics, in terms of its dimensions, at the University of Gondar Hospital. Accordingly, the mean values of "go along to get ahead" and "pay and promotion policy" indicate that the respondents' attitude towards the questions falls within the "neutral" range, with approximate values of 2.73 and 2.64, respectively. The mean values of "general political behavior" and "employee job satisfaction" were 2.53 and 2.55, respectively, indicating that the respondents tended to disagree with the given statements. As indicated in Table 4, the mean value of 2.55 confirms that hospital employees are dissatisfied with their work.

The next objective or hypothesis was related to the effect of general political behavior on employee satisfaction. The hypothesis showed that general political behavior has a negative effect on health workers job satisfaction at ($\beta = -.528$; $P < 0.05$). This indicated the highest effect among the other factors. This finding supports the first hypothesis (H1); that is, there is a significant and negative impact of general political behavior on health workers job satisfaction. This study was also supported by other studies. For instance, Luqman et al. (2015) provided empirical evidence in support of the theory that workers in the telecom industry who perceive a higher degree of general political behavior are more likely to have lower job satisfaction. Other scholars such as Durnali&Ayyildiz (2019), Ugwu et al., (2020), Munyeka&Setati (2022), Kachmar&Carlson(1997), and Goyal et al., (2015) also confirm this. Similarly, Akanbi et al., (2013) found that general political behavior and work satisfaction differed significantly.

The findings from the second hypothesis showed that going along to get ahead had a negative effect on health workers job satisfaction at a beta value of $-.739$ when the p-value was < 0.05 . This finding indicates that going along to get ahead has a negative impact on job satisfaction. Therefore, H2 is supported. This implies that when a one-unit change went along to get ahead, job satisfaction decreased by $.817$. Chen et al., (2021) support this, demonstrating that employees who prioritize political alignment over personal values may eventually feel disappointed and disengaged. Individuals who value authenticity may become unsatisfied in organizations that encourage conforming behavior because they feel under pressure to fit in (Schneider et al., 2023). Employee morale suffers as a result of the discrepancy between personal ideals and organizational norms. People who feel compelled to participate in political behaviors may experience stress and being alone, especially if they think their contributions are being underestimated (McGowan et al., 2023).

The findings of the third hypothesis also showed that pay and promotion policies had a negative effect on health workers job satisfaction, with a beta value of $-.718$ when the P-value was < 0.05 . This finding implies a negative effect on job satisfaction. Therefore, H3 was supported, that is, there is a significant impact of pay and promotion policies on job satisfaction. The findings of this study were in line to those of Gull &Zaidi (2012), Kosteas (2011), Akanbi et al. (2013), and Munyeka&Setati (2022), that is, higher politics in pay and promotion policy lead to lower job satisfaction.

Finally, perceived organizational politics had a positive and significant effect on health workers job satisfaction ($\beta=2.791$, $P<.05$). From the various reviewed literature and research findings, it can be concluded that perceived organizational politics have a significant impact on job satisfaction.

Consequently, organizations need to focus on ways to minimize the perception of organizational politics to increase job satisfaction. A study in 303 Israeli public sector employees' perceptions of organizational politics, attitudes toward their jobs, and other work-related outcomes were investigated (Vigoda& Cohen, 2002). Their result confirmed that perceived organizational politics and job satisfaction has negatively correlated.

5.1. Conclusions

This study examined the impact of perceived organizational politics (POP) on job satisfaction at the University of Gondar Hospital using a structured questionnaire. Out of 365 distributed surveys, 233 valid responses were analyzed after removing outliers. Confirmatory Factor Analysis (CFA) in AMOS confirmed good model fit (CFI = 0.983, TLI = 0.980, RMSEA < 0.08). Findings revealed a neutral attitude toward "go along to get ahead" (mean = 2.73) and "pay and promotion policies" (mean = 2.64), but disagreement with "general political behavior" (mean = 2.53) and overall job satisfaction (mean = 2.55). The study concluded that POP dimensions—general political behavior, go-along-to-get-ahead, and pay/promotion policies—significantly negatively affect job satisfaction. These results highlight the need to address POP to improve employee morale in healthcare settings.

5.2. Implication

5.2.1. Theoretical and Managerial Implications

This study builds on equity theory, person-organization fit, and social exchange theory to explore the relationship between organizational politics and job satisfaction. While Ethiopian research has extensively examined job satisfaction in sectors like public services and the leather industry (Temesgen et al., 2018; Addis & Winch, 2018), the healthcare sector, particularly hospitals, remains underexplored (Gualu et al., 2017; Ojiabo&Alagah, 2017). This study addresses this gap by investigating perceived organizational politics and its impact on health workers' job satisfaction, contributing to the literature on public sector organizations.

This study highlights the importance of minimizing perceived organizational politics (POP) to enhance job satisfaction among hospital workers. The findings show that POP significantly impacts employees' job satisfaction, emphasizing the need for leaders to create a transparent and fair work environment. Key actions include ensuring clarity in compensation, promotions, and career advancement policies to reduce perceptions of injustice. Deans and directors should also implement training programs, workshops, and seminars to address POP and improve satisfaction. These insights advance theoretical understanding and provide practical strategies for healthcare organizations to foster a positive workplace culture, ultimately boosting employee morale and retention.

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Political Instability and Tourism: A Systematic Review of Ethiopia's Tourism Industry (2013-2023)

By

Getachew Melesse Asefa¹; Endalkachew Teshome (PhD)²; Busha Taa (PhD)³

Abstract

This article examines the impact of political instability on Ethiopian tourism industry through a systematic literature review. Around 2,411 articles published between January 1, 2013, and December 31, 2023, were identified using search terms: "Political instability" OR "Political unrest" OR "armed conflict" AND "tourism development" OR "tourism industry" AND "Ethiopia." In order to analyze the relationship between political instability and tourism, 11 papers were selected after a thorough review of records. Publication outlets, journals, years of publication, citations per article, methods, contextual factors, and subjects were the main selection criteria. A descriptive analysis is used to examine how political instability affected the Ethiopian tourism industry and instigated its decline. An analysis of the main themes and trends of research papers on the impacts of political instability and Ethiopia's tourism industry is presented in this systematic review. The findings revealed that most studies focused on substantial reductions in tourism revenue, which adversely is affecting local economy and employment levels, apart from causing the loss of heritage resources and environmental degradation. Tourist arrivals have declined due to insecurity, while related research publications have increased in the subsequent years. Consequently, political instability emerges as a major barrier to the tourism industry in Ethiopia. As a result of these findings, researchers may be able to better understand the relationship between political instability and Ethiopia's tourism sector, while also identifying areas that need further study. Furthermore, recent literature has been summarized to provide up-to-date insights that may serve as benchmarks for future reviews.

Keywords: Employment, Heritage Resources, Political Instability, Revenue, Tourism Industry,

1 Assistant Professor of Tourism and Heritage Management; University of Gondar, Department of Tourism and Hotel Management; ORCID ID: <https://orcid.org/0000-0003-4819-7757>

2 Associate Professor of Ecotourism & Wildlife Management; University of Gondar, Department of Tourism and Hotel Management

3 Professor of Sociology; University of Gondar, Department of Sociology

1. Introduction

Political instability is a broad complex term that had led international institutions and researchers to formulate different indicators or proxies used for the study (Murad & Alshyab, 2019). It also has a bearing on the possibility that will have demonstrations, strikes and also varieties of violence, crimes and government collapse. Social disintegration, ethnic discord, negative changes which hinder progress (Tusalem, 2015) that result from a lack of political stability.

Governments go down either through the boiling point of hostilities or can at some extent collide between some opposition teams that may occasionally take a violent turn (Orji & Nwagbara, 2024). On the other hand, poor economic performance precipitates government collapse and chaos (Aisen & Veiga, 2013; Aisen & Veiga, 2011; Alesina et al., 1996). Consequently, a particularly volatile political environment retard investment and economic development, and lower GDP growth per capita (Aisen & Veiga, 2011).

Tourism is a highly pleasant experience based activity and is intrinsically irreconcilable with conflict, warfare, violence, and terrorism. Writings of terrible events were dramatically colourized by numerous violent conflicts and entire media coverage, bringing dreadful events in the cities and mainly in the homes of people (Tkalec & Žilić, 2017). In the last two decades the world has undergone many changes. Security has experienced significant decline in relation to terrorist attacks, local wars, natural disasters, and diseases (Kővári & Zimányi, 2010). Also, the tourism industry is very vulnerable to internal and external factors - for example, political instability (Meyer, 2018; Sofronov, 2018).

Several studies have reviewed the connection of the political instability to its consequences in the tourism industry, namely the important influence it exert on the numbers of tourist arrivals, revenues, and in general growth of the industry (Meyer, 2018; Sofronov, 2018). Marketing efforts have demonstrated that high exchange rates and high inflation rates, as well as political risks are associated with high variance of international tourist arrivals, especially in high risk destination (Athari et al., 2021). Political unrest, terrorism, civil conflicts have had notable effect on tourist destinations, caused a reduction in the number of tourists and reduce revenue significantly (Sofronov, 2018).

Because of the effects of political violence on destination image, impacts of political instability on tourist demand, motives of terrorists in targeting tourists, and use of tourism as a political tool, it has been difficult to recover the tourism market (Ryu, 2005; Sönmez & Sönmez, 2017). A threat of danger with political unrest intimidates tourists more than the effect of political unrest on tourism (David Mc A, 2014; Sönmez, 1998). Political unrest also decreases tourism revenue by 30 to 36 percent and visitor arrivals by 24 to 31 percent for every unit increase in instability (Yap & Saha, 2013).

Moreover, the existing literature indicates that political instability and conflict can have a very adverse effect on the demand and growth of tourism (Meyer, 2018; Theocharous et al., 2020). A typical example is from the Eastern-Mediterranean region where verbal or material conflict between two or more countries of the destination such as Greece, Turkey, Cyprus or Israel caused negative influence and volatility effect on tourist arrivals (Theocharous et al., 2020). Another study is similar in that the political risk has a negative effect on international tourism arrivals in high risk destinations (Athari et al., 2021).

On the other hand, political stability is a prerequisite for tourism and economic growth because it allows tourists (Meyer, 2018). During the last two decades, the importance of safety and security in tourism has increased greatly (Kővári & Zimányi, 2011). Increasing tourism safety and security concerns are

owing to the political instability, violent crime and regular terrorist attacks which U.S. France, Turkey and other countries of Middle East have experienced. To this end, the governments have also done their best to make travellers safe by providing the latest traveler information about risks and visa restrictions (Asongu et al., 2019; Chen & Noriega, 2004; Haddad et al., 2015; Tarlow, 2014). The tourism industry needs good governance, policy certainty as well as a stable political climate (Meyer, 2018). As political stability, peace and security complete with the tourism industry (Honey, 2009).

Ethiopia, a country renowned for its rich cultural heritage, historical attractions, and natural beauty, faces many challenges over the past decades in developing into an important industry in the country:- political instability, a negative country image, bad service quality, inadequate infrastructure development and the poor quality of human resources(Ahmed & Oumer, 2023; Ayalew, 2016). Amid political instability that erupted recently in northern Ethiopia in 2020 (Ahmed & Oumer, 2023; Berhe et al., 2022; Chiriko, 2021) and in 2016 appeared political unrest in parts of the country (Wondirad, 2017), the tourism sector has come down after the travel warnings for their citizens and the state of emergency. These periods were widespread protests, ethnic tensions, conflict and war, which disrupted the stability of the country and deterred international tourists. Even though these problems, tourism contributing for Ethiopia's economy: employment, GDP and foreign exchange earnings.

The Ethiopian government has actively promoted tourism through initiatives like the "Land of Origins" campaign, aiming to showcase the country's unique attractions. However, recurring political crises have undermined these efforts, leading to fluctuations in tourist arrivals and revenue losses. This has also "exacerbated Ethiopia's tourism problems, creating another serious calamity as saying goes "mumps on a goiter" (Wondirad, 2017), an expression commonly cited as a cliché for another calamity, another calamity. "The tourism industry could not avoid the negative impacts and consequences of political instability and armed conflict" (Rondeau et al., 2020). Therefore, such a fact stimulates the study on political instability influences on tourism industry, which provides valuable insights into the resilience of the sector amidst instability. It emphasizes the interrelationship between governance, security, and economic development(Adedeji et al., 2024), specifically on reducing the negative impact of political unrest and achieving a sustainable tourism recovery based on knowledge of sustainable tourism development.

Although others have investigated the impact of political instability on tourism, studies evaluating the nature and quality of systematic review papers in political instability towards tourism and hospitality are scarce. Development in terms of developing and developed countries, periods, methodologies, variables, destination and country is very variable (Athari et al., 2021; Chiriko, 2021; Hall, 2010; Theocharous et al., 2020). Moreover, no systematic review exists that synthesizes the impact of political unrest on Ethiopian tourism despite several rigorous methods that find that there is a lack of data on the subject, an important consideration that should be addressed in future work. Such review is important to inform research practice, policy and marketing decisions, conservation and crisis management; and to identify and mitigate or close the gaps in knowledge.

Additionally, Ethiopia's context is particularly significant due to its regional importance in East Africa and its potential as a tourism hub. By examining the impact of political instability on tourism, this systematic review offers lessons for other fragile states and underscores the need for stability, effective crisis management, and sustainable tourism strategies to harness the sector's full potential. Considering that, currently, there is a need to conduct a systematic review of some of the former published studies

involving political instability on the tourism industry, which contributes to the existing literature gap. Research methodology employed, study context, publication trends, suggestions for future research areas as well as depicts the overall picture of the effects of political instability on the tourism industry in Ethiopia utilizing research findings. This paper aims to fill this gap by providing a comprehensive systematic review and analysis of the past ten years of (2013–2023) literature regarding the impact of political instability, war and conflict in Ethiopia in past ten years on the tourism industry.

2. Objective

The objective of this paper is to conduct a systematic literature review analyzing the relationship between tourism and political instability in the Ethiopian tourism industry from 2013 to 2023, aiming to identify key trends, challenges, and implications for future tourism development.

3. Methodology

For this systematic literature review, electronic database search tools were used with specified key terms to identify literatures for potential inclusion in this systematic literature review. Original paper was sought through search engines EBSCO, Google scholar, and Scopus databases. These databases were selected because of their size, coverage, and relevance to the research topic. Likewise, they were chosen because they are updated regularly, making them reliable and current. PICO protocol was formulated to identify appropriate articles, which helps to frame research question for qualitative, quantitative and mixed research studies. P refers to Population; I represent Phenomena of Interest and Co represent Context (Schardt et al., 2007). So, this paper was proposed protocol as the following, P (Population): tourism industry, tourism development, I (Phenomena of Interest): Political instability, political unrest, and armed conflict, and CO (Context): Ethiopia. In addition, the paper proposes key words to search relevant articles using the following search protocol: "Political instability" OR "Political unrest" OR "armed conflict" AND "tourism development" OR "tourism industry" AND "Ethiopia."

Besides, a system theory is used to analyze the factors that influenced the adoption and impact of the PRISMA statement and its extensions (Page & Moher, 2017). So, a general system theory is crucial to analyze systematically the impacts of political instability on the tourism industry that shows the tourism system is a complex one that consists of various interrelated subsystems (Li & Chen, 2011). The movements of people between places are highly complex and are influenced by a wide variety of interrelated variables (Gidebo, 2021). Overall, the literature suggests that a multifaceted approach is required to understand the complex relationships between political instability and the tourism industry (Athari et al., 2021).

This study employs descriptive analysis method to adequately address its research questions/objectives. Descriptive analysis is a method used to objectively describe the nature and magnitude of sensory characteristics (Kemp et al., 2018). The researchers utilized, Publish or Perish, Endnote, Mendeley software and relevant information contained in each article was extracted and compiled using Microsoft excel sheet into various themes to execute and to compare the analysis. To write this a systematic literature review the researchers have considered the following four reporting methods: Search strategy, selection criteria, quality assurance and data extraction (Mengist et al., 2020; Sami et al., 2018).

3.1. Search Strategy

Thus, for this systematic literature review developed a search strategy to identify relevant articles on different databases. This search strategy was tailored to three electronic databases such as EBSCO, Scopus and Google scholar, and the search terms were used the following: “Political instability” OR “armed conflict” OR “political unrest” AND “tourism development" OR "tourism industry" AND “Ethiopia”, all searches spanned from database inception 2013- 2023, a total of 2411 article citations were identified and included journal articles only that are published in English language.

3.2. Selection Criteria

To identify the appropriate articles for this systematic review, the researchers used to PRISMA framework guidelines or steps that had been developed by Moher et al. (2009). The process used to determine which studies should be included in the review is shown in PRISMA flow diagram (Fig. 1). These initial protocols are useful to report and explain results from various articles without suggesting that are inappropriate for this systematic literature review.

Therefore, the selection criteria were based on the PRISMA statement (Moher et al., 2009). This search mainly focused on the mapping of existing literature on political instability in the field of tourism and hotel management, social science and business & economics. The search then narrowed to the subject areas tourism management, sustainable tourism development, tourism sector, and hospitality industry and tourism & hotel management fields. The search span was from January1, 2013-December 31, 2023 years. All articles before 2013 were excluded from search. The search mainly focuses on Ethiopia. Thus, articles from any other countries were excluded. 221 citations were duplicated thoroughly among in EBSCO, Scopus and Google scholar databases and 2190 citations were screened after removing duplication (see below PRISMA framework (Fig-1)).

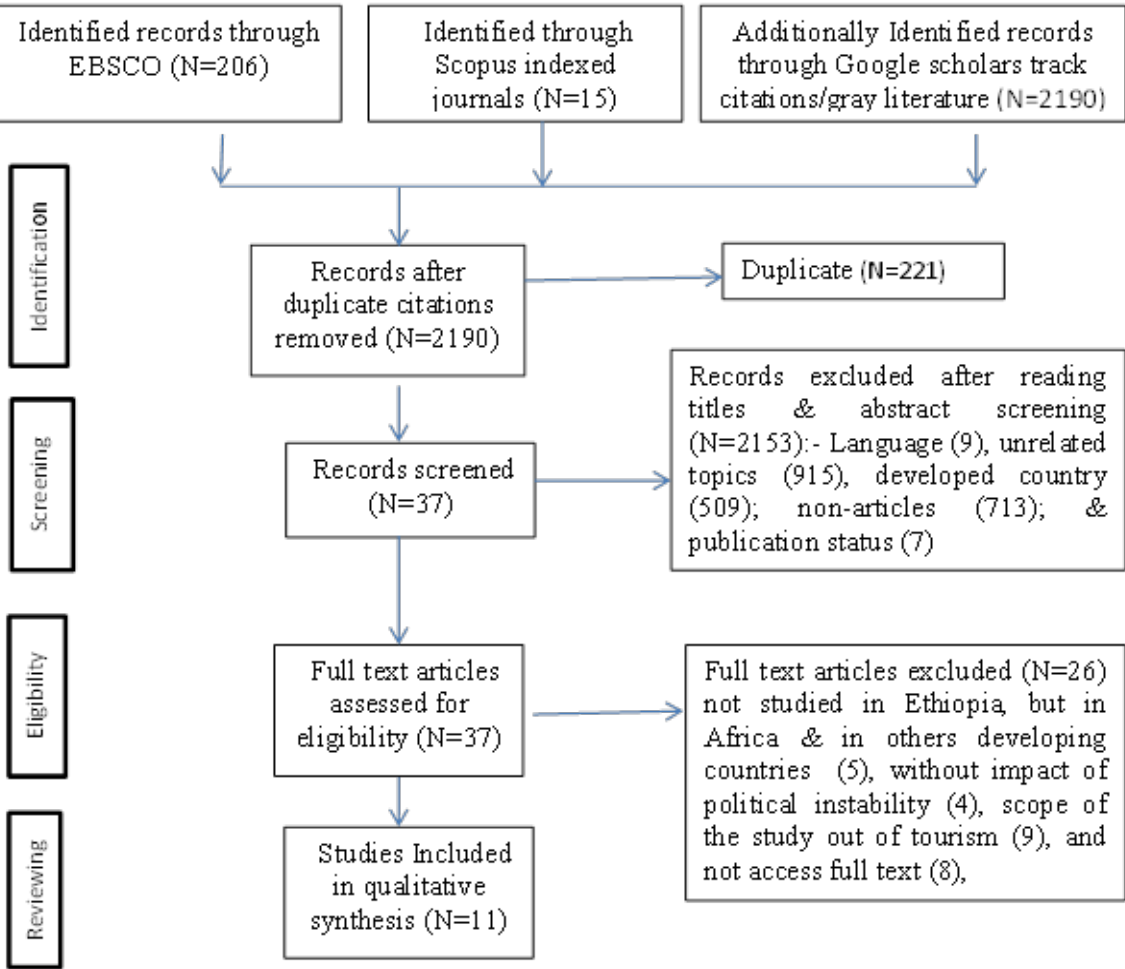
3.3. Quality Assurance

This study is based only on original research articles, which are published in various journals. In addition, this paper formulated inclusion and exclusion criteria that systematically assess the quality of chosen papers and either includes to the study or excludes from the study. For maintaining the quality of the review, titles and abstracts of the articles were checked deeply for the analysis and purification of the article to ensure the quality and relevance of academic literature included in review process.

So, 2153 (1440) records were excluded after reading titles & abstract screening based on the proposed selection criteria, which were not relevant to the objective of this review (See Fig-1 for the literature inclusion and exclusion at every stage (PRISMA)). A careful evaluation of each research paper was carried out at later stage. The researchers were selected articles after assessing each article on the aforementioned inclusion and exclusion criteria.

Fig-1. PRISMA flow diagram for systematic literature review studies included on political instability

Thus, 11 articles were selected for this SLR based on PRISMA framework (Fig-1)



3.4. Data Extraction

In the data extraction phase, 37 articles were selected and the characteristics extracted were used the following measurement:

1. This systematic literature review only included research articles and must be original paper.
2. Articles were extracted by considering impact of political instability on the tourism industry.
3. These original papers must be written in English language and it should be based on from the field of social science and business and economics towards tourism and hotel management.
4. All extracted articles were published between from January 1 2013- December 31 2023.
5. The extracted papers were from developing countries specifically in Ethiopia
6. The extracted papers were open access for full text.

4. Results and Interpretation

Systematic reviews hold a crucial position in the realm of academic and scientific research, serving as a cornerstone for evidence-based decision-making. These comprehensive studies synthesize the available literature on a specific topic, providing a rigorous and unbiased evaluation of the evidence. Researchers often rely on these studies to stay up-to-date with the latest findings and to guide their own work (Moher et al., 2009). Furthermore, the significance of systematic reviews extends beyond the academic sphere, as they play a pivotal role in shaping the trajectory of scientific inquiry.

Therefore, In this systematic literature review, a total of 2411 article citations were identified from the electronic search (EBSCO, Google scholar and Scopus databases), among that 221 citations were duplicated; 9 articles were written in non-English language; 915 articles were irrelevant and unrelated of the topics; 509 articles were studied in developed countries; 713 papers were excluded which included Books, book reviews, proceedings, research notes, personal notes & reports, conference papers, annual reports, news articles, and book chapters; 7 articles were omitted because of the publication status; 5 articles were not studied in Ethiopia, but studied in Africa, in others developing countries (Ukraine, Jordan, Iran, etc), 4 articles were studied without considering the negative impact of political instability and 9 articles were studied scope out of the tourism and hotel industry, and the remaining eight articles were not full access the whole text. Thus, 11 articles were selected for this systematic literature review (SLR) based on PRISMA framework (Fig-1).

The review demonstrated that political instability affected the tourism industry in Ethiopia different destinations. This offers summarized evidences on the impacts related with publication trend over the year, distribution of articles by citation, and number of articles in country.

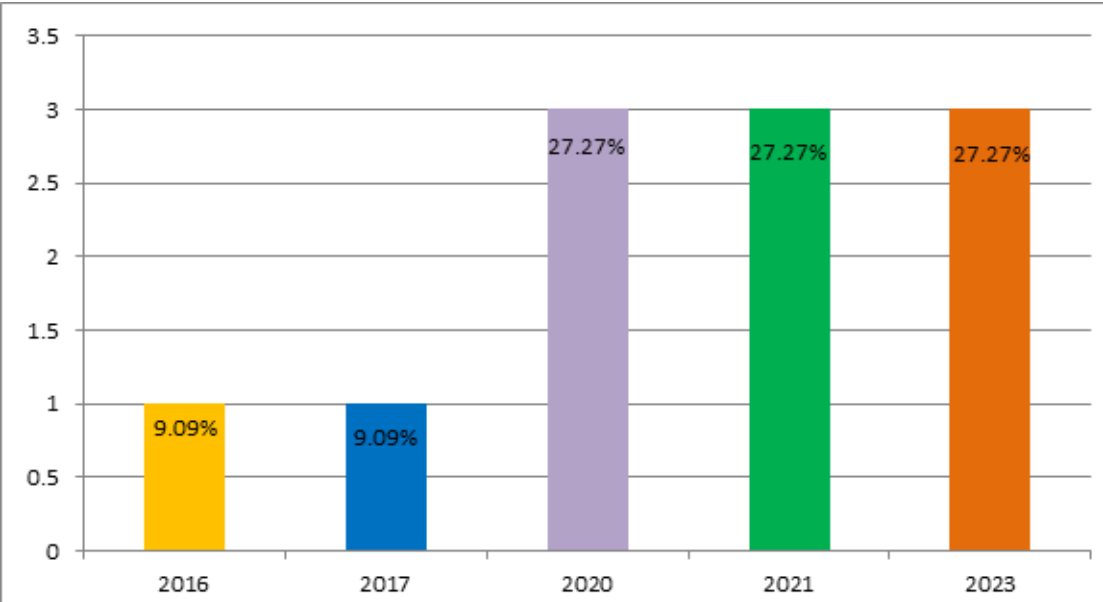
A. Publication trend over the year

As far as the number of publications per year is concerned, 2023, 2021 and 2020 years equal percentage and the highest number of articles published that is equal to 27.27%, but 2017 year 9.09% and 2016 year 9.09% published similar and the smallest numbers of articles than to the other years respectively, and as the table 1 shows, the first three papers were published in 2016, and 2017 in Journal of Korean Social Science Journal at Springer, and Journal of Exclusive Management Science respectively. Over the 2020 year the number of publications fluctuated, reaching a peak from 2020-2023 with a total of 9 articles that could be peer reviewed journals were encouraged in the same years might contribute to the growth of research publications in the subsequent years, Northern Ethiopia conflicts and also Russia and Ukraine war as well.

Hence, it indicated political instability, conflict and terrorism related research increased markedly after the attacks of Sept. 11, 2001 (9/11) (Phillips, 2021). And then the movement of people restricted to travel for business and vacation to different destinations. These eleven articles also published in different journals these are Anatolia an International Journal of Tourism and Hospitality Research; Journal of St. Mary's University Ethiopia Institutional Repository; Journal of heritage tourism at Taylor and Fransis; Korean Social Science Journal at Springer; Theseus; Max Planck Society (MPG) - pure.mpg.de; Journal of Emerging Technologies and Innovative Research (JETIR); Journal of Exclusive Management Science; Journal of Ethiopian Studies; and MDPI-Agriculture. Therefore, recently Taylor and Francis and, Springer based Journals of Tourism, Travel, Heritage, Leisure and Events are major outlets of

political instability on tourism research outputs so far (see table-1).

Fig-2. Publication number in year

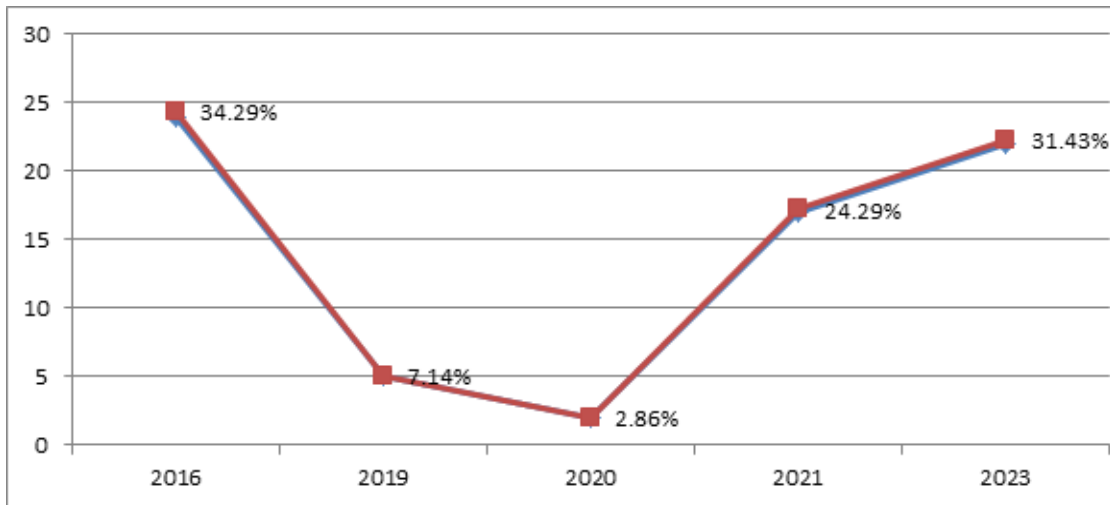


B. Distribution of Articles in Citation

Research publication of political instability effects on tourism is appreciated and mentioned by other researchers in their research articles. The most cited paper of political instability effects on tourism is “Pitfalls of tourism development in Ethiopia: the case of Bahir Dar town and its surroundings” authored by Birtukan Atinkut Asmare (2016). The citation of this paper has reached to 24 till August-4, 2024 and Chiriko (2021) article entitled “Political violence and hotels: economic consequences and response strategies” is second most cited article and has reached to 6 citations until August-4 2024. These two articles were published in 2016 and 2021 respectively. Third most cited article is Ahmed and Oumer (2023) article entitled “The impacts of armed conflicts on the heritage tourism of Dessie and its environs, Northern Ethiopia”. Table 5 demonstrates the most cited articles on public value.

By the 2016 one publication citations numbers increased, which is 24 (see fig-2) based on emerging years, as a result of the current study covers interesting trends (see Fig-3). Those researchers more focused on impacts of political instability on tourism and related issues (job insecurity).

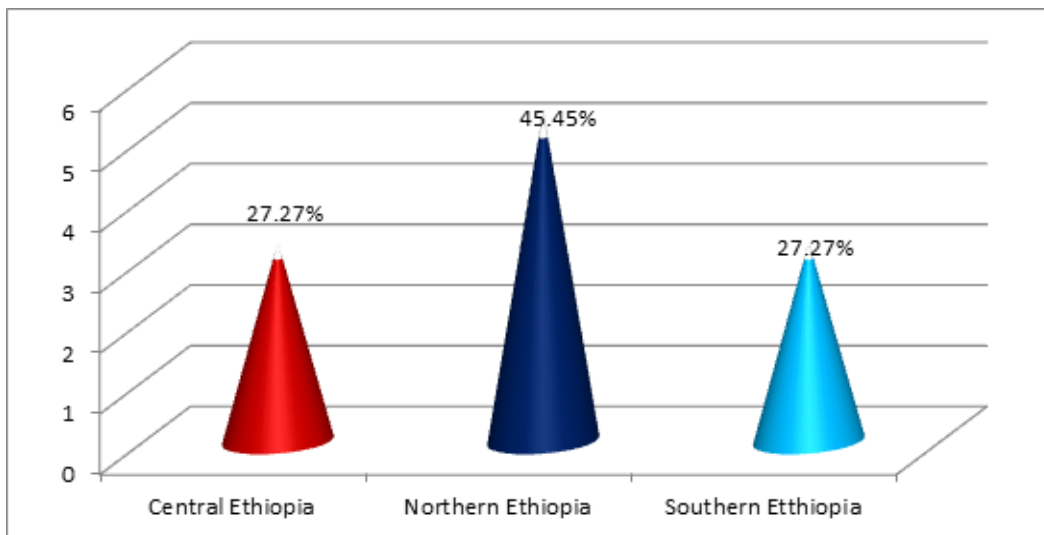
Fig.3: Distribution of articles by Citation



C. Distribution of Articles by Ethiopian Regions

Fig 4 presents leading political instability on tourism research themes that frequently emerge across Ethiopian regions and their region classification in geographical position. Political instability effects on tourism research in terms of different regions: In central Ethiopia three articles were published that focus on Addis Ababa and two articles were published focus on Bahir Dar, which are the same study areas to compare others. But, others Northern and Southern Ethiopia areas six papers were published in six different areas, in Northern Ethiopia includes Bahir Dar, Gondar, Lalibela and Dessie, and Southern Ethiopia includes Borena, Hamar and Yabelo study areas (see Fig 4) that including Ethiopia political instability towards tourism.

Fig-4, Distribution of journal by region



In General, It is revealed from fig.4 that most of the articles belong to Addis Ababa who does work on politics and tourism issues. Their article authors profile shows that collaborative work of Ethiopian authors with the researchers of other regions.

5. Discussion

Ethiopia's tourism industry has passed through a number of inter-related challenges, such as political instability, drought and famine, a command economy, restriction of movement, and nationalization of private investments. For tourism to return to previous levels after the fall of the military regime, it took more than a decade and was so slow (Asmare, 2016). The number of tourist arrivals in Amhara region was relatively higher than the national rate during the Ethio-Eritrean war of 1998–2000, because tourist destinations were somehow distant from the war zone and relatively safe (Ahmed & Oumer, 2023; Asmare, 2016).

Majority of the studies, were discussed noted that tourism helps to solve the problems of youth employment and education, economic consequences on hotel operating, sustainable rangeland management, contribute positively to leisure expenditure and tourist arrivals, GDP, and reconciliation mechanism for diversified nation (Akamavi et al., 2023; Chiriko, 2021; Fenetahun et al., 2021; Geremew, 2020). However, effects of the war and unrest on the local communities, archaeological places, heritage sites, and environment of the areas are immense; historical churches and mosques were damaged, vandalized and looted; traditional practices clash with modern development projects; and civil disobedience, civil unrest, state of emergency and war all affect the tourism sector negatively (Beldados et al., 2023; Ejigu, 2020; Gebremeskel, 2023).

The negative impacts of political instability, religious and ethnic conflicts on tourism are obvious. Analysis of the tourism sector in Ethiopia shows that international tourism, being a driving force of economic development, is not a neutral factor in gender, religious and ethnic dynamics. Suchkova (2021) shows that the rapid growth of tourism-related industries, which is accompanied by an unequal distribution of its benefits between the state, business, local communities and religious organizations, can slow down the resolution of gender equality problems, escalate intercommunal and interreligious conflicts.

However, the analysis of travel companies' business practices illustrates that the transition to a sustainable tourism model can contribute to the elimination of interethnic and interreligious conflicts. Formation of professional tourism communities aware of their social responsibility will help the hospitality industry together with the state to solve the problems of youth employment and education, gender inequality and security in general. Thus, a tourism destination must be safe and secure for it to sell and provide more tourism products, as well as market it confidently (Alene, 2017).

Besides, some studies incorporated in their findings that political instability, conflict (internal and external conflict), terrorism, and tourism industry have significant relationships and considered as the major theme (Alene, 2017; Beldados et al., 2023; Ejigu, 2020; Gebremeskel, 2023). The findings confirm previous research results that political instability leads to negative impacts on the tourism industry of a country decreased revenues, plummeting numbers of tourists and overnights, weaken tourism activity and increased costs. Political instability is linked with the likelihood of having demonstrations, strikes and various forms of violence, crimes (CR), coups, regime reversals and government collapse.

Consequently, political instability and conflicts often result in negative perceptions and safety concerns among tourists. Political instability effect on tourism economic development was the main theme shared across most studied and it includes loss of job opportunity, decrease labor wage, limited foreign exchange

and minimize multiplier effects on tourist destinations (Akamavi et al., 2023; Chiriko, 2021) and, safety of tourists having a positive and significant influence on the tourism market (Bogale, 2020).

6. Conclusion

A systematic literature review (SLR) is a good literature review method for synthesizing and identifying research on specific questions in the literature. Tourism is a crucial source for cultural exchange and for local economic benefit in Ethiopia. Since then, however, political unrest has caused the tourism revenues to hit rock bottom, whether it is local or foreign tourists visiting and harming the local economy and increasing unemployment.

In order to solve these challenges, the government has to develop a strategy which is developed based on a political instability impacts the tourism sector. The root causes of instability should be addressed in the long term solutions, and the economy should be diversified so that it reduces the risk of another rather bad regime or currency depreciating. And law enforcement should be strengthened to restore confidence in the investments of investors and tourists.

The results from this study may help to inform attempting to understand the impacts of political turmoil on tourism. It gives an overview of key topics and references for future research and depicts the negative consequences Ethiopia experienced. This paper contributes to understandings of both the past and the present through a systematic study of publications of the past decade, and encourages further investigation of the relationships between political instability and tourism.

7. Limitations

Journals publishing research articles in other languages are excluded from this study because all of the selected journals publish research articles in English only. In addition, this study boundary are limited as it explores only up to eleven tourism related articles published over the period ranging between 2013 and 2023 and related to the political instability effect on a tourism research articles in Ethiopia. In this way, other more robust results could be produced if other political instability effects on tourism published research outcomes in non-English language or if the time periods were extended.

Additionally, other items, including books, book chapters, short communications, conference proceedings and annual reports, and news articles might have provided a better picture of the way political instability is this topic has been addressed across time. However, this study seeks to investigate how political instability has impacted tourism research since the past ten years by tabulating data provided in Ethiopian tourism articles from research articles published in Ethiopian tourism journals.

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Data availability statement

All data supporting the findings of this study are contained within the article and its supplementary materials (including appendices and referenced documents).

Ethics declarations

Review and/or approval by an ethics committee was not needed for this study because all the data come

from published journal articles.

Credit authorship contribution statement

Getachew Melesse: Writing-original draft, Visualization, Methodology, Investigation, Formal analysis and interpretation, Discussion, Conceptualization. Endalkachew Teshome: Writing-review & editing, Validation, Supervision. Busha Taa: Writing-review & editing, Validation, Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Review Registration:

This systematic review was prospectively registered in COS or OSF, the international database for systematic reviews. The registration number is osf.io/46ak5, and the review was registered on October 2, 2024.

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Examining the moderating effect of Strategic Human Resource Management in the relationship between Diversity Management and Employee Performance

By

Gete Hirbesa (PhD)¹; Worku Mekonnen (PhD)²

Abstract

Public organization consists of varying diverse work groups with differences in terms of demographic, socio-cognitive, organizations and ethics. Such differences call for unique style of management varying work groups. This study showed the long term consideration for managing diversity concern through strategic management view as a moderating variable. The intend of the study was to demonstrate the degree to which strategic human resource management moderates the relationship between diversity management (demographic, organizational, socio-cognitive, ethical) and employee performance, focusing on public organizations. Data were collected from 296 employees and human resource managers of the selected public organizations in Ethiopia using a structured questionnaire. A modified version of the research instrument was adopted from previous studies, divided into seven sections based on the variables included in the study. Data were analyzed using IBM SPSS AMOS. The results indicated that strategic human resource management moderates the relationship between organizational diversity and employee performance at high level, however; does not moderate the relationship between socio-cognitive diversity and employee performance as well as the relationship between ethical diversity and employee performance. From a theoretical contribution point of view, this study examines the moderating role of strategic human resource management in the relationship between workforce diversity management practices and employee performance in public organizations. The study also considers ethical diversity as an additional dimension of diversity. From a practical implication point of view, the consideration of workforce diversity for employee performance in the study area is crucial. This consideration helps organizations achieve their ultimate goals and serve the community at large.

Keywords: Diversity management, Employee Performance, Strategic Human Resource Management

¹ Research Scholar Civil Service University

² Associate Professor, Addis Ababa University, School of Commerce
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1. Introduction

The term "workforce diversity" describes the traits that set each person or employee apart, such as gender, race, ethnicity, religion, age, sexual orientation, physical capabilities, beliefs, and life experiences. (Gupta and Dike, 2013). Recognizing, comprehending, appreciating, and respecting individual diversity in terms of age, class, race, ethnicity, gender, disability, etc. is known as diversity management (Pantaleo, 2018). When organizations possess a diverse workforce, they can actively respond to the various problems that may occur in service delivery and effectively utilize resources (Saxena, 2014). Moreover, Saxena (2014) stated that individual differences for the pursuit of productivity and quality must be maintained, and the uniqueness of each individual must be recognized and respected by human resource managers.

Employees working with a diversified workforce can develop their skills and improve their knowledge since the organization may consider diversity issues in their strategy to raise organizational productivity and competitiveness (Qasim, 2017).

One of the theoretical methods used in strategic human resource management to attain organizational success is the resource-based view, which aims to increase organizational capacities and retain and improve individuals with high levels of competency related to organizational operations (Rivard, et al. 2006). This idea considers that managing diversity of the workforce leads to an increase in employee creativity and capability. Building on this notion, the relationship between workforce diversity and employee performance may be stronger or weaker since it is related to SHRM practices. SHRM views employees as vital assets for organizations; the executives are the strategists that connect human asset capabilities with the essential goals of the association for the execution of organizational strategies. Therefore, the goal of the current study is to examine how strategic human resource management influences the relationship between employee performance and diversity variables resulting from organizational, socio cognitive, ethical, and demographic aspects.

In many African countries, researchers have suggested that managing workforce diversity is a considerable issue for any organization (Akinnusi et al., 2017). While workforce diversity is the integration of different sources of ideas such as creativity, innovation, and dynamism to build a healthy work environment, organizations, whether private or public, are given less attention for managing workforce diversity. There is still a disparity in the participation of diverse work groups at various levels of decision-making processes, despite the fact that including employees from various backgrounds—including gender, age, and educational background—in the decision-making process without discrimination boosts productivity. Therefore, as Ebrahim (2018) suggests, more research is required.

The study conducted at Wolkite University by Amdemicheal and Abdilgelil (2018) on 'the Effect of Workforce Diversity on Employee Performance' shows that Ethio Telecom encourages employees to work with various genders, ages, ethnicities, educational backgrounds, work experiences, and marital statuses, and they called for future researchers to enrich the study by adding other variables and enhancing the scope of the study. Gidi, et al. (2024) considered workforce diversity dimensions such as climate, organizational justice, identity, schema, and communication to show its effect on work performance by considering leadership style as a moderator, and their findings showed that diversity has statistically significant effects on the academic performance of higher educational institutions in Ethiopia. The impact of an diversity workforce on organizational performance in the Ethiopian food and beverage industry was examined by (Mehari et al. 2024). In order to explain the connection between

organizational performance and workforce inclusivity, they looked at workplace ethics as a mediator. The study's conclusions demonstrated that shifts in workplace ethics had a greater impact on corporate performance than workforce inclusivity.

Research on "the efficiency and effectiveness of public service in Ethiopia" was carried out in 2010 by the Ethiopian Civil Service Bureau. The results of this study showed that public service productivity was low and that public organizations lacked management in the area of workforce inclusivity to increase staff productivity. Yadav and Lenka (2020) made a systematic literature based on highly reputable journals by taking 123 articles published in the area of diversity management between 1990 and 2016. Their study mainly focused on western countries and none of the articles considered strategic management as a moderating variable meaning the focus was not given the role of diversity management from long term view. Particularly no study examined the role of strategic human resource management in the relationship between diversity management concerns and employee performance, especially in Ethiopian public organizations, despite the fact that numerous studies have demonstrated the impact of workforce inclusivity on employee and organizational performance by taking into account various workforce diversity dimensions. The strategic significance of human resource management in diversity issues was not taken into account in the earlier studies. Thus, the current study's goal is to demonstrate how strategic HRM plays a part in the connection between diversity management and worker performance. The following research question is the focus of this study: Does strategic human resource management in public organizations have a moderating influence on the relationship between workforce diversity management and employee performance?

2. Literature Review

Demographic diversity and employee performance

Workforce diversity refers to individual differences in the workplace, including gender, age, ethnicity, and educational background (Robbins, 2015). Organizations that have a mix of people from different backgrounds tend to increase productivity (Ibid). Ebrahim (2018) explains that due to economic and social international development, diversity management has become a basic necessity, and organizations need to include it in their strategic management practices. Managing a diversified workforce is a significant challenge for any organization, as noted by various scholars. Each individual is unique due to factors such as religion, education, age, and perception. Most research in the area of diversity management focuses on how HR practices can maintain workforce diversity to enhance individual and organizational performance (Joarder, Sharif, & Yazam, 2011). HRM practices can be utilized to improve employee performance (Saleem and Khurshid, 2014).

Organizational diversity management practice and employee performance

According to earlier studies, managers are aware of how employee turnover rates affect organizational performance and how to manage the impact of employee turnover on managers' job satisfaction and organizational performance. Therefore, in order to increase productivity inside their firm, managers and leaders believe it is their responsibility to maximize the benefits of each member (Rasoava Rijamampianina, 2015).

Employees leave their jobs for a variety of reasons, some of which include inadequate training or feedback, work-related issues, a lack of trust, high levels of stress, less demanding work, low job satisfaction, a

bad working environment, pressure from family, low pay, a large team, and inadequate leadership and management skills (Walid Abdullah Al-Suraihi, et.al, 2021).

The authors briefly demonstrate how an organization must comprehend the demands of its workers in relation to their job position, status, tenure, and experience—all of which are pillars—and motivate them to fulfill their responsibilities. According to this management, employee success inside the company is correlated with the diversity of employees in line with organizational inclusivity. In addition, there are a number of strategies for keeping employees, including proper management systems, training, job involvement, job satisfaction, rewards and benefits, high job engagement, good management systems, and high employee participation. These strategies have been shown to improve the performance of both individuals and organizations, with the main goal of an effective human resource management system being to develop sustainable performance by fostering creativity, competence, motivation, and opportunities among employees (Walid Abdullah Al-Suraihi, et.al, 2021).

Additionally, the findings of other empirical research demonstrate that organizational structure affects worker performance, with a weak organizational structure resulting in low productivity, less job delegation, no incentives, and centralized decision-making. Additionally, a study by Tizitaye (2022) titled "Work environment and employee performance" indicated that the former positively affects the latter.

Similarly, the length of time an employee has worked, their level of job comprehension, and the amount of time they have finished their work are all evaluated by their work experience. Additionally, it significantly and favorably affects employee performance, or work experience can help to boost optimal performance (Yandra and Septa Diana, 2022). According to the ideas of two authors, a progressive organization must be able to improve staff productivity and effectiveness as well as be proficient with modern technology.

The major one of help for competition is the way to manage workforce that is realize their ultimate goal. That was interims of organizational diversity the management of employee job related activity is when properly managed both employee performance and organizational performance are increased at the sometime. Hence workforce diversity management is important indicators to achieve organizational goals effectively and efficiently explained by many scholars. The concept of research findings of Indriasari & Setyorini (2018) notice that recognizing employee competencies or capability makes building work guarantees.

Each organization is required to keep its employees in order to show a high performance and maintain diversity issues of their employees in order to commit themselves to the organization in the job related activity (Armstrong & Taylor 2014).

Finally, many empirical studies revealed that organizational diversity management practice affects employee performance at their work place. Hence the implication is low organizational diversity management practice results lead low efficiency and effectiveness. On the other side well establishing diverse work related employee scores the expected goal. Based on this concern the next hypothesis was developed.

Socio-cognitive diversity management practice and employee performance

The personal traits of the individual are cooperation, flexibility, motivation, action, behavior at work. Diverse labor force indicates a variety of personality types, so the managers apply the features which assist the organization. For instance, people who are driven by job happiness are anticipated to contribute more work-related efforts (latif, 2015). Furthermore, according to Bader Alyoubi et al. (2018), knowledge management methodologies and procedures as a new organizational practice enhance worker productivity. Therefore, SHRM practices like thorough socialization, peer mentoring, multisource feedback, performance coaching, sponsored continuing education, study leave, job shadowing, and job rotation programs are likely to be highly valued for their ability to help employees grow (Lauren and Peter, 2015).

Employee participation, flexibility, value orientation, strategy orientation, competency and knowledge orientation, stakeholder orientation, and the development of mutually trusting employee-employer relationships are all aspects of SHRM that organizations must take into account (Zaugg, 2001). In addition, human capital theory suggests that education is widely acknowledged to be a key factor in an organization's success or failure as well as the development of employees' energy at work.

Likewise, scholars' indicated that cognitive diversity is the inclusion of people who have different skill and knowledge for problem solving and a group that enhance satisfaction and group performance (Verduijn, 2010). From the author's notion cognitive diversity has significant effect on employee performance.

According to other researchers Sauer, Felsing, Franke, and Ruttinger (2006), the relationship between the team's performance level and cognitive inclusivity is extremely complex. According to this theory, a public organization's manager ought to be proactive in overseeing cognitive inclusion within their company. However, a number of researches have shown that improving employee performance in public organizations is the fundamental requirement of cognitive diversity management. Accordingly, the study by Reynolds et al. (2017) on "Teams solve problems faster when they are more cognitively diverse" shows that proactive management of cognitive diversity in the workplace is crucial for both employee performance and organizational culture.

Similarly, Research conducted on 'cognition and affect' by Fink and Yolles (2018) shows since cognitive diversity is employees having different thinking ability and different knowledge, come together, it's effective management of those social variety mind set encouraging creativity and innovation in the organization. Another research on the title 'Managing diversity and closing thought' also, point out that socio-cognitive diversity management is further HRM capacity hence it needs the cooperation of each stake holder's contribution in the organization (Pompper, 2014). Additionally, the findings of a study by Khanal and Santosh (2017) showed that employee performance and work satisfaction are significantly impacted by varied knowledge management practices.

Several scholars' notice that education is the cornerstone and point of reference for fostering a highly competent, adaptable, and having broad mind set employees (Viscal, 2011) and employee competency is determined by education that can learn from their environment and employee performance correlated from those evidence cognitive diversity management and employee performance have association.

Ethical diversity management and employee performance

According to literature, values express one's own or one's own standards of what is significant or worthwhile, whereas morals describe the goodness or badness, right or wrong, of deeds. A widely

recognized set of moral precepts is referred to as ethics. Most people hold firm beliefs about what is right and wrong. Numerous elements, such as politics, religion, family history, cultural roots, legislation, organizational principles, and personal experiences, all have an impact on these opinions.

While morality refers to the proper conduct of an individual, values are the internal judgments that determine an individual's actual behavior. When values are connected to ideas about what is right and wrong, ethics are involved (Sunanda, 2018). Therefore, in order to improve employee performance, employees practice have good behavior (Umar Abbas & Saharawi, 2020). Ethics can help to better understand cultures of work environment and it represents an entry point for each company (Chang, 2012).

The study conducted by Hamza, (2017) on the topic Ethical tools in the context of cultural diversity and globalization and exploratory nature study shows the first impulse and the development of the ethical tools followed top-down logic, from this leader towards the each employee. This study result showed that the substantial value of ethical diversity management on employee performance.

According to scholars, the word ethics comes from the Greek word "ethos," which signifies norm or character. Hubert et al. (2007) define ethics as the set of principles and standards that serve as a yardstick or reference point for evaluating the morality of personal behavior. It outlines what constitutes appropriate and inappropriate behavior (Fajana, 2006). However, Getachew and Mohan (2016) Ethics is beyond distinguishing right from wrong but also with the commitment to do work responsibility in the commands of moral value. Therefore, esthetical diversity managing is leading a set of rules regulation interims diverse employees to do their responsibilities or acceptable practices to realize each individual productivity in the organization or employee acting as moral and value accepted by the majority of the people of an organization, that helps employees more effective in their workplace (Getachew and Mohan, 2016).

The function of SHRM in the connection between employee performance and diversity management

In accordance with the SHRM planning process, management support motivates staff members based on their contributions. Designing and managing people, developing systems based on employment and workforce strategies, integrating HR operations and other policies into the formulation of business strategies, and appreciating people as special resources to obtain a competitive edge are all part of SHRM (Armstrong, 2009). Effective SHRM practices have a significant impact on employee performance (Jackson et al., 2014). Human resource managers and top management in organizations must have the knowledge and skills to manage workforce diversity to enhance employee performance. For example, hiring young employees with high qualifications and capabilities can increase the capacity of experienced employees in technology, leading to improved organizational productivity (Ayat, 2019).

Considering employees to be an organization's most important asset requires strategic human resource management. Well-managed diversity initiatives should encourage new ideas and innovations that enhance employee performance (Armstrong, 2009). Strategic human resource management can either strengthen or weaken the relationship between workforce diversity management and employee performance. Research conducted by Hudson (2014) and Akpakip (2017) on the Nigerian banking industry revealed a positive relationship between workforce diversity (gender, age, and educational background) and employee performance. A study conducted on saving and credit in Ethiopia by Assefa (2017) also showed a positive relationship between workforce diversity and employee work performance,

focusing mainly on demographic diversity. According to Yana (2020), workforce diversity management takes into account both visible and invisible diversity, including physical ability, age, gender, race, and ethnicity, as well as motivation, work experience, education, and capabilities.

In this study, the relationship between workforce diversity management and employee performance in public enterprises is examined via the lens of strategic human resource management. According to the report, obtaining a competitive edge and accomplishing organizational objectives depend on effective workforce diversity management techniques. For testing, the following hypothesis was developed:

H1: SHRM is a moderating variable in the relationship between workforce diversity management (demographic, organizational, socio-cognitive, and ethical) and employee performance.

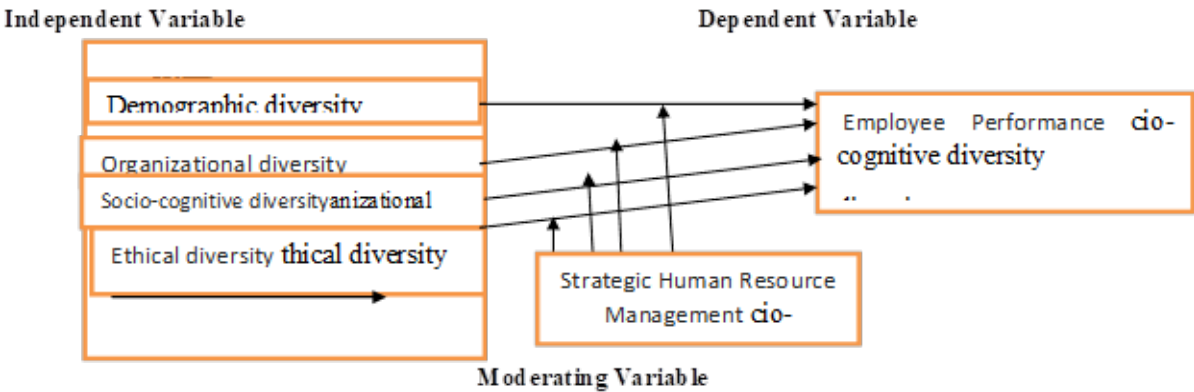
H1a: SHRM is a moderating variable in the interaction between Demographic diversity and employee performance.

H1b: SHRM is a moderating variable in the interaction between organizational diversity and employee performance.

H1c: SHRM is a moderating variable in the interaction between socio cognitive diversity and employee performance.

H1d: SHRM is a moderating variable in the interaction between ethical diversity and employee performance

Research model model



Source: Own model Developed by the researchers (2023)

3. Research Methodology

The researcher used a quantitative research approach to gather respondents' opinions on how to handle diversity concerns in order to meet the study's goal. As a result, quantitative methods and instruments that focus on measuring variables were employed, and the study's data gathering tool was a questionnaire. Consequently, the research employed a quantitative methodology and an explanatory design. The study was aimed at explaining the effect of workforce diversity management practice on employee performance with the moderating effect of SHRM practice in public organization using explanatory research design. The current study was cross-sectional research in term of time the data were collected once. Employee

Examining the moderating effect of Strategic Human Resource performance was the dependent variable, while the diversity management dimensions i.e—demographic, organizational, socio cognitive and ethical—were the independent variable. The strategic function of human resources was thought to be demonstrated by the moderating effect of strategic human resource management. According to Sekaran (2003) population refers to the entire group of people, events, or things that the researcher wishes to investigate. With the foundation of this fact this research mainly focuses on employees in the public organization. This study purposively selected five selected public sector bureaus in Oromia namely Agriculture Bureau, Education Bureau, Women and Children Bureau and Health bureau. The respondents were, directors, team leaders, employees of different departments and human resource management of the selected sector in Oromia Regional State. Those five selected sectors have 1111 total staff members' (Sector HR report, 2023).

Methods of Data Analysis

A structural equation model (SEM) using SPSS IBM AMOS was used in the investigation. Various sources primarily describe the reasoning behind this decision; SEMs allow for the graphic modeling of structural relations, which facilitates a clear comprehension of the theory being studied. As recommended by Asoka (2015), an overall test model of fit and individual parameter estimate tests were carried out concurrently to evaluate the SEM programs. Additionally, convergent validity and composite reliability were achieved from the AMOS output results. Additionally, the results of the KMO and Bartlett's tests guaranteed that the measure of sample adequacy values and the returned data of this study had a significance value of $P < 0.005$.

4. Results and Discussion

Response Rate

The primary data was collected from the human resources manager and employees of the selected public organization at the Oromia regional state of Ethiopia. The sample size of the respondents was 296 in total, with 240 questionnaires completed and returned. This formed a response rate of 81.1%. According to Kothari (2007), a response rate of 70% or above is considered good for analysis. Therefore, the returned data from this research was deemed adequate for analysis. Additionally, as indicated in the table below, the KMO and Bartlett's test were performed to display sample adequacy values.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.791
Bartlett's Test of Sphericity	Approx. Chi-Square	10971.442
	Df	2850
	Sig.	0.000

Source: Survey data (2023)

According to the preceding table, 0.791 is the Kaiser-Meyer-Olkin (KMO) value. Backhaus, Erichson, Plinke, and Weiber (2006) state that sampling adequacy values between 0.70 and 0.79 are deemed sufficient. The study's data yielded a significance value of 0.000, meaning it was suitable for analysis. As a result, the study's p-value for Bartlett's sphericity test is less than 0.05, indicating that the data returned is appropriate for analysis.

Structural Model Fit

The measurement variables were initially evaluated by looking at their factor loading, which revealed acceptable values, in order to build the study's legitimate factor structure. The workforce's diversity dimensions (demographic, organizational, socio cognitive, and ethical diversity - independent variables), strategic HRM practices (moderating variable), and employee performance (dependent variable) were then tested for model fit using AMOS. According to the research investigation, the suggested six-factor model fit it with a chi-square of 2.242, df = 115, GFI = 0.881, RMR = 0.57, and RMSEA = 0.072. To be deemed acceptable, the RMSEA must be less than 0.08 and the GFI must be near 0.90 (Hair et al., 2010). The AMOS output of the Structural Model Fit estimation is displayed in the picture below.

Table 2: Structural Model Fit Estimation

Indices	Recommended Value	Model Fit Indices
CMIB/Df	<3	2.242
P- value	> or = 0.05	0.000
GFI	> or = 0.90	1.000
AGFI	> or = 0.80	0.889
NFI	> or =0.90	0.91
CFI	> or = 0.90	0.90
RMR	< or = 0.05	0.058
RMSEA	< or = 0.08	0.072
P Close	> or = 0.05	0.000

Source: Survey Data (2023)

CMIN/Df, P-value, Goodness of Fit (GFI), Adjusted Goodness of Fit (AGFI), Comparative Fit Index (CFI), Root Mean Square of Approximation (RMSEA), p-close, and model fit of the research construct are among the metrics that show how fit the structural model is. The summary findings demonstrate that the model's fitness is shown by the acceptable values of the fundamental model indices, including the P-value, GFI, AGFI, NFI, CFI, RMR, and RMSEA..

Structural Equation Model

Employee performance (EP), strategic human resource management (SHRM) moderating variables, and workforce dimensions were all measured in order to develop the model. Moderation1, Moderation2, Moderation3, and Moderation4 are the names of the corresponding interactions: ZDd*ZSHR, ZO d*SHRM, ZSoco*SHRM, and ZETd*SHRM. In this study, moderation analysis was conducted using the product-indicator technique, as defined by Chin, Marcolin, and Newsted (2003). The research model mentioned above served as the foundation for the construction of the structural model, and the outcomes are shown below.

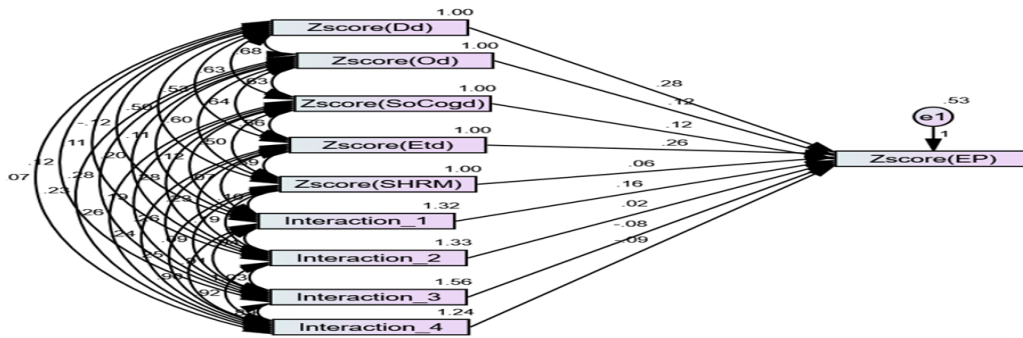


Figure results of Stractural Model (from survey data 2023)

Table 3: Regression Weights

Regression Weights: (Group number 1 - Default model)					
Dependent Variable	Independent Variable	Estimate	S.E.	C.R.	P
ZEP	<--- ZOd	0.116	0.079	1.475	0.14
ZEP	<--- ZSoCogd	0.124	0.069	1.789	0.074
ZEP	<--- ZEtd	0.265	0.068	3.868	***
ZEP	<--- ZSHRM	0.06	0.065	0.914	0.361
ZEP	<--- Interaction_1	0.159	0.068	2.326	0.02
ZEP	<--- Interaction_2	0.018	0.072	0.255	0.799
ZEP	<--- Interaction_3	-0.084	0.06	-1.396	0.163
ZEP	<--- ZDd	0.278	0.073	3.8	***
ZEP	<--- Interaction_4	-0.089	0.069	-1.28	0.201

Source: Survey Data (2023)

As demonstrated above, there is a less than 0.002 chance of achieving a critical ratio with an absolute value of 2.36. Stated differently, at the 0.001 level (two-tailed), the regression weight for standardized demographic diversity in predicting standardized employee performance differs significantly from zero. At the two-tailed 0.05 level, the regression weight for standardized SHRM in predicting standardized employee performance does not differ substantially from zero. There is a 0.020 chance of achieving a critical ratio with an absolute value of 2.326. To put it another way, at the 0.05 level (two-tailed), the regression weight for Interaction_1 in predicting standardized employee performance differs significantly from zero. This suggests a strong and favorable correlation between employee performance and demographic inclusivity. There is a moderating variable between the independent and dependent variables if the interactions between the independent variables and a moderating variable are substantial,

claim Baron & Kenny (1986). Demographic diversity with the moderating variable (Interaction_1) also has a positive and substantial value, as indicated by the regression weights above. Thus, the relationship between employee performance and demographic diversity management is moderated by strategic human resource management.

In other words, the regression weight for standardized organizational diversity in predicting standardized employee performance is not substantially different from zero at the 0.05 level (two-tailed); the likelihood of attaining a crucial ratio as large as 1.475 in absolute value is 0.140. At the two-tailed 0.05 level, the regression weight for standardized SHRM in predicting standardized employee performance does not differ substantially from zero. In other words, the regression weight for Interaction_2 in predicting standardized employee performance is not substantially different from zero at the 0.05 level (two-tailed); the probability of attaining a crucial ratio as large as 0.255 in absolute value is 0.799. This implies that when it comes to employee performance and organizational inclusivity, SHRM has no moderating influence.

In other words, the regression weight for standardized socio-cognitive diversity in predicting standardized employee performance is not substantially different from zero at the 0.05 level (two-tailed); the likelihood of achieving a crucial ratio as large as 1.789 in absolute value is 0.074. At the two-tailed 0.05 level, the regression weight for standardized SHRM in predicting standardized employee performance does not differ substantially from zero. There is a 0.163 chance of achieving a critical ratio as large as -1.396 in absolute value. Furthermore, there is a less than 0.001 chance of achieving a critical ratio as high as 3.868 in absolute value. This indicates that, at the 0.001 level (two-tailed), the regression weight for standardized ethical diversity in predicting standardized employee performance differs significantly from zero. To put it another way, the probability of reaching a critical ratio as high as 1.789 in absolute value is 0.074; the regression weight for standardized socio-cognitive diversity in predicting standardized employee performance is not significantly different from zero at the 0.05 level (two-tailed). The regression weight for standardized SHRM in predicting standardized employee performance is not significantly different from zero at the two-tailed 0.05 level. The probability of reaching a critical ratio as high as -1.396 in absolute value is 0.163. Additionally, the probability of reaching a critical ratio as high as 3.868 in absolute value is less than 0.001. This shows that the regression weight for standardized ethical diversity in predicting standardized employee performance deviates considerably from zero at the 0.001 level (two-tailed). The probability of obtaining a critical ratio as large as 0.914 in absolute value is 0.361, indicating that the regression weight for standardized SHRM in predicting standardized employee performance is not significantly different from zero at the 0.05 level (two-tailed). This research hypothesis, which stated that SHRM has a moderating effect in the relationship between WFDM, namely, demographic diversity, organizational diversity, socio-cognitive diversity, and ethical diversity, and EP in dimensions, was tested as shown in the table below.

Table 4: Results of Hypotheses Tested

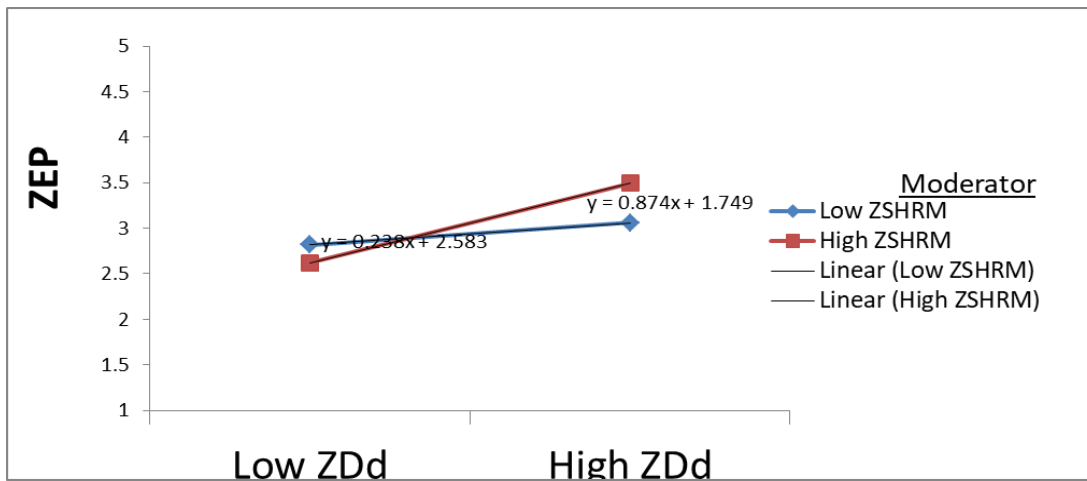
Hypothesis	Interaction of ID with Moderating Variables	Estimate(Beta)	S.E	C.R	P-value	Remarks
H1	ZDd*ZSHRM-> ZEP	0.159	0.068	2.326	0.02	Supported
H1	ZOd*ZSHRM-> ZEP	0.018	0.072	0.255	0.799	not Supported
H1		0.084	0.06	-1.396	0.163	not Supported
H1	ZEtd*ZSHRM-> ZEP	0.089	0.069	-1.28	0.201	not Supported

Source: Survey Data (2023)

ZDd stands for standardized demographic diversity, as a hint. ZEP stands for standardized employee performance; ZSHRM for standardized strategic human resource management; ZOd for standardized organizational diversity; ZSoCog for standardized socio-cognitive diversity; and ZEtd for standardized ethical inclusion.

The discussions on the results in the form of a simple slop analysis graph are depicted in the succeeding graphs.

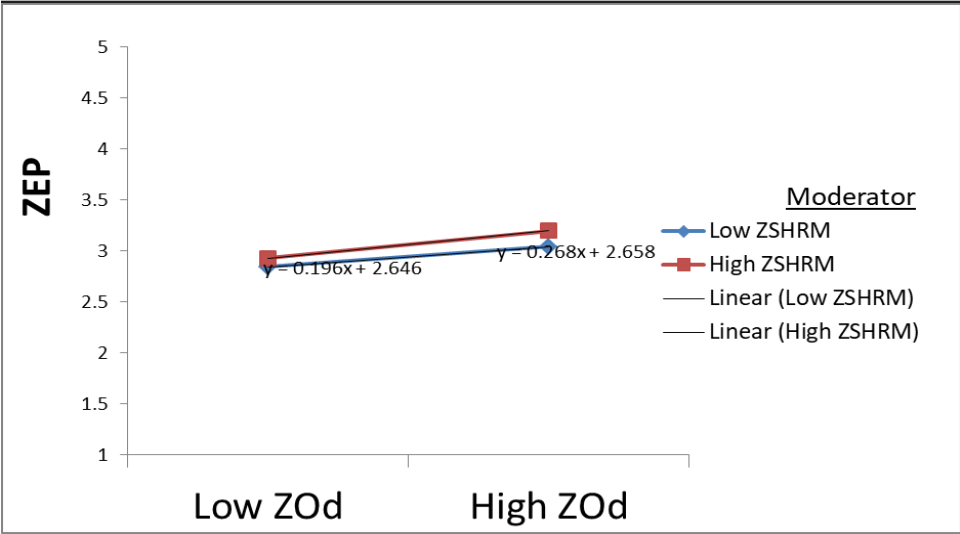
Interaction plots of Standardized demographic diversity and SHRM



ZSHRM strengthens the positive relationship between ZDd and ZEP.

The moderating variable in relation to demographic diversity management and employee performance was found to be significant, while the other three variables were not. Therefore, SHRM is not a moderating variable between them. The statistical analysis's findings indicate that SHRM has a minor impact on the correlation between employee performance and demographics. It does not, however, act as a moderating factor between employee performance and the other independent factors.

Interaction plots of Standardized organizational diversity and SHRM

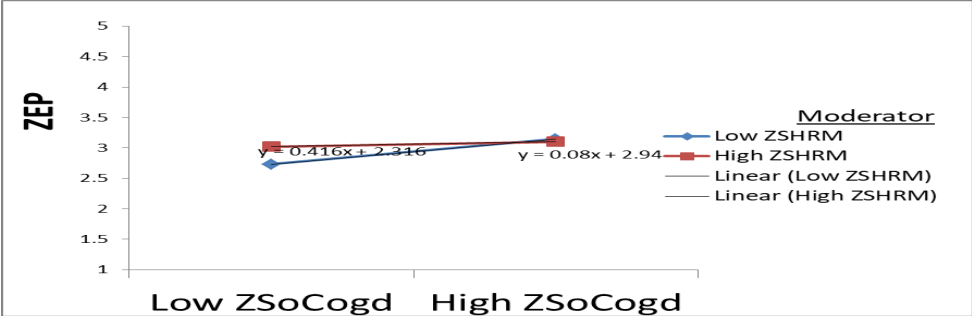


ZSHRM strengthens the positive relationship between ZOd and ZEP.

Source: Survey Data (2023)

The study looks at how Strategic Human Resource Management (SHRM) influences Employee Performance (EP) and Organizational Diversity (OD). The results revealed that there was no significant moderating impact of SHRM in relation to OD and EP (estimated = 0.018, S.E. = 0.072, C.R. and P-value= 0.799), which is > 0.05 and does not support alternative hypotheses or H1. From the results of the simple slope analysis, SHRM strengthens the relationship between OD and EP, meaning that as SHRM increases, the effect of organizational diversity on employee performance also increases.

Interaction plots of Standardized Socio-cognitive diversity and SHRM



ZSHRM dampens the positive relationship between ZSoCogd and ZEP.

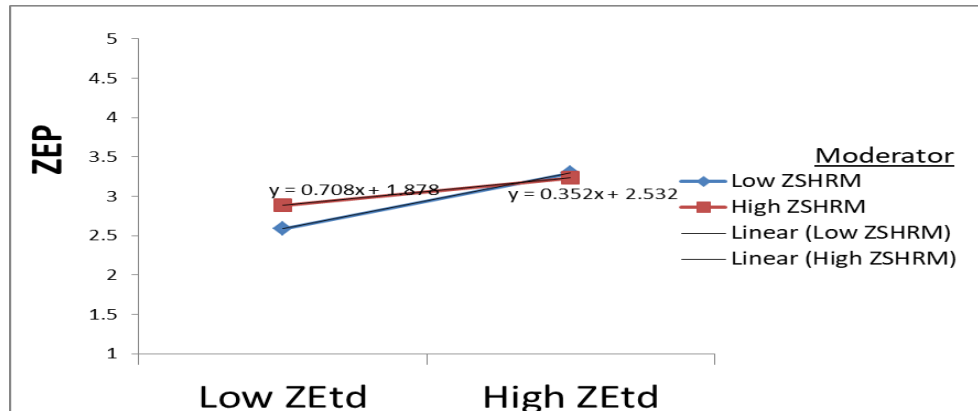
Source: Survey Data (2023)

The study looks at how employee performance (EP) and socio-cognitive diversity (CD) are influenced by strategic human resource management (SHRM). The findings showed that the connection between CD and EP was not significantly moderated by SHRM (beta = -0.084, S.E. = 0.06, C.R. = -1.396, with a P-value of 0.163). P > 0.05 meant that H1 was not supported.

The plot graph's findings show that moderated ZSHRM reduces the relationship between employee performance and socio cognitive diversity. This suggests that with low SHRM, the effects of socio-

Examining the moderating effect of Strategic Human Resource cognitive diversity on employee performance are more pronounced. ZSHRM enhances the impact of socio-cognitive diversity on employee performance by reducing beta. The moderating effect of SHRM has a negative impact on the relationship between socio-cognitive diversity and employee performance, with a beta value of -0.084 and a CR of 1.396. This suggests that proper WFD increases employee performance, while effective WFD management decreases employee performance.

Interaction plots of Standardized Ethical diversity and SHRM



ZSHRM dampens the positive relationship between ZETd and ZEP.

Source: Survey Data (2023)

The study evaluates how strategic human resource management (SHRM) influences the relationship between employee performance (EP) and ethical inclusivity. The result revealed that there was no significant moderating impact of SHRM in relation to ethical diversity on employee performance. Estimate = -0.089, S.E. = 0.069, C.R. = -1.285, and P-value = 0.2, not supporting H1.

The results of simple slop analysis show that the moderated ZSHRM dampens the relation between ethical diversity and employee performance, which means that with a low ZSHRM, there are more effects of ethical diversity on employee performance. And ZSHRM increases the effect of ethical diversity on employee performance by decreasing the range. The moderating effect of ZSHRM negatively affects the relation between ethical diversity and employee performance, as earlier demonstrated by the regression weight, with its beta value of -0.89 and its critical ratio of

This means low SHRM in the organization, leading to high ethical diversity. And high SHRM decreases the effect of ethical diversity on employee performance.

5. Conclusions

This study looked at the relationship between employee performance in public enterprises and workforce diversity management strategies, as well as the moderating effect of strategic human resource management. The study took into account diversity aspects like organizational, cognitive, ethical, and demographic inclusivity. The study found that the association between employee performance and demographic diversity management practices is strongly moderated by strategic human resource management. However, according to the study's findings, the relationship between employee performance and organizational, cognitive, and ethical inclusivity was not moderately impacted by strategic human resource management.

The structural model was built according to the research mode, and then SEM result showed that all independent variables except demographic diversity's interaction, that is, the multiplication of demographic diversity with strategic human resource management, has a positive and significant value. Strategic human resource management (SHRM) is moderating the relationship between demographic diversity and employee performance. It was indicated that SHRM strengthened or weakened the relationship between demographic diversity management and employee performance. The results of a simple slop analysis were conducted to better understand the nature of the moderating effects. The line ZSHRM strengthens the positive relationship between ZDd and ZEP. This shows that as ZSHRM increases, the effect of demographic diversity on employee performance also increases. This well-managed WFD has a positive effect on employee productivity. From the results, SHRM had the power to increase the relationship between demographic diversity and employee performance in the study area. Hence, SHRM is determining the practice of implementing WFD and employee performance. On the other hand, OD, CD, and ethical diversity in relation to employee performance SHRM are not a moderating variable. On simple slop analysis, ZSHRM strengthens the positive relationship between ZOd and ZEP, while ZSHRM dampens the positive relationship between socio-cognitive diversity and ZEP. And ZSHRM dampens the positive relationship between ethical diversity and ZEP. Dampens refers to low SHRM; there are more effects of socio-cognitive diversity on employee performance. And ZSHRM increases the effect of socio-cognitive diversity on employee performance by decreasing the beta value. From these results, SHRM is either a moderation variable or not, and in some elements of the workforce diversity of this study, it is influential in relation between the two variables in the Oromia public organization.

Suggestions

From the findings of the study, consideration of workforce diversity for employee productivity in this study area is important because it helps the organization achieve their ultimate goal, and the community serves at large. Hence, it needs government support, a strong management style, as well as authentic appropriate management of workforce diversity band having strategic human resource manager for the long run to enhance employee productivity to ensure, quality service for their customer, to be effective and efficient. The existence of an organization would be genuine and visible to its customers when workforce diversity management is thought to be producing better outcomes for workers. By examining additional public and private firms in several Ethiopian regional states, the study urges future research to demonstrate the significance of strategic human resource management in the relationship between diversity management and employee performance.

Limitations and Future Study Directions

The study is based on respondents' impressions and is cross-sectional in nature. A longitudinal study is advised in order to investigate the function of strategic human resource management in the connection between diversity management and worker performance. Future studies ought to take into account a wider variety of public and private organizations in various national situations.

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Validating Scale Items for Measuring the Determinants of Tourists' Loyalty in Heritage Destinations of Gondar City, Ethiopia

By

Alubel Workie¹; Busha Taa (PhD)²; Yechale Mehret (PhD)³

Abstract

Regardless of the existence of abundance tourism literature about determinant factors influencing tourism destination loyalty, the validation of measurement scales particularly for such determinant factors of tourists' loyalty to heritage destinations in the contexts of Gondar City remained untapped. Therefore, the main purpose of this study is to validate scale items for measuring the determinant factors that influence tourists' loyalty to heritage destinations in the case of Gondar City. Crafted from a dissertation study, an exploratory sequential mixed methods design was employed. The study collected qualitative data from an extensive literature review, refined it using the Delphi method, and then quantitative data was collected through structured questionnaires from tourists who visited Gondar City's heritage destinations from August to October 2024. Qualitative data was analyzed descriptively, and followed by a quantitative analysis using SPSS. The study described 9 sociodemographic variables and validated 55 out of 90 scale items to measure tourist motivation (7 items), destination image (5 items), perceived value (5 items), perceived risk (10 items), tourist satisfaction (7 items), memorable tourism experiences (11 items), and tourists' loyalty to heritage destinations (10 items) as determinant factors of tourists' loyalty to heritage destinations in the realm of Gondar City. Validating such measurements can assist heritage destination managers and stakeholders in devising strategies to incite revisit intentions and positive word-of-mouth recommendation intentions. Finally, the findings can contribute valuable insights into tourism literature of motivation, destination image, perceived value, perceived risk, satisfaction, memorable experiences, and destination loyalty in theoretical, practical, and methodological perspectives.

Keywords: Scale Validation; Motivation; Destination Image; Perceived Value; Perceived Risk, Experience, Satisfaction; Loyalty; Heritage; Gondar City

¹ PhD candidate, Department of Tourism and Hotel Management, College of Business & Economics, University of Gondar

² Professor, Department of Sociology, College of Social Sciences and Humanities, University of Gondar

³ Associate Professor, Department of Tourism and Hotel Management, College of Business and Economics, University of Gondar

I. Introduction

Validating a measurement scale involves the process of ensuring the questions accurately capture the concept of tourist destination loyalty, typically done through a combination of extensive literature review, panel of experts, pre-test, and pilot study. Because construct validation is a necessary condition for theory testing and development of quality measures in social sciences (Steenkamp & van Trijp, 1991). Accordingly, the study explored factors influencing tourist loyalty to heritage destinations, including motivation, destination image, perceived value, perceived risk, satisfaction, and memorable experiences, and validates measurement scales for these factors.

Tourist destination loyalty is often used as an indicator of success (Sun et al., 2013; Yoon & Uysal, 2005), as retaining existing customers is cheaper than attracting new ones (Chi & Qu, 2008; Oppermann, 2000). Loyalty plays an essential role in maintaining the competitiveness of tourism destination market (Wang & Li, 2023) and is also essential for the destination due to being one of the strong determinants of customer retention and profitability of tourism businesses (Li & Cai, 2012). Establishing a destination's superiority over the rivals has become important for gaining a competitive edge in luring and retaining tourists, as it fosters destination loyalty (Sánchez-Sánchez et al., 2021), which has a central role in ensuring sustainability (Zhang et al., 2014).

Ahmad et al. (2020) integrated the personal values of Schwartz (1992) and the theory of planned behaviour (TPB) to examine tourist visiting intentions and recommendation intentions. Applying affective theory of social exchange, social identity, stimulus-organism-response (SOR), tourism consumption system and attachment theories, Akhshik et al. (2023) developed configurationally model that predicts antecedents of visitors' pro-environmental behavioural intention to revisit and recommend. Sthapit, Bjork, et al. (2023) also verified the relations between a memorable volunteer tourism experience (MVTE) model, psychological resilience and behavioural intention. Akhshik et al. (2023) used Fuzzy-set qualitative comparative analysis to evaluate the impact of memorable tourism experiences (MTEs), place attachment, and demographics on tourist intentions.

Terasaki et al. (2023) validated the causal path connecting MTE to the revisit intention is driven by satisfaction, revised macro country image, and consumer affinity. Multiple attributes combine to create MTEs (Stone et al., 2018) and the essence of MTEs be contingent on the ability to affect behavioural intentions (Seyfi et al., 2020). Experiences and satisfaction with a destination are among the major determinants of tourist revisit intention (Choo & Petrick, 2014). So, determining the degree of loyalty among participants and what contributes towards tourist destination loyalty is of paramount importance in planning sustainable tourism destination (Kamath et al., 2023).

Based on the extended SOR theory, Huang & Bu (2022) constructed a model of destination attributes (gastronomy, accommodation, physiography, and rural lifestyle) of MTEs on tourists recommend and revisit intention in Chinese rural tourism. Similarly, Nazir et al. (2022) examined how international tourists' destination image of Pakistan influences their behavioural intention and travel experience. Tourism destinations with positive experiences are more likely to gain positive perception, revisit intention, recommend others, and share positive word-of-mouth (T. H. Lee, 2009; Zhang et al., 2014). Because tourism destination image has significant impact on both travel experience and behavioural intention (Nazir et al., 2022).

Additionally, Seyfi et al.'s (2020) memorable cultural tourism experience (MCTE) model highlights six

key factors influencing cultural tourist experiences: perceived significance, authenticity, engagement, cultural exchange, culinary attraction, and service quality. Likewise, tourists motivation determines the destination image before, during, and after a visit (San Martín & Rodríguez del Bosque, 2008). Tourist motivation is theorized as the dynamic process of internal psychological factors that generate a state of tension or disequilibrium within individuals (Crompton & McKay, 1997), and it is one of the basic concepts of human behaviour (Bayih & Singh, 2020). Tourist motivation is the sum of biological and sociocultural forces that energize and generate people's behaviour (S. Huang & Hsu, 2008).

Understanding the tourist motivation is basic to designing better heritage destinations because motivation is associated with satisfaction and essential to understanding tourist decision-making processes and predicting travel patterns (Özdemir & Çelebi, 2018). Motivation shall enable tourists to participate in rituals and customs, thereby fostering the likelihood of forging emotional solidarity with residents and fellow tourists, as emotional solidarity is contingent on motivations to visit (Capistrano & Weaver, 2018). Destinations that host religious sacred events, such as Gondar City's heritage destinations, offer tourists a chance to grow spiritually and give a glimpse into residents, culture, and hosting groups (Kamath et al., 2023). Hosting ethnically and culturally rich religious festivals also provides tourists with a glimpse into how a sense of intimacy and faith are not only gained but also reinforced over shared beliefs and rituals (Patwardhan et al., 2020).

Jiang et al. (2022) developed a model that integrates emotional solidarity (feeling welcomed, emotional closeness, and sympathetic understanding), with MTEs and destination loyalty. Memorable experiences can be driven by the internal motivations as perceived by individual rather than the services, which need to examine tourist behaviour based on their motivations in order to provide a better understanding of experience (J. Huang & Chu, 2020). Cajiao et al. (2023) identified two dimensions of memories that resulted in three distinct groups of tourists: snapshot group likely to recall specific trip components, reflective group likely to think and share about their experience, and reflective and transformative group likely to indicate that their experience impacted them personally. In the same vein, Elvekrok & Gulbrandsøy (2022) explored the relationship between the degree of sensory stimulation and positive memory in staged experiences through making a field study on how two museums used sensory tools in their experience design and showed that senses played an important role in experience evaluation.

Richards et al. (2020) developed a measurement scale for cultural experiences across different contexts in Hong Kong and found four dimensions of experiences (cognitive, conative, affective and novelty). Tourism experience is also a complex amalgamation of distinctly subjective components that shape emotions and attitudes (Chen et al., 2020). Yet importantly, tourism experiences and security issues are inevitably interwoven phenomena, and security is more likely the single most important determinant of a tourist destination's allure (Boakye, 2012). Talwar et al. (2022) applied an artificial neural network (ANN) model to examine the influence of personality qualities categorized by the big factor (extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) model on people's intentions to travel for leisure during and after COVID-19. Nambulee et al. (2023) also employed TPB and Health Belief Models to check whether the perceived barriers, perceived severity, and health motivation had significant negative influences on the travel intentions during COVID-19.

Concerns about destination security have the power to influence tourist flow and make travelers more aware of the risks they may encounter while on vacation (Ghaderi et al., 2016). So, perceived risk is a potential antecedent for satisfaction and decision to revisit (Nguyen Viet et al., 2020). Principally,

COVID-19, which has plagued the world since 2020, and the escalating socio-political upheaval in Ethiopia since 2020 have had a significant impact on Gondar City's tourism resilience amidst difficulties, mainly tourists' loyalty to heritage destinations. The enduring socio-political turmoil has affected Gondar's tourism, regardless of being well-known and powerful during its heyday and serving as the country's political and religious capital for more than 250 years before the Imperial power shifted to Addis Ababa. Given this in mind, validating a reliable and valid measurement for the determinant factors of tourists' loyalty to heritage destinations have paramount importance for planning sustainable tourism development in Gondar, which is known for its historical castles and colourful festivals (Bayih & Singh, 2020).

2. Theoretical Framework

Tourists' loyalty remains important indicator of a successful tourism destination (Prayag & Ryan, 2012) and has garnered a significant attention over the last two decades, arguably the most explored yet one of the most complicated themes (Kamath et al., 2023). Identifying the values of in determining tourists' destination loyalty may empower heritage destination managers to allocate their resources efficiently, thereby consolidating tourist retaining (Bhat & Darzi, 2018). Motivation is characterized neither by the behaviourist (cyclic regularity) nor by the cognitivist (object-specific preference) approach rather by the combination of models or theories, including Plog's (1974) 'allocentric-psychocentric', Dann's (1977) 'push-pull', Pearce's (1988) 'travel career ladder', and Iso-Ahola's (1991) 'escape-seeking'. An integrated perspective is crucial, as no single model can sufficiently explain travelers' choices (Yoo et al., 2018). Motivations and destination settings can also be varied alongside tourist's psychographics, demographics, travel type, frequencies, duration, purpose, and destination settings (Yoo et al., 2018).

Shared beliefs have sparked attention (S. J. Lee et al., 2020) and arguably are as important as tourist motivations are for affecting the closeness between individuals and memorable experiences. Immersing in the local culture (Derrett, 2002) and taking part in rituals associated people with sites (Fine & Speer, 1985) contribute to MTE (Tung & Ritchie, 2011). Experience is dependent on the engagement and destination perceptions (Tukamushaba et al., 2016), as well as interaction with both residents and fellow tourists (Woosnam, 2011). Tourists that have memorable experiences are inclined to return to the same destinations (Coudounaris & Sthapit, 2017), cultivate an attachment to the destination (Tsai, 2016), and experienced subjective well-being (Sthapit et al., 2019). Thus, further study is needed as there are still different understandings of the relationship between tourist experiences, tourist satisfaction and destination loyalty (PEI, 2019).

Substantial gaps yet remain unclear for validating measurement of MTEs and determining how memorable experiences can influence on tourist destination loyalty (B. Kim et al., 2020). Kamath et al. (2023) also recommended to focus on differentiating between individuals based on cultural backgrounds (Soldatenko & Backer, 2019). Similarly, B. Kim et al. (2020) suggested future studies need to consider how tourist experiences, motivations, and national culture may advance focusing on destination loyalty. Most studies have limited only to two or three factors and the strength of different factors influencing tourist destination loyalty is also overlooked (Wang & Li, 2023).

Scholars suggested to take into account factors like destination image, service quality, and others because human behaviour is dynamic and there is limited longitudinal design (Asmelash & Kumar, 2020). Chi & Qu (2008) have also suggested that including other antecedents of destination loyalty for future study

due to the paucity of valid measurement scales pertaining to tourist loyalty to heritage destinations. B. Kim et al. (2020) and Kamath et al. (2023) also call for further integration of tourist motivation, emotional solidarity, and MTEs as antecedents of tourist loyalty. Extending behavioural intention model (modelling domestic tourism: motivations, satisfaction, and tourists) by including other predictors, such as destination image, perceived quality, place attachment, and perceived value, is recommended to understand behavioural intentions (Bayih & Singh, 2020). So, factors influencing tourists' destination loyalty are inconclusive due to varied places and methodological factors (mainly, quantitative), and yet unknown is the strength and magnitude of the relations between these factors and loyalty (Gursoy et al., 2014; Phillips et al., 2011).

The relationship between some constructs remain unclear, inconclusive, contradictory, and conceptual similarities between the items and dimensions suggest that relationship and interrelationship may exist but are not yet fully understood in the tourism field for attractions, sites, and destinations (Bhat & Darzi, 2018). Suhartanto et al. (2018) also recommended that generalization must be done with caution and the loyalty model should be tested in different cultural destinations, such as Gondar City's heritage destinations, due to the fact that there are factors influencing tourist experiences with attractions that are not well studied.

Moreover, future studies can address more variables and give more comprehensive results and a better picture of the antecedents of tourists' destination loyalty (Abror et al., 2023). Given the overall inconsistencies in reliability and validity of measurement scales, methodological gaps, and a variety of influencing factors, it is critical to fill such gaps in the context of the historical and cultural hub of Gondar City. Because there has yet to be validated scale items for measuring the study constructs (tourist motivation, destination image, perceived value, perceived risk, tourist satisfaction, memorable tourism experiences, and tourist loyalty to heritage destinations). Therefore, the main objective of the paper is to validate scale items for measuring the determinant factors that influence tourists' loyalty to heritage destinations in the case of Gondar City, Ethiopia.

3 Methodology

3.1 Paradigm

The study employed pragmatism paradigm as a philosophical approach, utilizing a mixed research method to gather and analysis data, promoting a practical and comprehensive understanding of complex issues (Alise & Teddlie, 2010; J. W. Creswell & Creswell, 2018). Therefore, a research paradigm encompasses the researcher's ontological, epistemological, axiological, aesthetical, and methodological beliefs (Hanson et al., 2005; Lincoln, 1990). As this paper intends to use a mixed-methods approach that stems from pragmatism paradigm, the researcher's ontological stance adopts idealism and relativism because knowledge is contingent on our ontological stance (Rawnsley, 1998). Particularly, idealism suggests that the nature of being is known in the minds of individuals who experience and understand it (Rawnsley, 1998), and relativists believe that reality should be understood relative to context (Mills et al., 2006). So, the researcher's ontological stance adopts a mixed-methods approach that combines elements of idealism and relativism.

Since knowledge is only partially and probabilistically understood, it must be triangulated from a variety of sources to be fully understood (J. W. Creswell & Clark, 2018). While positivism or post-positivism tests the theory, constructivism seeks to establish the meaning of phenomena, and a pragmatism

paradigm helps to collect both quantitative and qualitative data (J. Creswell, 2009). J. W. Creswell (2007) suggests mixed method allows researchers to use multiple methods and data sources to examine a phenomenon, enhancing accuracy by examining aspects from different perspectives. So, the researcher's epistemological stance is both positivism and constructivism.

3.2 Research Design

The study employed a two-phase exploratory sequential mixed methods design. Creswell et al. (2003) identified six mixed-method designs: sequential explanatory, sequential exploratory, sequential transformative, concurrent triangulation, concurrent nested, and concurrent transformative. Exploring qualitative data was mainly followed by a cross-sectional sample survey design that can help collect data at a single point in time since the study's time frame precludes the application of a longitudinal design (J. W. Creswell & Clark, 2018), which is based on the qualitative phase coming before the quantitative phase (Munce et al., 2020).

The qualitative method is most suitable for inductive or exploratory research in early phases (Berman, 2017; J. W. Creswell & Clark, 2018), while the quantitative approach is more suitable for deductive or hypothesis-testing research later (Thomas A Schwandt, 1989). Studies involving hypothesis testing of the causal relationships between variables require designs that permit inferences about the causality in addition to the minimization of bias and maximization of reliability (Kothari, 2004). An exploratory sequential mixed-methods design begins with a qualitative approach and transitions to a quantitative approach, generating instruments based on preliminary qualitative findings (Berman, 2017; Guetterman et al., 2015).

3.3 Study Population

The target population for the qualitative data collection, which served as a springboard for the quantitative data collection phase, included PhD candidates in tourism-related fields, university professors, culture and tourism experts. Whereas the target population for the quantitative data collection were tourists, both domestic and foreign, who visited Gondar City's heritage destinations from August to October 2024.

3.4 Sampling Strategies

The study employed both probability and non-probability sampling designs, with purposive for qualitative data and convenient techniques for quantitative data collection. Since the 1970s, panel sizes in tourism studies have risen from 6 to over 900 (Lin & Song, 2015). Besides the sample size, the panelists should be carefully selected to provide a diverse range of viewpoints, with no more than 30 participants, as excessive participation can become unmanageable in an iterative process (Sekayi & Kennedy, 2017). Accordingly, finding and selecting the panel experts was the first task, which was essential to ensuring the validity and reliability (Lin & Song, 2015).

Panel members were selected according to experience, readiness to engage, and direct domain knowledge, following the criteria established by Donohoe & Needham (2009). In light of the given criteria, purposefully employed a construct elicitation technique with 15 panel experts for Round 1 and discussion continued with 10 panel experts in Round 2 to refine and verify suggestions of Round 1 from August 15 to August 31, 2024. Delphi members were chosen based on age, gender, experience, and expertise. Five of the panel experts (PhD candidates) were specializing in the fields of hospitality, tourism and heritage management and working at University of Gondar (2), Wollo University (2), and EJBME, Vol. 7, No. 2, 2025

Debre Tabor University (1). The rest ten were employed at Ethiopian Civil Service University (1), University of Gondar (7), and Gondar culture and tourism office (2).

Table 1: Composition and profiles of the Delphi panel members

no	Panelists' domain knowledge	Round 1	Round 2
1.	PhD candidates in tourism related fields	5	3
2.	University professors in tourism related fields	8	5
3.	Culture and tourism department	2	2
	total	15	10

Also, ideal sample size should be large enough for generalization and economically small enough to account for subject availability and study expenses (Best & Kahn, 2006). A sample size of 30 to 460 cases is required to avoid misspecification errors (Wolf et al., 2013), and also, using the rule of thumb, sample sizes >30 and < 500 are appropriate (Roscoe, 1975). Thus, a pilot study with 50 tourists (25 foreign and 25 domestic) who had visited the study sites tested reliability, analysis techniques, and scale items. Mainly, ideal sample size for a pilot study is debated, with Hill (1998) suggesting 10-30 cases, Balding et al. (2008) and Julious (2005) suggesting at least 12 cases.

3.5 Data Collection

Following the suggestion of Jenkins (1999), a two-stage data collection method was used that includes qualitative and quantitative methods. It utilized an extensive review and Delphi method for qualitative data, followed by a structured questionnaire for quantitative data collection.

3.5.1 Delphi Method

The Delphi method was used to redefine the determinant factors of tourist loyalty, refine variables for questionnaire development, and identify measurement scale items with robust conceptual foundations and psychometric validation. It is a survey method that uses expert input or multiple rounds of discussion to reach consensus on contentious topics, renowned for its anonymity and convergence (Chuenjitwongsa, 2017; Lin & Song, 2015). The Delphi Round 1 and Round 2, conducted from August 15-31, 2024, involved paper-based and electronic questionnaires, with a response rate of at least 70% (Chuenjitwongsa, 2017; Kilroy & Driscoll, 2006).

The researcher provided a background statement, modified questions to experts, and examined the responses to determine consensus and disagreement agendas during Round 1. Question 1 asked to indicate whether they agreed that tourist motivation, destination image, perceived value, perceived risk, tourist satisfaction, and memorable tourism experience are determinant factors? If they disagree with this statement, they were requested to indicate what otherwise are the determinant factors. Question 2 asked about measurement items for the determinant factors, which were acknowledged in Question number 1. The Round 1 results (the first aggregated summaries) and another question with non-consensus issues in paper-based Delphi survey were forwarded to the experts (Round 2), encouraging the panel members to compare their first thoughts and make additional revisions. The Round 2 invited the panel members to make changes to the determinants and measurement items they had previously obtained, and eventually their answers converged.

3.5.2 Pre-Test

A pre-test was conducted regardless of the initial pool of the scale items were adopted from multitude literature to ensure that they are easy to understand, that everything works as it should, and face validity of the items accurately reflects the content of the construct (Bryman, 2012). Pre-testing ensures that language clarity, order, and wording of the questionnaire are accurate and understood by respondents (Dedeoğlu et al., 2020). Hair et al. (2013) underline the importance of understanding and accurately performing measurements to ensure validity.

The initial draft of the questionnaire was sent to five PhD candidates and five university professors who were chosen based on their backgrounds in both the tourism industry and academia to review the scale items and assess the applicability, clarity, and relevance of the survey's content and face validity. Constructive feedback was utilized to correct, refine, and improve scales, with some comments omitted due to different wording. The questionnaire survey, resent to five university professors for more amendment, received no significant feedback, and only minor modifications were made. Ten tourists were participated in pre-surveys to assess readability, clarity, wording, sequence, layout, familiarity, response rate, completion time, and content validity before pilot test.

3.5.3 Pilot Study

Following a review, and pre-test, the pilot study used 90 structured questionnaire items, and 9 sociodemographic variables. This pilot study was useful to validate the scale items for the main data survey, including the items of tourist motivation (12), destination image (8), perceived value (6), perceived risk (18), tourist satisfaction (7), memorable tourism experience (27), loyalty to heritage destination (12), and sociodemographic variables (9). Two lodging supervisors and two tour guides were chosen based on commitment, experience, exposure, and language proficiency (Amharic and English) to collect data from 50 tourists from August to October 2024. Daily survey was held to capture both the weekday and weekend tourists in the morning and afternoon at lodgings and exits of heritage sites, aiming to minimize coverage errors.

4 Results and Discussions

The qualitative data fetched through literature and the Delphi method were analyzed thematically. Thematic analysis summarizes the reason behind the consensus or explains the lack of agreement using review along with the knowledge of experts and scholars (Chuenjitwongsa, 2017). The Delphi participants were those with a master's degree (46.67%), a PhD candidate (33.33%), and a PhD holder (20%). Panel experts, 86.67% of whom are employed by higher education institutions, are excluding two experts, 01 and 02, who work for the Gondar City culture and tourism office.

The Delphi method included three groups: cultural and tourist industry (13.33%), PhD candidates (33.33%), and academia (53.33%), with males comprising 93.33% and women 6.67%, aged 36-50 years old, and 14 to 25 years of experiences. The panel experts (80%) agreed that motivation, destination image, perceived value, perceived risk, tourist satisfaction, and memorable tourism experience are the determinant factors of tourist loyalty in the context of Gondar. They also suggested other factors like perceived quality of service, authenticity, emotional attachment, revisit intention, heritage values, safety and security, cleanliness, friendliness and hospitality, foods and products, social media, WOM, online review behaviour, accessibility, and price sensitivity. Most panel experts (66.67%) suggested that Likert scale for measuring these determinant factors, except for sociodemographic variables. The responses from small outliers in the Round 1 Delphi survey were adjusted and incorporated into interim results for

further discussion in Round 2.

The Round 2 continued until an agreement was reached, no new issues arose, or the response rate was too low. In Round 2, the researcher conducted a paper-based Delphi method with 10 panel experts, including 3 PhD candidates, 5 university professors, and 2 culture and tourism experts, to verify and refine the variables and clarify unclear concepts. The survey was not terminated until the members of the Delphi panel's responses converged, suggesting that Round 2 continued until a significant consensus was obtained (Lin & Song, 2015). Subject to the time frame and financial constraints, the Delphi method process ended as soon as convergence is achieved or when the predetermined stop criteria are met. Statistically, when the coefficient of variation is <0.8 , there is no need to conduct additional survey round (Shah & Kalaian, 2009).

Table 2: Sociodemographic characteristics of Delphi members

Code	Age	Sex	Educational status	Organization	Experience
01	38	M	MA in Tourism and Heritage	Culture and Tourism	17 years
02	45	M	MA in Marketing Management	Culture and Tourism	20 years
03	40	M	PhD candidate in Tourism & Heritage Management	University of Gondar	17 years
04	37	M	PhD candidate in Tourism and Heritage Management	University of Gondar	15 years
05	38	M	PhD candidate in Tourism and Heritage Management	Debre Tabor University	15 years
06	36	M	PhD candidate in Tourism and Hospitality Management	Wollo University	14 years
07	39	M	PhD candidate in Tourism and Heritage Management	Wollo University	17 years
08	50	M	PhD in Ecotourism and Wildlife	University of Gondar	25 years
09	48	M	PhD in Environmental and Developmental Studies	Ethiopian Civil Service University	21 years
10	41	M	PhD in Social Anthropology	University of Gondar	20 years
11	37	M	MA in Tourism and Heritage	University of Gondar	16 years
12	37	M	MA in Tourism Development	University of Gondar	16 years
13	38	M	MA in Tourism Development	University of Gondar	17 years
14	36	M	MA in Tourism and Heritage	University of Gondar	14 years
15	39	F	MBA in Business Administration	University of Gondar	18 years

Note: M = Male, F = Female, MA = Master of Arts, PhD = Doctor of Philosophy, MBA = Master of Business Administration

Applying SPSS 26, an exploratory factor analysis (EFA) was conducted on the pilot study data to improve structure, phrasing, layout, familiarization with respondents, analysis methods, question categorization, response rate, and completion time. The survey was completed with an average completion time of 25 minutes, yet some enumerators recommended reducing number of questions for each construct. The pilot study analyzed nine demographic variables, with half being foreign and the remaining being domestic visitors. Of these, 42% were first-time visitors, 58% were repeat visitors, 70% were there for relaxation,

28% were there for education, 2% were there for religion, 62% of them stay for 1-5 days, 70% being single, and 88% aged 18-50 years old.

Table 3: Sociodemographic profiles of respondents for pilot study (N = 50)

Demographic variables	Category	Frequency (%)
Age of the participant	18-28 years	12 (24)
	29-39 years	17 (34)
	40-50 years	10 (20)
	51-61 years	3 (6)
	62-72 years	6 (12)
	73 years and above	2 (4)
Gender of the participant	Male	30 (60)
	Female	20 (40)
Marital status of the participant	Single	35 (70)
	Married	14 (28)
	Divorced	1 (2)
Nationality of the participant	Domestic	25 (50)
	Foreign	25 (50)
Educational status of the participant	Illiterate	1 (2)
	Diploma	7 (14)
	Degree	28 (56)
	Master	8 (16)
	PhD	3 (6)
	Other	3 (6)
Length of stay of the participant in days	1-5 days	31 (62)
	6-11 days	1 (2)
	12-17 days	11 (22)
	24-29 days	1 (2)
	30 days and above	6 (12)
Travel companion of the participant	Alone	14 (28)
	Wife	3 (6)
	Family	10 (20)
	Group	23 (46)
Travel frequency of the participant	First time	21 (42)
	Repeat	29 (58)
Purpose of the visit of the participant	Education	14 (28)
	Religion	1 (2)
	Relaxation	35 (70)

The pilot data was analyzed, ensuring normality through skewness within the range of -3 to 3 and kurtosis between -10 and 10 variations, and was deemed normal, using Brown's (2015) guidelines. Hair J et al. (2010) recommend that Cronbach's alpha coefficient (α) ≥ 0.70 indicates good internal consistency and standard factor loadings >0.50 for academic studies. Accordingly, the reliability test confirmed the measurement quality and random measurement error, resulting in a Cronbach's alpha value of 0.812.

According to Hair et al. (2020) guidelines, the study utilized the principal component analysis (PCA) and an EFA to identify foundational constructs, ensuring an acceptable construct validity with standard factor loading of each item >0.5 and $p < 0.001$. The study also used various statistical methods to identify components, evaluate measurement scales, and analyze correlations, including the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (>0.708), the Eigenvalue criterion greater than one, the Bartlett's test of sphericity with a significance level of $p < 0.001$ (Kaiser, 1974), and the scree plot method (Cattell, 1966). The data underwent factor analysis using varimax rotation to identify construct dimensions, examine dimensionalities, and assess psychometric properties, with a cutoff point of 0.30 for component loadings with 50 samples for the pilot study. Following some adjustments, Table 4 unveils that all values showed reliability scores >0.70 , indicating internal consistency and reliability without needing further changes.

Table 4: Reliability of instrument for pilot study

Construct	#	Cronbach's Alpha (α)
Tourist motivation (TM)	7	0.741
Destination image (DI)	5	0.722
Perceived value (PV)	5	0.726
Perceived risk (PR)	10	0.869
Tourist satisfaction (TS)	7	0.878
Memorable tourism experience (MTE)	10	0.905
Tourist loyalty to heritage destination (TLHD)	10	0.979

Tourist motivation dimensionality study reduced items to 7, removing 5 due to low communality, component loadings, unrelated concepts, and high cross-loadings, and conducted PCA with varimax rotation on 12 initial tourist motivation items. However, Iso Ahola's (1982) model of the social psychology of tourism validated 12 scale items to measure tourist motivation using a seven-point Likert scale.

The KMO index was 0.626, and Bartlett's sphericity test confirmed the dataset's suitability for EFA, with a $\chi^2 = 98.964$, $df = 21$, $p < 0.001$. The KMO index 0.626, despite being below the minimum 0.708 sampling adequacy measure, is acceptable as it is the first of its kind for data collection instrument validation in the case of heritage destinations in Gondar City. Items' communality ranged from 0.518 to 0.862, indicating a variation of 51.8% to 86.2%, with components accounting for 40.734% of the variance. The α is 0.741, exceeding the suggested threshold, indicating internal consistency (Tabachnick & Fidell, 2014).

Table 5: EFA of tourist motivation dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component 1: Motivation		2.851	40.734%	.741
I visit Gondar to have change from daily life	.695			
I visit Gondar to tell about my experiences	.518			
I visit Gondar to feel good about myself	.638			
I visit Gondar to experience new things	.862			
I visit Gondar to be with people of similar interests	.810			
I visit Gondar to bring friends	.797			
I visit Gondar to meet new people	.817			

EFA assessed destination image dimensionality, removed 3 items with communalities, component loadings, unrelated concepts, and high cross-loadings, and performed PCA with varimax rotation on 8 initial destination image items. But McDowall & Ma (2010), Kastenholz et al. (2013), Su et al. (2014), and H. C. Wu & Li (2017) employed 8 scale items to measure the destination image by employing a seven-point Likert scale. The KMO coefficient of 0.744 with Bartlett's test of sphericity was ($\chi^2 = 54.946$, $df = 10$, $p < .001$), confirming the fitness of the EFA technique on the dataset. The study found that communalities ranged from 0.248 to 0.690, revealing a variable variance of 24.8% to 69%, with components accounting for 49.832% of the variance.

A common cut-off point for communality is considered to be between 0.25 and 0.4; indicating that variables with communality values below this range might be considered for removal, as they contribute very little shared variance with other variables in the analysis. While a range of 0.25-0.4 is often used, some researchers consider communalities above 0.6 as ideal, indicating a high level of shared variance. Accordingly, the communality of 0.248 (approximately 0.25) in Table 6 is tolerable. The Cronbach's alpha coefficient (α), which is 0.722, indicates internal consistency, surpassing the recommended cutoff ≥ 0.70 (Tabachnick & Fidell, 2014).

Table 6: EFA of destination image dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component: Destination image		2.492	49.832%	.722
Gondar has beautiful architectural buildings	.690			
Gondar is famed for its history & reputation	.514			
Gondar echoes historical & cultural mixture	.515			
Gondar has good image as a destination	.525			
Gondar left me with a good impression	.248			

The EFA was conducted on perceived value and one item was removed due to low communalities, low component loadings, conceptual unrelatedness, and high cross-loadings, and performed PCA with varimax rotation on 6 initial perceived value items. The KMO coefficient of 0.675 with Bartlett's test

of sphericity was ($\chi^2 = 78.844$, $df = 10$, $p < .001$), confirming the fitness of the EFA technique on the dataset. The KMO index 0.675, notwithstanding being below the minimum 0.708 sampling adequacy measure, is acceptable as it is the first of its kind for data collection instrument validation in the context of heritage destinations in Gondar City. The study assessed that communality ranged from 0.686 to 0.790, revealing a variable variance of 68.6% to 79%, with components accounting for 53.022% of the variance. Cronbach's alpha coefficient (α), which is 0.726, indicates internal consistency, surpassing the suggested cutoff (Tabachnick & Fidell, 2014).

Table 7: EFA of perceived value dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component: Perceived value		2.651	53.022%	.726
Gondar offers good value for my holiday	.783			
Gondar offers good chance to combine trip	.686			
Gondar provides good value for money	.689			
Gondar makes good use of time	.752			
Overall, a vacation in Gondar is affordable	.790			

Perceived risk dimensionality analysis reduced 18 items to 10, removed 8 with low communalities, low component loadings, conceptual unrelatedness, and high cross-loadings, and performed PCA with Varimax rotation on 19 initial risk items. Whereas Khan et al. (2017), and Fuchs & Reichel (2008) used 19 perceived risk measurement scale using a seven-point Likert scale. The dataset's adequacy for EFA was confirmed by a KMO index of 0.801 and Bartlett's test of sphericity ($\chi^2 = 343.107$, $df = 45$, $p < .001$). The item communalities ranged from 0.371 to 0.880, with a variable variance of 37.1% to 88%, with components accounting for 51.361% of the variance. The communality of 0.371 in Table 8 is acceptable. The Cronbach's alpha coefficient (α), 0.869, indicates internal consistency and is above the suggested threshold (Tabachnick & Fidell, 2014).

The 7 initial tourist satisfaction items underwent EFA and PCA with varimax rotation, retaining all seven items. The KMO coefficient of 0.86 with Bartlett's test of sphericity was ($\chi^2 = 201.550$, $df = 21$, $p < .001$), confirming the fitness of the EFA technique on the dataset. However, del Bosque & San Martín (2008), Sun et al. (2013), Su et al. (2014), and H. C. Wu & Li (2017), employed 7 scale items to measure tourist satisfaction using a seven-point Likert scale. The study found that communalities ranged from 0.273 to 0.763, revealing a variable variance of 27.3% to 76.3%, with components accounted for 62.374% of the variance. The communality of 0.273 in Table 8 is adequate. The Cronbach's alpha coefficient (α), which is 0.878, indicates internal consistency, surpassing the recommended cutoff (Tabachnick & Fidell, 2014).

Table 8: EFA of perceived risk dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component: Perceived risk		5.136	51.361%	.869
I did not receive good value for my money	.873			
Visit to Gondar involve unexpected expense	.781			
Visit to Gondar would be expensive	.856			
Gondar would be too crowded	.702			
Services in Gondar would be unsatisfactory	.880			
There are possible attacks in Gondar	.746			
There are food safety problems in Gondar	.699			
There is crime (theft, robbery) in Gondar	.371			
I worry about terrorism in Gondar	.778			
I exposed to political unrest in Gondar	.820			

Table 9: EFA of tourist satisfaction dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component: Tourist satisfaction		4.366	62.374%	.878
My visit to Gondar was wonderful	.763			
I have enjoyed the visit to Gondar	.590			
I really like trip to Gondar	.699			
Gondar is exactly what I needed	.273			
It is worthwhile to be in Gondar	.750			
Gondar is one of the best destinations	.562			
Overall, I satisfied with visit to Gondar	.729			

The memorable tourism experience dimensionality analysis reduced items to 11, and 16 were removed due to low communalities, component loadings, and high cross-loadings, and PCA with varimax rotation was performed on initial 27 tourist experience items. While J. H. Kim et al. (2012) and others used 24 scale items to measure MTE by using a seven-point Likert scale. The dataset's adequacy for EFA was confirmed by a KMO index of 0.857 and Bartlett's test of sphericity ($\chi^2 = 306.641$, $df = 55$, $p < .001$). The item communalities ranged from 0.278 to 0.735, with a variable variance of 27.8% to 73.5%, with 53.747% of the variance attributed to components. The communalities of 0.345, 0.423, .413, and .278 in Table 10 are tolerable. The Cronbach's alpha coefficient (α), 0.905, indicates internal consistency and is above the suggested threshold (Tabachnick & Fidell, 2014).

Table 10: EFA of memorable tourism experience dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component: MTE		5.912	53.747%	.905
I took part in the activities in Gondar	.278			
I really enjoyed the trip to Gondar	.668			
I had an exciting trip to Gondar	.620			
I had a once lifetime experience in Gondar	.661			
I experienced something new in Gondar	.413			
I had good impression of culture at Gondar	.423			
I relieved stress during trip to Gondar	.726			
I felt free from routine during trip to Gondar	.735			
I felt better after the trip to Gondar	.508			
I was interested in main activities at Gondar	.537			
I gained a new skill from visiting Gondar	.345			

Finally, the study analyzed tourist loyalty to heritage destinations from three dimensions: behavioural, attitudinal, and composite. The EFA reduced loyalty items to 10, removed 2 composite loyalty items for low communalities, component loadings, and high cross-loadings, and performed PCA with varimax rotation on 12 initial tourist destination loyalty items. But McKercher et al. (2012), Sun et al. (2013), Su et al. (2014), and H. C. Wu & Li (2017) applied 12 scale items to measure tourist destination loyalty using a seven-point Likert scale. The dataset's adequacy for EFA was confirmed by a KMO index of 0.894 and Bartlett's test of sphericity ($\chi^2 = 1008.711$, $df = 45$, $p < .001$). The Cronbach's alpha coefficient (α), ranged between 0.800 and 0.870, exceeded the suggested threshold and indicated internal consistency (Tabachnick & Fidell, 2014).

Table 11: EFA of tourist destination loyalty dimensionality of the pilot study

Components and items	Communality	Eigen value	Variance explained	α
Component 1: Behavioural loyalty		4.372	87.448%	.800
I will revisit Gondar	.936			
I will probably revisit Gondar	.939			
If I could, I would visit Gondar again	.742			
I intend to revisit Gondar again	.906			
It is very likely that I will revisit Gondar	.849			
Component 2: Attitudinal loyalty		4.821	96.426	.870
I would recommend Gondar to others	.955			
I would positively recommend Gondar	.947			
I would recommend Gondar to who are planning heritage trips	.976			
I will speak highly of Gondar to VFR	.977			
I will always say positive things to Gondar	.967			

5 Conclusion

The study findings can contribute to theoretical, methodological, and practical implications in pertaining fields of study. Theoretically, the validation of measurement scale can contribute to test and develop a heritage destination loyalty model by unveiling the reliability and validity of these instruments to measure tourist motivation, destination image, perceived value, perceived risk, tourist satisfaction, memorable tourism experiences, and loyalty. It can also contribute to the methodological perspective because most literature reviews indicate that simply adopting the existing measurement scales regardless of variations over time, and different study contexts. Practically, validating such measurement scales of tourists' loyalty to heritage destinations can assist tourism destination managers and stakeholders in devising strategies to incite revisit intentions and positive word-of-mouth recommendation intentions. Thus, the study can contribute practical, theoretical, and methodological insights on motivation, destination image, perceived value, perceived risk, tourist satisfaction, memorable tourism experiences, and tourist loyalty.

6 Limitations and Suggestions

This paper has its own limitations but the major findings are not significantly influenced. As the main focus of the study was validating measurement scale items for the determinant factors of tourists' loyalty to heritage destinations in the contexts of Gondar City, the findings may not be conclusive to other heritage sites due to various geographical settings, and methodological differences. Considering the study settings (contexts) and methodological differences, validating the measurement scale items need to be replicated at different heritage sites in order to make conclusive remarks. In addition, the data was collected from August to October 2024 using cross-sectional study design. Hence, future research should involve a longitudinal study design in order to compare the change over time. Finally, the study acknowledges unavoidable potential biases (response bias, sample bias, measurement bias, and self-reporting bias), suggesting future research should include more targeted respondents, and multitude data sources for a prolonged period.

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