

OPEN ACCESS



January 2023
ISSN: 1993-8233
DOI: 10.5897/AJBM
www.academicjournals.org

 **ACADEMIC
JOURNALS**
expand your knowledge

About AJBM

The African Journal of Business Management (AJBM) is published twice monthly (one volume per year) by Academic Journals.

African Journal of Business Management (AJBM) is an open access journal that publishes research analysis and inquiry into issues of importance to the business community. Articles in AJBM examine emerging trends and concerns in the areas of general management, business law, public responsibility and ethics, marketing theory and applications, business finance and investment, general business research, business and economics education, production/operations management, organizational behaviour and theory, strategic management policy, social issues and public policy, management organization, statistics and econometrics, personnel and industrial relations, technology and innovation, case studies, and management information systems. The goal of AJBM is to broaden the knowledge of business professionals and academicians by promoting free access and providing valuable insight to business-related information, research and ideas. AJBM is a weekly publication and all articles are peer-reviewed.

Contact Us

Editorial Office: ajbm@academicjournals.org

Help Desk: helpdesk@academicjournals.org

Website: <http://www.academicjournals.org/journal/AJBM>

Submit manuscript online <http://ms.academicjournals.me/>

Editor-in-Chief

Prof. Wilfred Isioma Ukpere

*Department of Industrial Psychology and People Management,
Faculty of Management,
University of Johannesburg,
South Africa.*

Editors

Dr. Amran Awang

*Faculty of Business Management,
02600 Arau, Perlis, Malaysia*

Prof. Giurca Vasilescu Laura

*University of Craiova, Romania
13, A.I. Cuza, 200585, Craiova, Dolj,
Romania.*

Associate Editors

Dr. Ilse Botha

*University of Johannesburg
APK Campus PO Box 524 Aucklandpark 2006
South Africa.*

Dr. Howard Qi

*Michigan Technological University
1400 Townsend Dr., Houghton, MI 49931,
U.S.A.*

Dr. Aktham AlMaghaireh

*United Arab Emirates University
Department of Economics & Finance
United Arab Emirates.*

Dr. Haretsebe Manwa

*University of Botswana
Faculty of Business
University of Botswana
P.O. Box UB 70478
Gaborone Botswana.*

Dr. Reza Gharoie Ahangar

*Islamic Azad University of Babol,
Iran.*

Dr. Sérgio Dominique Ferreira

*Polytechnic Institute of Cavado and Ave
Campus IPCA, Lugar does Aldão, 4750-810. Vila
Frescainha,
Portugal.*

Prof. Ravinder Rena

*Department of Economics
University of the Western Cape
Private Bag: X17
Modderdam Road
Bellville 7535
Cape town, South Africa*

Dr. Shun-Chung Lee

*Taiwan Institute of Economic Research
No. 16-8, Dehuei Street, Jhongshan District,
Taipei City 104,
Taiwan.*

Dr. Kuo-Chung Chu

*National Taipei University of Nursing and Health
Sciences No. 365, Min-Te Road, Taipei,
Taiwan.*

Dr. Gregory J. Davids

*University of the Western Cape
Private Bag x17, Bellville 7535,
South Africa.*

Prof. Victor Dragotă

*Bucharest Academy of Economic Studies, Department
of Finance
Bucharest, Sector 1, Piata Romana no. 6, Room 1104,
Romania*

Dr. Maurice Oscar Dassah

*School of Management, IT and Governance
University of KwaZulu-Natal
Post Office Box X54001
Durban
4000
South Africa.*

Prof. Joseph Offiong Udoayang
University of Calabar
P.M.B 1115, Calabar. Cross River State, Nigeria.

Prof. Robert Taylor
University of KwaZulu-Natal
Varsity Drive, Westville
South Africa.

Dr. Nazim Taskin
Massey University - Albany
Quad Building A, Room 3.07
Gate 1, Dairy Flat Highway (State Highway 17)Albany,
New Zealand

Prof. João J. M. Ferreira
University of Beira Interior (UBI)
Estrada do Sineiro, Pólo IV 6200 Covilhã,
Portugal.

Dr. Izah Mohd Tahir
Universiti Sultan Zainal Abidin
Gong Badak Campus, 21300 Kuala Terengganu,
Terengganu, Malaysia.

Dr. V. Mahalakshmi
Panimalar Engineering College
7-A,CID Quarters, Mandaveli,Chennai-600028,
Tamilnadu,
India.

Dr. Ata Allah Taleizadeh
Iran University of Science and Technology
Faculty of Industrial Engineering,
Iran University of Science and Technology,
Narmak, Tehran, Iran.

Dr. P.S. Vohra
Chandigarh Group of Colleges, Landran, Mohali, India
#3075, Sector 40 D
Chandigarh, Pin code 160036

Dr. José M. Merigó
University of Barcelona
Department of Business Administration, Av. Diagonal
690, Spain.

Prof. Mornay Roberts-Lombard
Department of Marketing Management,
C-Ring 607, Kingsway campus, University of
Johannesburg, Auckland Park, Johannesburg, 2006,
South Africa

Dr. Anton Sorin Gabriel
Carol I Boulevard, No. 11, 700506, Iasi,
Alexandru Ioan Cuza University Iasi,
Romania.

Dr. Aura Emanuela Domil
31 Horia Creanga, zip code 300253, Timisoara,
West University from Timisoara,
Faculty of Economics and Business Administration, Romania.

Dr. Guowei Hua
NO. 3 Shangyuancun, Haidian District, Beijing 100044,
School of Economics and Management,
Beijing Jiaotong University, China.

Dr. Mehdi Toloo
Technical University of Ostrava,
Ostrava, Czech Republic

Dr. Surendar Singh
Department of Management Studies, Invertis University
Invertis village, Bareilly -
Lucknow Highway, N.H.-24, Bareilly
(U.P.) 243 123 India.

Dr. Nebojsa Pavlovic
High school "Djura Jaksic"
Trska bb, 34210 Raca, Serbia.

Dr. Colin J. Butler
University of Greenwich
Business School, University of Greenwich, Greenwich, SE10
9LS,
London, UK.

Prof. Dev Tewari
School of Economics and Finance
Westville Campus University of Kwa-Zulu
Natal (UKZN) Durban, 4001
South Africa.

Dr. Paloma Bernal Turnes
Universidad Rey Juan Carlos
Dpto. Economía de la Empresa
Pº de los Artilleros s/n
Edif. Departamental, Desp. 2101
28032 Madrid, España

Dr. Jurandir Peinado
Universidade Positivo
Rua Silveira Peixoto, 306
Zip 80240-120 Curitiba – PR – Brazil

Table of Content

Analysis of agency banking and customer satisfaction in Rwanda: A case of Bank of Kigali Rwanyarare Godfrey* and Kalimba Peter	1-12
The influence of the college environment on the development of entrepreneurial intentions Isabel Elitas Chilangwa ^{1*} , Clement Mwaanga ² and Moulén Siame ²	13-22

Full Length Research Paper

Analysis of agency banking and customer satisfaction in Rwanda: A case of Bank of Kigali

Rwanyarare Godfrey* and Kalimba Peter

Department of Business Administration, School of Graduate Studies, University of Kigali, Rwanda.

Received 15 November, 2022; Accepted 11 January, 2023

This paper used quantitative and qualitative methods to analyze agency banking and customer satisfaction in Rwanda and it considered the Bank of Kigali as a case study. The research adopted a descriptive research design in nature. Data were collected from a sample size of 208 respondents who were selected from the customers that consume the Bank agency services of Bank of Kigali agents. Research data from questionnaires were assessed descriptively, and on the other hand, data from interviews were studied qualitatively. The study discovered that customers queue in the ATMs and banking halls due to; a lack of liquidity, and e-money float balances to meet customer transaction demands; lack of tangibles, leanness, and location of the agents' outlets; and lack of in-depth knowledge and modern skills in banking among bank agents. These were supported by regression equation results that found that all the p-values were less than 0.05; this is a confirmation that all the variables were statistically significant in influencing customer satisfaction in Bank of Kigali agency services. Therefore, the study recommended that there should be constant training for Bank agents regarding Bank services and products. This will reinforce bank agents on the bank's products and update them on some customers' needs and will continuously build customer relationships as they will be performing as the real Bank ambassadors and satisfy them with the required information. Finally, the regulator should continuously review the regulation governing the bank agent operations since the economy is dynamic.

Keywords: Agency banking, customer satisfaction, service quality dimensions.

INTRODUCTION

Service quality has been in existence since 1985. After being introduced by Saravanan and Rao. (2007), the service quality (SERVQUAL) model has been used to pinpoint opportunities to enhance service quality and, by extension, customer happiness, for nearly three decades. Despite its usefulness, the model has been criticized for a number of shortcomings, leading to the introduction of a number of variants in research. Quality of service is the

best strategy for positioning a company and assuring a sustainable competitive advantage in the red ocean market. Meeting customers' needs induces customer retention and loyalty (Bayad et al., 2021). In Germany, the banking industry considers service quality as important and it takes an outsider's view of service quality, which holds that the customer's opinion is the most important one. This evaluation is conceived of as a

*Corresponding author. E-mail: rgodfreynoon@gmail.com.

discrepancy or a gap between the customer's expectations for the quality of service from a category of service providers and the service provider's actual performance and customer satisfaction which is the extent to which customers are happy and delighted with the products and services provided by a business (Munari et al., 2013). In other words, satisfaction is the state of mind felt by a person who experienced a performance of a product or service that has fulfilled his or her expectations. However, customer satisfaction is dynamic and previous researchers have focused on the current status of the customers and neglected the behavioral changes of customers. Retaining customers must match with spontaneous innovation (Chong et al., 1997). It was also highlighted that agency banking services remained relevant in the growth of the banking industry and reached customers easily (Munari et al., 2013).

This financial inclusiveness system has helped many people to access financial services which led to the entire development of the country and the world in general. Lotto (2019) revealed that agency banking helped to simplify banking services by reducing the distance for customers to reach the service point. It was also set up in the study that agency banking costs are reported to be lower compared to those of traditional banking services. It was concluded that lesser geographical content brought about by agency banking is a stronger protagonist of fiscal addition because services follow people closer to where they leave and hence reduce the traveling costs and other hassles involved like time wasted long ranges at Bank branches. Tangibility, assurance, responsiveness, and empathy are the key influencers in generating customer satisfaction for hospital and hospitality brand as customers' choice heavily depends on these benefits (Tapan and Satyabrat, 2021). Though previous researchers showed the contribution of agency banking in solving the problems of the customers, other limited studies also were highlighted showing the causes of clients' dissatisfaction in agency banks (Uddin and Afrin, 2019), Daily transactional limits, agent commission, limited skills and knowledge of agents, poor network, and limited infrastructure led the mistrust and complaints of customers. Bertram et al. (2019) that insufficient liquidity in the agency banking outlets affected the sustainability of operational performance and customer disutility. Since customer satisfaction is static, previous researchers have shown the contribution and challenges of banking agencies, and the quality dimensions that influenced customer satisfaction in hospitality (Tapan and Satyabrat, 2021).

The current study is interested in replicating the same study in the context of the Bank of Kigali and Rwanda in general because the Banking sector and Hospitality are different sectors of which the finding from one sector cannot be applicable/ generalizable to another sector, and all studies done on agency banking were carried outside Rwanda and their customer needs and

perception might be different from Rwandans. Therefore, by integrating this study's findings and perspectives from other empirical findings, this study addressed the question of limited literature in Rwanda.

Statement of the problem

Tangibility, assurance, responsiveness, and empathy are the key influencers in generating customer satisfaction for hospital and hospitality brand as customers' choice heavily depends on these benefits (Tapan and Satyabrat, 2021; Tapan and Satyabrat, 2021; Uddin and Afrin, 2019; Munari et al., 2013). Even though tangibility, assurance, responsiveness, empathy, and reliability influence customers' behavior in terms of performance but it was only focused on hospitality which cannot be generalized across all sectors. It's in that context that the current to researcher needs replicate the study on the banking sector. Previous studies were also carried outside Rwanda and customer behavior varies based on their values. Customer satisfaction is also changing due to environmental changes and that is why the previous research findings cannot be used in current decision-making.

It is in that context that replicating this study is very relevant. Besides, the study analyzed why there are still rampant queues at Bank of Kigali branches even if the bank has got banking agents commonly termed as "BK YACU".

Research hypotheses

H₀1: There is no significant impact of empathy against services provided by Bank Agents on the satisfaction of Bank of Kigali customers.

H₀2: There is no significant impact of the reliability of services offered by Bank Agents on the satisfaction of Bank of Kigali customers.

H₀3: There is no significant impact of the tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers.

REVIEW OF LITERATURE

The section presents the theoretical review which presents theories related to service quality dimensions and indicators of customer satisfaction as independent and dependent variables respectively. The second segment presents a conceptual review, followed by an empirical review, and conceptual framework and it ends with the research gap.

Queuing theory models

Nityangini and Bhathawala (2019), queues (waiting lines)

are a part of daily life; excessive costs are involved in providing too much service. The waiting line becomes long because of not providing enough service capacity. The goal is to have an economic balance between the cost of service and waiting time. The study of waiting in various guises is the subject of queuing theory. If it can be managed, forming a queue is essential to society so that both the unit that waits and the one that serves get the most benefit. In the Banking context, the effect of queuing on the time taken by customers to access bank services is becoming a major concern. If customers are kept waiting too long, it could cost them excessive costs associated with providing too much service capacity, and excessive waiting time and cost are caused by not providing enough service capacity (Nityangini and Bhathawala, 2019). Jahan (2019) stated that queuing model is a mathematical description of a queuing system that makes some specific assumptions about the probabilistic nature of the arrival and service processes, the number and type of servers, and the queue discipline and organization. It isn't useful for the banks to build the number of branch banks and servers in the banks simply. Sheikh (2018), some of the banking systems do not really get overwhelmed by the crowding experiences they have during the delivery of services to their customer because of the seeming state of complacency. However, some of the impatient and dissatisfied customers gradually begin to withdraw from such banks and look for another with better service delivery modalities, leaving the customer insensitive banks with a gradual loss of customer patronage. Bakari (2018), analyzed queuing systems obtained from queues from the observed data of some selected banks in Ogun State, Nigeria. The analysis of the data helped to make some suggestions regarding the use of queuing theory model in banking.

Bank-led theory

The Bank Led concept states that a regulated financial institution delivers financial services via a retail agent. The theory contends that a bank creates financial products and services and distributes them via retail agents who manage all or most client contacts. Agency banking is encouraged by this banking paradigm (Lyman et al., 2019). Similar to how a branch-based teller would accept deposits and handle withdrawals, retail agents interact directly with customers and perform cash-in and cash-out duties. This strategy has the bank producing financial services and goods, but distributing them via retail agents who handle all or most of the customer contacts (Lyman et al., 2019). The bank serves as both the institution where consumers maintain accounts and the provider of financial services. Any business that accepts cash and is close to customers might theoretically act as a retail agent. In some nations, retail agents also manage the entire account opening process

and, in some situations, even locate and support loan borrowers (Tapan and Satyabrat, 2021). Each retail agent under this arrangement is provided with electronic communication equipment for use with the bank for which it is operating. The tools might be a mobile phone or a card-reading electronic point-of-sale terminal (Lyman et al., 2019). By employing a different distribution method, a different trading partner (Chain Store) with experience serving a market different from traditional banks, and perhaps at a lower cost than the bank-based alternatives, this model aims to considerably expand the reach of financial services. With this model, customers can complete financial transactions through a variety of retail agents rather than bank branches or through bank workers, providing a clear contrast to traditional branch-based banking (Lyman et al., 2019). The use of retail agents may also give rise to particular worries about consumer protection and adherence to laws intended to stop money laundering and the financing of terrorism (Levesque and McDougall, 1996). Multiple categories of risk are commonly recognized in banking regulation, and bank regulators and supervisors work to reduce such risks. Credit risk, operational risk, legal risk, liquidity risk, and reputation risk are five of these risk categories. Reputation risk assumes particular significance when clients utilize retail agents rather than bank branches to acquire banking services.

Disconfirmation theory

Disconfirmation theory argues that customer satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Uddin and Afrin (2019) asserted that the disconfirmation paradigm is the best predictor of customer satisfaction. It is among the most popular satisfaction theories. Satisfaction is the result of the process of comparing perceptions against a standard or expectations. However, the weakness of this theory is that research also indicates that customer satisfaction is more importantly also influenced by how the service was delivered than the result of the service process, and customer dissatisfaction with the service frequently just arises when their expectations are not met.

Services quality dimensions and customer satisfaction in agency banking

Agency banking is viewed as an important factor in service evaluation. There is ample evidence that agency banking significantly affects customers' evaluative judgments such as perceptions of quality. Moreover, agency banking significantly improves perceived service quality. That is, agency banking is a critical determinant

of service quality (Bloemer, 2018). The idea behind agency banking is that the consumer is not just using agency banking services but also the image associated with that product or service. Agency banking services should be positive, unique, and instant. Agency banking has not to be created but is automatically formed. The agency banking services should appeal to be easy to use, functional, famous, and overall valuable. In the agency literature, there is a general assumption that favorable agency services have a positive impact on customer satisfaction. Andreassen (2018) found that agency banking affects customer satisfaction through a filtering effect. Similarly, Donabedian (2005) suggested that agency correlates with customer satisfaction. Agency banking has been recognized as an important antecedent of customer satisfaction. Hence, good agency services will tend to generate high customer satisfaction in the bank. If there is a necessity of defining customer satisfaction in the banking sub-sector, then one cannot ignore the quality of service. This is because the two co-exist and the deterioration of one often leads to the deterioration of the other. Although some scholars claim that quality precedes satisfaction other writers suggest that customer satisfaction is necessarily founded on the quality of service or product (Donabedian, 2005). That's why in the present study, quality in service is understood as a satisfaction antecedent. Customer satisfaction is therefore an emotional reaction strongly associated with prior expectations, related to specific transactions. This can be defined as the feelings or judgments by customers towards products or services after they have used them (Jamal and Naser, 2018). Various scholars purport that satisfaction is the result of a customer's perception of the value received in a transaction or relationship compared with price and acquisition costs. Moreover, it is relative to the value expected from transactions with competitors. According to Sheikh (2018), quality of service is defined as a construct composed of what is delivered by the company to the customer (technical aspect), and the way the service is performed (functional or relational aspect). Several empirical types of research have validated this definition and indicated a strong relationship between these two quality dimensions and customer satisfaction. In addition to technical aspects, on the other hand, studies have shown that functional quality (the way the service is

performed) contributes significantly to customers' satisfaction. It's been shown that bank clients do not overlook how the service was performed (functional quality) even when asked specifically about their satisfaction with service technical aspects. This suggests that the functional dimension also influences clients' satisfaction significantly (Lotto, 2019). Owing to the nature of the financial service activity in which customers in general, do not regard the financial product as a tangible, complete product, the service that accompanies the product is very important to determine general satisfaction towards the institution. Consequently, by modeling general satisfaction for financial service companies, it proves important to include both the attributes linked to products and the ones related to services (Lotto, 2019). Despite the fact that there are other ways to evaluate service quality, it was acknowledged that the SERVQUAL model remains the most extensive attempt to conceptualize and quantify service quality. The approach is widely used to evaluate service quality in the literature. Customers frequently are unaware of the technical aspects of a service, therefore they rely on their assessments of the service's quality on its functionality (Donabedian, 2005). These factors were: accessibility, communication, competence, courtesy, credibility, reliability, responsiveness, security, understanding, and tangibles. In further research, associated factors were combined, and the determinants were condensed into five consolidated dimensions: tangibles, reliability, responsiveness, assurance, and empathy as the metrics for service quality (Saravanan and Rao, 2007).

Conceptual Framework

The goal of a conceptual framework is to categorize and describe concepts relevant to the study and map relationships among them. According to Cronin and Taylor (1992), a conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas. Likewise, conceptual frameworks are abstract representations, connected to the research project's goal that directs the collection and analysis of data.

Independent Variable

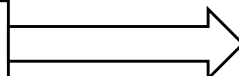
SQD

Empathy
Reliability
Tangibility

Dependent Variable

Customer satisfaction

Customer satisfaction
- Referrals
- Compliments
- Loyalty and trust



METHODOLOGY

This research did embrace both descriptive and correlational study designs. Descriptive design was used to analyse banking and customer satisfaction in Rwanda and it considered Bank of Kigali as a case study, whereas correlational design was used in the study to establish the nature and magnitude of the relationship and the significance between agency banking and customer satisfaction in Rwanda and in particular Bank of Kigali. The population of interest in this research constituted agency banking clients and operators from Nyarugenge, Gasabo, and Bugesera Districts because they have more clues about the topic of the study. In line with this, the target population of this research comprised four-hundred and fifty (450) persons who serve as the heads of the department. The study focuses on the bank employees and middle-level each of the department in question as mentioned in the department population. Hakkeem and Sha (2015) define a sample as a group of subjects that are selected from the general population and are considered a representative of the real population for that specific study as a set of entities drawn from a population with the aim of estimating characteristics of the population. Mugenda and Mugenda (2018) further define a sample size as the number of cases or entities in the sample studied. April and Reddy (2015) defined sample size as a set of entities drawn from a population with an aim of estimating characteristics of the population. Thus, the sample size of this study was 208 respondents. In determining the sample size, Krejcie and Morgan sample size formula was used as expressed below for clarity.

$$n = \frac{x^2 Np(1 - P)}{e^2(N - 1) + x^2 p(1 - P)}$$

n = sample size; N = population size; e = At 95% confidence level, the margin error or the acceptable sampling error = 0.05; x^2 = At 95% confidence level with a degree of freedom of 1, chi-square value (x^2) = 3.841; P = Population Proportion = 0.5

$$n = \frac{3.841 \times 450 \times 0.5 \times 0.5}{0.0025(450 - 1) + 3.841 \times 0.5 \times 0.5}$$

$$n = \frac{432.11}{2.082}$$

$$n = 207.545 \approx 208$$

Krejcie and Morgan's formula and table were developed to help the researchers determine (with 95% certainty) the sample size. Thus, based on the Krejcie and Morgan sample size determination formula, this study's population size of (450) was represented by a sample size equivalent to 208 respondents. The researcher used a simple random sampling technique to consider the right sample size from the targeted population. Sampling is a process that involves choosing from a large target population a unit of representation. Simple random sampling is the basic sampling technique where we select a group of subjects called a sample for study from a larger group called a population. Each individual is chosen entirely by chance and each member of the population has an equal chance of being included in the sample (Hajizadeh, 2019). Simple random sampling assisted the researcher with at least involving 81 respondents in Nyarugenge, 71 from Gasabo, and 56 in the Bugesera districts. In this study, a pilot study was conducted with fourteen (14) operators and customers of agency banking in the Kicukiro district in Kigali city. The researcher's target in conducting the pilot study is to ascertain the reliability of the instruments before distributing them to the respondents. In addition, Cronbach's alpha coefficient was considered to ensure the reliability of the research. Indeed, the overall reliability Cronbach alpha (α) coefficient ($\alpha \leq 0.7$), the acceptable, good, and excellent standards are relied on to produce consistent results for describing internal consistency. Thus, this study's reliability index was found to be

0.811 which indicated good consistency and the study models typically possess high reliability. For ensuring validity, the questionnaires were presented to the research supervisor to solicit his opinion in order to guarantee the correctness and relevance of the instrument. Data collection was followed by data processing. The researcher had to exercise good care for ensuring reliable data collection because all data collection efforts could end in vain if the collections were not well processed. Thus, the following task envisions were undergone during the data processing. The first activity under data processing was data editing. Through editing, the researcher was able to eliminate errors in the completed questionnaires and this ensured that answers are accurate and consistent. After carrying out data editing, the researcher proceeded to the data coding stage. The researcher embarked on the task of establishing coding frames by use of his own code categories based on the research questions and responses. After data coding, the researcher used the Statistical Package for Social Sciences (SPSS) version 22.0 in coming up with the statistical analysis for the study.

Data analysis

The research data were analyzed using both descriptive and correlational statistics; in particular, regression analysis and correlation analysis. Therefore, after acquiring adequate research data, the researcher employed qualitative data analysis which was used to analyze data from different sources as prior mentioned. With the help of SPSS, the researcher applied descriptive statistics. In addition to descriptive statistics, the research included inferential statistics which involved both correlational analysis and regression analysis. In order to produce an effective measurement of variables; it was essential to offer the correlation analysis model that the research employed by calculating; evaluating and interpreting the connection among variables via the obtained data. Additionally, regression analysis was used to establish the effect of service quality dimensions on customer satisfaction. The following is a regression model which was used in the study: X_1 = Empathy; X_2 = Reliability; X_3 = Tangibility; e = error. Thus, this study's regression equation is: Customer Satisfaction = $\alpha + \beta_1$ (Empathy) + β_2 (Reliability) + β_3 (Tangibility) + e

RESULTS

Data were collected from a sample of 208 respondents whereby 192 were given questionnaires and 16 respondents were interviewed. This represented a response rate of 100% and this response rate proved enough results to develop a conclusion. Findings were presented in form of both descriptive and inferential statistics. In particular, mean, standard deviation, and regression analyses considered a model summary, ANOVA, and correlation analyses.

Descriptive statistics

This section presented descriptive statistics which were also presented in line with the study's specific objectives. The specific objectives include assessing the impact of empathy against services provided by Bank Agents on the satisfaction of Bank of Kigali customers; assessing the impact of reliability of the services offered by Bank

Table 1. Respondents' level of agreement on empathy.

Statement	Valid percent of responses (%)						Mean	St. Devi
	Str. Agree	Agree	Undecided	Disagree	Str. Disagree			
Bank of Kigali agents provide personal attention to clients	82.8	17.2	0	0	0	4.45	0.40	
Well-maintained waiting queue	12.5	20.8	29.2	37.5	0	3.91	0.37	
Bank of Kigali agents instill confidence in customers	29.2	50.0	0	20.8	0	4.39	0.35	
The bank agent understands my specific needs	62.5	16.7	20.8	0	0	4.57	0.46	

Source: Authors.

Agents on the satisfaction of Bank of Kigali customers; and assessing the impact of the tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers. The findings were presented in tables in form of frequencies, percentages, mean, and standard deviation for better understanding.

Descriptive statistics on empathy

This section expressed the respondents' level of appreciation in assessing the impact of empathy against services provided by Bank Agents on the satisfaction of Bank of Kigali customers and the results were presented in the Table 1.

Table 1 presented findings that are in regard to the appreciation level of respondents on the impact of empathy against services provided by Bank Agents on the satisfaction of Bank of Kigali customers. From the study's findings, it was discovered that 82.8% of the total respondents strongly agreed that Bank of Kigali agents provide personal attention to customers. In addition, this was trailed by 62.5% of the respondents who strongly agreed that the bank agent understands my specific needs. The results also found that 50.0% of the respondents agreed that Bank of Kigali agents instill confidence in customers; though the same statement was disagreed by

20.8% of the respondents. In addition, another disagreed statement was about the well-maintained waiting queue; and disagreed 37.5% of the study's respondents. Based on the findings revealed in Table 6, the researcher confirmed that there is a strong influence of empathy and customer satisfaction at the Bank of Kigali customers in the selected districts. This was derived due to the fact that most of the statements were agreed and strongly agreed. In addition, the findings in form of mean and standard deviation presented above showed that all the standard deviation values were above 0.33. Besides, results in terms of the mean indicated 4.45, 3.91, 4.39, and 4.57; which showed a very high mean. The findings discovered positive impact of empathy against services provided by bank agents on the satisfaction of Bank of Kigali customers. In an interview with the bank agents, indeed their responses matched with the findings from the staff. For stance, he expressed that mostly the elderly and uneducated clients never like using agency banking because they fear a lack of data confidence; this was also revealed by the staff and clients. The issue of privacy and security was also revealed by both parties and the staff. The findings were sustained by Tapan and Satyabrat (2021) who stressed that although some clients could be timid about the security and safety of the cashless payment modes practices

in particular agency banking, these services offer more efficient reports infrastructure and lower transaction costs to the entrepreneur.

Descriptive statistics on reliability

This section expressed the respondents' level of appreciation to assess the impact of the reliability of the services offered by Bank Agents on the satisfaction of Bank of Kigali customers and the results were presented in Table 2. The study findings presented in Table 2 indicated the respondents' agreement levels as regards the impact of the reliability of services offered by Bank Agents on the satisfaction of Bank of Kigali customers. It was discovered that 87.5% of the total respondents strongly agreed that Bank of Kigali agents has product and service knowledge. More so, 83.3% of the respondents strongly agreed that Bank of Kigali agents serves me with the professionalism; also 75.0% of the respondents strongly agreed that Bank of agent services is consistent. Furthermore, 62.5% strongly agreed that the services rendered by Bank of Kigali agents helped to solve my, issue, and finally, 37.5% of the study's respondents agreed that about the same statement. Besides, the findings were presented in form of mean and standard deviation presented in the above showed

Table 2. Respondents' level of agreement on reliability.

Statement	Valid percent of responses (%)					Mean	Std. Dev.
	Str. Agree	Agree	Undecided	Disagree	Str. Disagree		
Bank of Kigali agent's services are consistent	75.0	25.0	0	0	0	4.42	0.41
Bank of Kigali agents serves me with professionalism	83.3	16.7	0	0	0	4.45	0.44
Bank of Kigali agents has product and services knowledge	87.5	12.5	0	0	0	4.56	0.46
Services rendered by BK agents helped to solve my issues	62.5	37.5	0	0	0	3.37	0.38

Source: Authors

Table 3. Respondents' level of agreement on tangibility.

Statement	Valid percent of responses (%)					Mean	Std. Dev.
	Str. Agree	Agree	Undecided	Disagree	Str. Disagree		
Bank of Kigali agents use modern-looking equipment	54.2	37.5	8.3	0	0	3.37	0.38
Faster operation with modern technology	84.4	15.6	0	0	0	4.57	0.45
Cleanness and location of buildings where BK agents operate	75.0	25.0	0	0	0	4.51	0.42
T-Shirts, caps, pens diaries, umbrellas, and others	37.5	41.7	8.3	12.5	0	3.21	0.32

Source: Authors

showed that all the standard deviation values were from 0.38 to 0.46. In addition, results in terms of the mean indicated from 4.42, 4.45, 4.56 to 3.37, and this showed a very high mean, which explains that there is positive impact of the reliability of the services offered by bank Agents on the satisfaction of BK clients. As indicated in Table 2, the research findings exposed a positive about the impact of the reliability of services offered by Bank Agents on the satisfaction of Bank of Kigali customers since all the statements about reliability were both strongly agreed and agreed in regard to the impact of service quality dimensions towards customer satisfaction. The findings revealed by the customers were in support of the interview results from the agency operators of during the interview. They, for example, point out the banking employee

reduction since some clients make orders and make them from agents. The agent operator in the City center close the Nyarugenge Market ahead to express that the agency banking platforms were largely used during the period of the COVID-19 pandemic outbreak as it was always pushed by the government authorities. Hence, this confirmed that there is a strong relationship between service quality dimensions towards customer satisfaction. In the same line, according to Munari et al. (2013), agency banking brings about a concept that management at tactical levels involves before they take durable banking institution strategies regardless of the level or type of business. The main value of agency banking in strategy is to emphasize the importance of the application of financial payments as an alternative, and anticipate the reliability to the customers.

Similarly, Bayad et al. (2021) added that the agency banking system is also widely accepted by various commercial governments in cooperation with the community and sequestered sectors for the benefit of people at large. They also added that agency banking offers reliable services compared to branch banking. These were all pointed out in the study findings presented in Table 2.

Descriptive statistics on tangibility

This section conveyed the respondents' level of appreciation on to assess the impact of the tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers and the results are clearly presented in Table 3 of this

Table 4. Respondents' level of agreement on customer satisfaction.

Statement	Valid percent of responses (%)						Mean	St. Devi
	Str. Agree	Agree	Undecided	Disagree	Str. Disagree			
BK customers make referrals and recommendations	64.6	33.4	0	0	0	4.24	0.39	
Bank of Kigali clients make compliments	83.3	16.7	0	0	0	4.80	0.42	
Bank of Kigali customers are loyal and trust BK services	90.6	9.4	0	0	0	4.89	0.45	
Banking modes used in this business are friendly to staff	62.5	16.7	20.8	12.5	0	3.89	0.36	

Source: Authors

research report. The research outcomes presented in Table 3 present the study findings that are all about the impact of the tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers. The study discovered that 84.4% of the respondents strongly agreed that faster operation with modern technology. The statement on the cleanliness and location of buildings where Bank of Kigali agents operate were also strongly agreed by 75.0% of the respondents. In addition, 54.2% of this study's respondents strongly agreed that Bank of Kigali agents use modern-looking equipment and others, while 41.7% of the respondents agreed on t-shirts, caps, pens, diaries, and umbrellas. Still, this was the only statement that was both undecided about and disagreed on by 8.3% and 12.5% of the respondents respectively. Besides, the findings were presented in form of mean and standard deviation as presented in the above showed that all the standard deviation values were from 0.32 to 0.45. In addition, results in terms of mean indicated from 3.21, 4.57, 4.51 to 3.37 and this showed very high mean, which explains that there is impact of the tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers. As presented in Table 3, it was found out that all the statements were agreed and strongly agreed apart from the statement of t-

shirts, caps, pens, diary, umbrellas. Though, since most were agreed, this causes one to learn that there is strong impact of tangibility of services provided by Bank Agents on the satisfaction of Bank of Kigali customers. In the interview with the branch agent operators noted that the pandemic affected them hugely. They however expressed optimism about business recovery. The agency banking operators highlighted that bank cards increased convenience for clients. They continued to note that the Bank of Kigali supermarket management can easily make audits smoothly with mobile banking since all transactions made can be traced with ease. The study findings were in line with Uddin and Afrin (2019) that states agency banking especially using bank cards typically has a multi-channel approach to delivering transactional services to its customer base.

Descriptive statistics on customer satisfaction

This section conveyed the respondents' level of appreciation for customer satisfaction in agency banking in Nyarugenge, Gasabo and Bugesera Districts, and the results were presented in Table 4 of this research report. The research results presented in Table 4, the researcher targeted the

respondents to capture information about customer satisfaction whereby the respondents were offered a number of options to choose from. The most strongly agreed factor was that Bank of Kigali customer are loyalty and trust BK services and this was strongly agreed by 90.6% of the respondents. In addition, it was clearly witnessed that 83.3% of the respondents strongly agreed that to Bank of Kigali clients make compliments; whereas 64.6% of the respondents strongly agreed that Bank of Kigali customers make referrals and recommendations. Besides, 62.5% of the respondents strongly agreed that the banking modes that are used in this business are friendly to staff and clients. However, 20.8% of the respondents were undecided about the fact that the banking modes that are used in this business are friendly to staff and clients. The study findings presented in Table 4 revealed that at least each statement was strongly agreed or agreed apart from one of them where respondents were undecided. Thus, the researcher concluded that the respondents of selected districts believe that customer satisfaction is effective in their businesses due to the service quality dimensions. Besides, the findings were presented in form of mean and standard deviation presented in the above showed that all the standard deviation values were from 0.38 to 0.46. In addition, results

Table 5. Spearman test.

Model	Variable	Service quality D	Customer satisfaction
Spearman's rho	Correlation coefficient	1.000	0.798**
	Sig. (2-tailed)	.	0.004
	N	192	192
Customer satisfaction	Correlation coefficient	.798**	1.000
	Sig. (2-tailed)	0.004	.
	N	192	192

** Correlation is significant at the 0.01 level (2-tailed).
Source: SPSS Regression Output (2022)

Table 6. Model summary.

Model	R	R square	Adjusted R square	Std. an error in the estimate
1	0.851 ^a	0.676	0.632	0.2131

^aPredictors: (Constant), empathy, reliability and tangibility.
Source: SPSS Regression Output (2022)

in terms of the mean indicated from 4.24, 4.80, 4.89 to 3.89; and this showed a very high mean, which explains that there is level of appreciation for customer satisfaction in agency banking in Nyarugenge, Gasabo and Bugesera Districts. The findings are in line with Saravanan and Rao. (2007) who put it that from a performance perspective, customer satisfaction is fundamental and it can be expressed in many ways including referrals (recommendations), compliments and loyalty, and trust. The following types of service quality dimensions can be distinguished based on the kind of investor-involved portfolio investment, involving widely held equity securities intercompany equity securities, involving ownership links between related units, and equity securities relating to privately owned corporations.

Inferential statistics

In order to realize the effect of service quality dimensions and customer satisfaction and with the help of SPSS, this section detailed inferential statistics in form of both correlation analysis and regression analysis of the study results. In an actual sense, this section enables us to establish the relationship between the service quality dimensions and customer satisfaction.

Spearman correlation analysis

Spearman Correlation analysis helped the researcher to recognize the relationship that lies between an independent variable and the dependent variable of this study. The findings were presented in Table 5. Table 5

presents the results of the Spearman test and they discovered the value of $r_s=0.798$ and $p=0.004$ which explains that there was a strong, positive correlation between service quality dimensions and customer satisfaction in Bank of Kigali ($= .798$, $n = 192$, $p < .004$). Based on the spearman analysis, therefore, the researcher learnt that service quality dimensions in terms of empathy, reliability, and tangibility have a strong relationship with customer satisfaction in agency banking in Rwanda.

Regression analysis

The regression analysis presented results that were all about model summary, ANOVA, and coefficient findings. The results presented in Table 6 are in relation to the model summary. Findings revealed in the table show that 63.2% of changes in customer satisfaction could be accounted for by empathy, reliability, and tangibility. Thus, a strong positive impact between the study variables marked by $R=.851^a$ as asserted in the model summary table. The model instantaneous designated that an adjusted R squared is coefficient that governs the disparity in the reliant variable because of the variations in the liberated variable. As revealed in the table, the value of adjusted R squared was 0.632, an indication that there was a variation of 63.2% in customer satisfaction due to changes in empathy, reliability, and tangibility. This means that 36.8% is for the other factors that influence the variation of customer satisfaction in agency banking in Rwanda and the Bank of Kigali in particular. As revealed in Table 7, ANOVA test findings revealed that independent variables are statistically significant to

Table 7. Analysis of variance (ANOVA).

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	6.025	4	1.506	3.508	0.000 ^b
	Residual	80.369	187	0.429		
	Total	86.394	191			

^aDependent variable: Customer satisfaction; ^bPredictors: (Constant), empathy, reliability, and tangibility.
Source: SPSS Regression Output (2022)

Table 8. Coefficients.

Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
1	(Cons)	1.912	0.678		2.820	0.774
	Emp.	0.317	0.169	0.565	1.876	0.004
	Rel.	0.679	0.871	0.641	0.758	0.002
	Tan.	0.383	0.287	0.533	1.336	0.013

^aDependent variable: Customer satisfaction.
Source: SPSS Regression Output (2022)

the dependent variable and the p-value was found to be 0.000 which is less than alpha (5%), the significant positive impact level. In addition, the results clarify that the given perfectly well with the multiple regression models. Therefore, the significance value was less than 0.05, an indication that the model was statistically significant. This means the given data fit well with the multiple regression models. Findings obtained and presented in Table 8 were established as a regression equation as shown below:

$$\text{Customer satisfaction} = \alpha + \beta^1 (\text{Empathy}) + \beta^2 (\text{Reliability}) + \beta^3 (\text{Tangibility}) + \epsilon (\text{Error})$$

$$\text{Customer satisfaction} = 1.912 + 0.565 (\text{Empathy}) + 0.641 (\text{Reliability}) + 0.533 (\text{Tangibility}) + 0.678.$$

In line with the regression equation results as presented in Table 8, it was revealed that holding empathy, reliability, and tangibility to a constant zero, customer satisfaction would be 1.912. As revealed in the table, of course, this constant called y-intercept is not realistic but it is a needed parameter in the model. In addition to the findings, since earlier the study also found that all the p-values were less than 0.05; this is a confirmation that all the variables were statistically significant in influencing customer satisfaction in Bank of Kigali agency services. Indeed, this constant called y-intercept is not realistic but it is a needed parameter in the model as presented in Table 8. As per the findings, there is a positive and significant impact of empathy on customer satisfaction in the selected agencies ($\beta = 0.565$; t test = 1.876; p-value < 5%). Thus, you reject the null hypothesis. This implies that a unit increase in empathy would lead to customer satisfaction in the selected agencies by a factor of 0.565.

Likewise, there is a positive and significant impact of reliability on customer satisfaction in the selected agencies ($\beta = 0.641$; t test = 0.758; p-value >5%). Thus, the null hypothesis was rejected. This implies that a unit increase in reliability would lead to increase customer satisfaction in the selected agencies by a factor of 0.641. In addition, there is a positive and significant impact of tangibility on customer satisfaction in the selected agencies ($\beta = 0.533$; t test = 1.336; p-value >5%). Thus, the null hypothesis was rejected. This implies that a unit increase in tangibility would lead to customer satisfaction in the selected agencies by a factor of 0.533. The researcher asserted that there was a strong positive and significant impact among the study variables as shown by the regression analysis. This, therefore, led to the rejection of all the study's null hypotheses.

DISCUSSION

This study considered both descriptive and inferential analyses. The discovered results in the model summary revealed that there was a variation of 63.2% in customer satisfaction due to changes in empathy, reliability, and tangibility. This means that 36.8% is for the other factors that influence the variation of customer satisfaction in agency banking in Rwanda and the Bank of Kigali in particular. In addition, as revealed, ANOVA test findings revealed that independent variables are statistically significant to the dependent variable and the p-value was found to be 0.000 which is less than alpha (5%), and there is a significant positive impact level. This means the given data fit well with the multiple regression models. In line with the regression equation results, it was revealed

that there is a positive and significant impact of empathy on customer satisfaction in the selected agencies ($\beta = 0.565$; t test = 1.876; p -value < 5%). Thus, you reject the null hypothesis. This implies that a unit increase in empathy would lead to customer satisfaction in the selected agencies by a factor of 0.565. Likewise, there is a positive and significant impact of reliability on customer satisfaction in the selected agencies ($\beta = 0.641$; t test = 0.758; p -value >5%). Thus, the null hypothesis was rejected. This implies that a unit increase in reliability would lead to increase customer satisfaction in the selected agencies by a factor of 0.641. Referring to the prevailing gaps within the agency banking such as rampant queues at Bank of Kigali branches that had been identified at the start and based on the findings of this study, the researcher asserts that customers largely prefer branches to BK Yacu mainly due to the fact that banking agents lack knowledge about the BK services. Indeed, the findings are consistent with the expectations of the researcher. In addition, there is positive and significant impact of tangibility on customer satisfaction in the selected agencies ($\beta = 0.533$; t test = 1.336; p -value >5%). Thus, null hypothesis was rejected. This implies that a unit increase in tangibility would lead to customer satisfaction in the selected agencies by a factor of 0.533. The researcher asserted that there was a strong positive and significant impact among the study variables as shown by the regression analysis. This, therefore, led to the rejection of all the study's null hypotheses.

Conclusion

This is the last section of the study and it presents the implications of this study. This study's overall objective was to evaluate the impact of service quality dimensions on customer satisfaction in agency banking in Rwanda. To realize this objective, the study adopted both descriptive and correlative research designs. The study's target population included the customers and operators of agency banking in selected districts. Responses were collected from a sample of 208 respondents whereby (192) were given questionnaires whereas (13) respondents were interviewed. This represented a response rate of 100% and this response rate proved enough results to develop a conclusion. The study attempted to analyze agency Banking and Customer Satisfaction in Rwanda. Tapan and Satyabrat (2021) stated that an important concept to consider when developing a customer loyalty program is customer satisfaction. Satisfaction is a critical scale of how well a customer's needs and demands are met while customer loyalty is a measure of how likely a customer is to repeat the purchases and involve in related activities. A banking agent is a retail or postal outlet contracted by a financial institution or a mobile network operator to process a client's transactions. Rather than a branch teller, it is the

owner or an employee of the retail outlet who conducts the transaction and lets clients deposit, withdraw, transfer funds, pay their bills, inquire about an account balance, or receive government benefits or a direct deposit from their employer. Banking agents can be pharmacies, supermarkets, convenience stores, lottery outlets, post offices, and many more (Nityangini and Bhathawala, 2019). In growing countries, Banks and other financial service providers are innovating a new way to deliver their services to the unbanked population, to increase their performance and increase customer satisfaction of their customers. Agency Banking is the latest in a series of technological innovations linking the use of mobile devices, especially mobile phones for distributing Banking products and services. Agency banking support can be an opportunity for the Bank to increase its competitive advantage in the Banking sector through customer satisfaction. With well-established agency banking, customers don't have to travel far and then queue in ATMs and Banking halls to make payments, cash withdraws bill payments, and other transactions. In consideration of the quality service dimensions (Empathy, Reliability and Tangibility) that were considered in this research, customers pointed out that, to some extent, they were satisfied with Agency Banking services and this show that Agency Banking has got a role to play as far as customer satisfaction is concerned. However, the study also identified some challenges in the Agency Banking services that hinder the comprehensive usage of Agency Banking services as can be clarified by the data collected above and hence the rampant queues at the Bank of Kigali's ATMs and Banking halls. It was revealed that customers queue in the ATMs and Banking halls due to; a lack of liquidity, and e-money float balances by Bank agents to meet customer transaction demands, tangibles, leanness, and location of the Agents' outlets, lack of in-depth knowledge and modern skills in banking among Bank agents and Customers as well and limited services that are offered by the Banking agents.

Recommendations

The discovered research findings led to the following recommendations that will help Bank of Kigali Plc to improve its service delivery performance so as customer expectations are exceedingly satisfied. There is a need for service and product teaching courses constantly for Bank of Kigali Plc Agents. This will reinforce bank agents on the bank's products and update them on some customers' needs and will continuously build customer relationships as they will be performing as the real Bank ambassadors. This will always enable the bank agents to be ready for the needs of the customers at all hours and satisfy them with the required information. It is recommended that since the dimensions of Customer satisfaction did not meet the customer's expectations in

one way, certain service dimensions require an improved effort to ensure its enhancement. For service dimensions like tangibles and assurances, actual efforts are required to ensure an improvement in these dimensions. This will help in the overall service delivery and customer satisfaction among the bank agents. To enhance on this the Bank can be in charge of approving the location and painting the Bank agent outlets. There is a need for more agents banking of Kigali Plc to consider the continuous improvement of their Banking agents' products to operate as promised to its customers. The researcher believes this will reduce the customer's queues in ATMs and Banking halls to transact their business, balance inquiries, bill payments, or deposits and withdraws hence enhancing customers' satisfaction. The regulations governing the Bank agents should be continuously reviewed by the regulatory body, as the world is dynamic. This will help to increase the number of services and products that Bank agent offers to the customers. Finally, mass advertisements on Bank of Kigali agents are needed for the public to know more about its services and products and their locations.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

REFERENCES

- Andreassen CS (2018). Developing an instrument to measure customer service quality in branch banking. *International Journal of Bank Marketing* 12(60):10-18.
- April Z, Reddy C (2015). The internationalisation of SMEs in South Africa: Export capacity, capability and commitment. *Journal of Economic and Financial Sciences* 8(2):567-583.
- Bayad K, Pavel AM, Pavel A, Moldovan B (2021). Hotel Service Quality: The Impact of Service Quality on Customer Satisfaction in Hospitality. *Journal of Business Development* 5(12):34-43.
- Bertram K, Berger, Mayland L (2019). *Poor Economics*. New York: Perseus Books.
- Bloemer (2018). Export diversification effects of the WTO trade facilitation agreement. *World Development* 76:293-310.
- Chong E, Kennedy R, Riquire C, Rungie C (1997). The difference between satisfaction and service quality. In EMAC Conference Proceedings pp. 257-269.
- Cronin Jr JJ, Taylor SA (1992). Measuring service quality: a reexamination and extension. *Journal of Marketing* 56(3):55-68.
- Donabedian A (2005). The definition of quality and approaches to its assessment Exploration in quality assessment and monitoring, Volume 1. Health Administration Press, Ann Arbor pp. 12-17. Available at: <https://psnet.ahrq.gov/issue/definition-quality-and-approaches-its-assessment-vol-1-explorations-quality-assessment-and>
- Hajizadeh K (2019). *Strategic Management and Marketing in the Service Sector*, Swedish School of Economics and Business Administration Helsinki 21(7):54-57.
- Hakkeem DMA, Sha YM (2015). An empirical study towards customer satisfaction in internet banking services with special reference to Tiruchirappalli District. *International Journal of Scientific Research* 4(5):1-4.
- Jahan I (2019). Agent banking as a relationship marketing tool by banks in Bangladesh. Available at: <https://www.diva-portal.org/smash/record.jsf?pid=diva2:1365084>
- Jamal M, Naser K (2018). *Research Methodology – Methods and Techniques*, USA. New Age International (P) Ltd KCB Annual Report. pp. 123-130.
- Levesque T, McDougall GH (1996). Determinants of customer satisfaction in retail banking. *International Journal of Bank Marketing* 6(8):111-134.
- Lotto B (2019). *Fundamentals of Financial Management*. England: Home Publishers 2(1):234-241.
- Lyman K, Ivatury J, Staschen H (2019). Technology management. *Encyclopedia of Management*. Ed. Marilyn Helms, D.B.A. 5th ed. Detroit: Boston: Library of Congress pp. 892-899.
- Mugenda O, Mugenda S (2018). *Research Methods, Quantitative and Qualitative Approaches*. ACT, Nairobi 6(10):54-59.
- Munari L, Ielasi F, Bajetta L (2013). Customer satisfaction management in Italian banks. *Qualitative Research in Financial Markets* 5(2):139-160.
- Nityangini L, Bhathawala H (2019). The role of agency banking in growth of banking sector in India: A survey of bank agents in New Delhi. *International Journal of Economics, Commerce and Management* 9(9):76-79.
- Saravanan R, Rao KSP (2007). Measurement of service quality from the customer's perspective—an empirical study. *Total Quality Management and Business Excellence* 18(4):435-449.
- Sheikh AH (2018). *Research methods for business: a skill building approach* (4th edition). New Delhi: John and Sons, Inc.
- Tapan K, Satyabrat J (2021). A study on Customers perception about public private banks, *International Journal of Scientific and Research Publications* 6(8):111-134.
- Uddin K, Afrin M (2019). Effects of agency banking on customer satisfaction in the banking industry in Kenya. *International Academic Journal of Economics and Finance* 5(1):29-42.

Full Length Research Paper

The influence of the college environment on the development of entrepreneurial intentions

Isabel Elitas Chilangwa^{1*}, Clement Mwaanga² and Moulen Siame²

¹Department of Applied Sciences and Business Studies, Faculty of Business Studies,
Northern Technical College, Zambia.

²Department of Business Studies, Faculty of Business Studies, Mulungushi University, Zambia.

Received 14 July, 2022; Accepted 28 November, 2022

This study aimed to assess the factors that influence the formation of entrepreneurial intentions (EIs) among college students in Zambia. The research was built on the theory of planned behaviour (TPB) by Ajzne, to identify how the constructs of the same theory are manipulated by the factors that influence entrepreneurship intention formation among college students at Northern Technical College and Kabwe Institute of Technology. Primary data were obtained from 300 students through a self-administered questionnaire and was analysed using structural equation modelling. The study findings reported a positive relationship between the independent variables in the name of risk-taking (RST), college environment (CE) and entrepreneurship education (EE) and (EIs). Attitude towards entrepreneurship (ATE) was observed to mediate the relationship between RST and EIs while subjective norms (SN) were observed to mediate the relationship between RST and EIs. Perceived behavioural control (PBC) was reported to mediate the interaction between all three independent variables and EIs. The results presented both theoretical and practical implications and recommendations were made to policymakers and suggestions for future research.

Key words: Entrepreneurial intention, risk-taking, college environment, entrepreneurship education.

INTRODUCTION

Given the growing interest among government in the role entrepreneurship play in achieving socio-economic development objectives, the development of policies aimed to promote entrepreneurship in developing countries has received a lot of attention (Karimi et al., 2017). Many countries are considering entrepreneurship as a panacea for employment creation, technology transfer, infrastructure development and economic growth (Mumba, 2017). To enhance entrepreneurial

activities and promote economic development in Zambia, the government has introduced entrepreneurship subjects in all the programmes offered by Technical education Vocation entrepreneurship and Technology (TEVET) institutions (Kazonga, 2019). Since College schooling is not regarded to be a passageway to acquire formal jobs for graduates hence the prerequisite to contemplate entrepreneurialism and self-employment as a feasible occupation alternative (Ajike et. al, 2015).

*Corresponding author. E-mail: ichilangwa1985@gmail.com.

Although, it is generally accepted that College education increase graduate employability, in Zambia the situation is different. About 72% of the youths are not employed (Mwiya et al., 2017).

Literature has shown that the development of entrepreneurial intentions is a pre-requisite for entrepreneurial behaviour, especially among students (Bagheri and Pihie, 2015). Therefore, establishing the factors that influence the formation of entrepreneurial intention has received a lot of attention among scholars (Tung et al., 2020). According to Yildirim et al. (2016), "these factors are categorized as internal (personality) and external (contextual or environment); personal history, social context, attitudes toward entrepreneurship, planned behaviour and personality traits are pointed out as factors that have impact on the propensity to engage in entrepreneurship". In exploring the formation of students' entrepreneurial intentions, two significant issues have been raised. Firstly, it has been observed that studies establishing the formation of entrepreneurial intention have focused on personality and environmental factors (Luthje and Franke, 2003; Nabi and Linan, 2013). Yildirim et al. (2016) proposed the need for future research to explore further the impact of personality, college environment/education on entrepreneurial intentions in one study. Secondly, these studies have been conducted in developing countries or innovative-driven economies. Hence the need to conduct this studies in a developing country, Zambia in particular by combining these factors.

Therefore, the main aim of this study is to replicate the western models in a developing country context to establish whether these factors have the same influence on the development of entrepreneurial intentions among students in Zambia and those in developed countries and hence the rationale for this study.

Theoretical framework

Entrepreneurship and TPB

Entrepreneurship is regarded as the backbone of economic growth in an economy due to its ability to exploit opportunities in the market and change its structure (Wilfred, 2015). Its consists of three key elements namely; the creation or expansion of business; risk-taking or acceptance of failure and identification and exploitation of new opportunities to produce new products or processes/markets (Muhumed, 2021). European Commission (2012) states that the basis for the establishment of an activity socially or commercially for entrepreneurs is the term, entrepreneurship. Entrepreneurship is nothing but the process of creating new things valuably responding in particular to available opportunities; hence involves time, effort and risk assumption with the expectation of rewards in the end which can take monetary or non-monetary form (Pahuja

and Sanjeev, 2016). Entrepreneurship is considered to be a combination of Entrepreneur and Enterprise (Badhai, 2005). As a way to understand entrepreneurship in full, there should be clear definitions of who an entrepreneur is and what an enterprise is. A definition by Gedik et al. (2015) of an entrepreneur is that the term refers to "someone who manages organizes and presumes the risks of an enterprise or a business"; creates or develops something that no one has thought about it before. In this case, EI is considered to be the basis for establishing a new business venture in the long run (Karimi et al., 2017).

According to Chinonye et al. (2016), EI is defined as, the willingness of an individual to express entrepreneurial behaviour or engages in entrepreneurial activities associated with self-employment initiatives or new business start-ups.

Krueger (1993) states that, EI is the dedication to carry out a certain action necessary to physically start a business venture. On the other hand, Bird (1988), EI is an alert disposition focusing on individual experience, attentiveness, and conduct about entrepreneurial behaviours. EIs of individuals are known to predict entrepreneurial behaviours although there is no identical definition of EIs despite many studies having been conducted (Peng et al., 2012; Ohanu and Ogbuanya (2018) state that the intention for entrepreneurship is a result of one's attitudes and values; that is the motivation or desire to set up and manage a business venture also known as an enterprise. Mwiya et al. (2017) state that intention in itself is a demonstration of how much more someone is eager to strive and how much of an endeavour he or she is prepared to employ, to carry out intended actions.

To understand the formation of EIs and how they translate into entrepreneurial behaviour, most of the studies have employed the TPB (Karimi et al, 2017; Mustafa et al., 2016; Alok et al., 2017; Laguía et al., 2019; Zovko et al. (2020). The TPB by Ajzen (1991) has been extensively applied in EIs studies in the last decade (Ebewo et. al, 2017). The model explains the link between human belief and human behaviour in an attempt to undertake a certain course of action using three antecedents of EIs as follows:

a. Attitudes towards Entrepreneurship (ATE)- refers to the degree of conduct subject to a person's evaluation or assessment that is either favourable or unfavourable concerning the behaviour in question (Saraih et al., 2018).

b. Social Norm (SN) is said to be one's perception of the pressure exerted by society to either carry out or not particular behaviours such as influence by parents, role models, and peers among others (Zovko et al., 2020).

c. Perceived Behavioural Control (PBC)- this is one's viewpoint of easiness or difficulties in undertaking certain

actions. This may be one's subjective behaviour such as personal assessment of whether one can do it or not reflecting on experience or anticipated obstacles and failures (Pejic et al., 2018)

A study conducted by Shah and Soomro (2017) reported a positive interaction between the two antecedents of EIs (ATE and SN) and EIs and PBC was not statistically significant. Other studies have indicated a positive relationship between three antecedents of EIs (ATE, SN and PBC) and EIs (Fantaye, 2019; Kwarbai et al., 2016; Zovko et al., 2020). A survey by Wambua et al. (2020) carried out in Kenya on graduating students of business studies underscores the influence of ATE as a mediating variable in the creation of entrepreneurship intentions amongst students. Karla et al. (2017) state that PBC in line with intention was seen to be strengthened by entrepreneurial education (EE) while the university environment through ATE affected the intentionality to be entrepreneurial through attitude towards entrepreneurship. Based on the above discussion, we tested the following hypotheses

H1a: ATE as an antecedent of EIs mediate the relationship between EE and EI

H1b: ATE as an antecedent of EIs mediate the relationship between EC and EI

H1c: ATE as an antecedent of EIs mediate the relationship between RST and EI

H2a: SN as an antecedent of EIs mediate the relationship between EE and EI

H2b: SN as an antecedent of EIs mediate the relationship between CE and EI

H2c: SN as an antecedent of EIs mediate the relationship between RST and EI

H3a: PBC as an antecedent of EIs mediate the relationship between EE and EIs

H3b: PBC as an antecedent of EIs mediate the relationship between CE and EIs

H3c: PBC as an antecedent of EIs mediate the relationship between RST and EIs

EE and EIs

EE is considered to be one of the factors that influence the development of EI, especially among students. However, Kurniawan et al. (2021) suggested that EE only is not sufficient because life in itself is education although it is pervasive. They then conclude that formal, informal, and non-formal education can lead to any entrepreneurialism decision. According to Maresch et al. (2016) EE increases EIs. Along the same line, additionally, and Kisolo (2016) established that entrepreneurial knowledge/education of the undergraduate using a sample of 100 students significantly affected their intent. Israr and Saleem (2018) a study conducted in Italy showed that EE showed

positive results towards intention. It can be seen that EE affects the intentions of would-be entrepreneurs moderately as presented by Keat et al. (2011). Kwarbai et al. (2016), presented results in which students accessing EE had a high likelihood of forming enterprises as opposed to those that did not partake. Among all the various elements favourable towards the initiative to be entrepreneurial, education is distinctive since it becomes a part of cognitive as well as socio-cultural approaches (Peris-Ortiz et al., 2016). As indicated by Zovko et al. (2020), EE plays a noticeable role in students' awareness of their ability to lead entrepreneurial activity and their weaknesses in management which need to be improved. However, contradictory results were found in a study conducted by Mohammed (2020) that found an insignificant relationship between EE and EIs. Therefore, students who have acquired knowledge of entrepreneurship education are more likely to engage in entrepreneurial activities. Thus the hypothesis was formulated as follows and tested:

H4: EE as an environmental variable has a positive relationship with EIs

RST and EIs

RST as a personality factor has a significant influence on the formation of EIs (Antoncic, 2000). For a long time, researchers in the field of entrepreneurship have reinforced the idea that establishing an enterprise is a risky behaviour, trying to prove that willingness to take risks or risk appetite is a personal feature that distinguishes between entrepreneurs and non-entrepreneurs; the former can bear risks independently as there is no fear of the obstacles hence, he/she is careful of everything and takes the necessary measures to deal with sudden cases (Omar et al., 2018).

The propensity to take on risks is said to be an ability to take or avoid risks; hence entrepreneurship in the same vein has always been likened to RST (Ozaralli and Nancy, 2016). The ability to take risks was regarded as having a linear relationship with intentions to be enterprising according to Moraes et al. (2018). Attitude toward RST was seen to affect intentions to be enterprising (Moraes et al., 2018). Zovko et al. (2020) concluded that Croatian students with a reduced aversion toward risk had entrepreneurial intentions for a higher degree. A study carried out to ascertain how readiness to bear risk affects the intention to be enterprising learners presented that being a lover of risk positively but moderately affected intentions hence the conclusion that willingness to be a risk-taker is one distinctive factor for features of entrepreneurship (Yurtkoru et al., 2014). A study was conducted among 274 Pakistani students (university level) in assessing the impact of the five major personal characteristics on intentionality for entrepreneurship with risk aversion as a mediator; there

Table 1. Demographic characteristics of respondents.

Variable		Frequency	Percent
Gender	Male	182	60.7
	Female	118	39.3
Age	Below 20 y	9	3
	20-21 y	30	10
	22-23 y	72	24
	24-25 y	42	14
	Above 25 y	147	49
Departments	Electrical	119	39.7
	Mechanical	121	40.3
	Automotive	26	8.7
	Applied Sciences and Business Studies	34	11.3
Qualification	Craft Certificate	4	4
	Advanced Certificate	15	15
	Diploma	81	81

Source Authors

is therefore a considerable relationship between aversion to risk and intentions (Malik et al., 2020). Given the above discussion, the hypothesis was tested which reads:

H5: RST as a personality factor has a positive influence on EIs

CE and EIs

Literature has described the CE as a place where individuals interact which at the same time has a great influence on the decision to become entrepreneurs (Barral et al., 2018). Moraes and others (2018) state that the environment is a construct for EI which is influential in that when the assessment of the environment is positive, EI tends to increase.

Moraes et al. (2018) further add by citing CE as a factor that affects the intention to be enterprising to the highest degree; this way, when there is a positive assessment of the CE by the student; intention also increases. A survey by Moraes et al. (2018) was used to probe entrepreneurial and CE traits' effect on the intention to be enterprising using 287 students at the undergraduate level imploring a layout considering the university environment as having a linear relationship with EIs. It was discovered that intentionality by learners to engage in enterprising activities was resulting out of the positive effect of the environment of the university in collaboration with some existing information on entrepreneurship studies. A survey of 3037 targeted graduates of business studies in the public higher learning institutions with a sample size of 354 students; analysis was done and it revealed that an insignificant but positive correlation

existed between CE and intentions to be enterprising by business-related learners in public institutions (Wambua et al., 2020). With this information, the hypothesis was tested which reads:

H6: CE as an environmental factor has a positive relationship with EIs.

METHODS

Sample and data collection

In this study, a sample size of 300 Northern Technical College and Kabwe Institute of Technology students registered in 2018 was used (Schoch, 2020). Simple random sampling was employed to enhance accuracy and easy access to respondents (Saunders et al., 2009; Babbie, 2007). A total of 300 questionnaires were distributed and returned representing a 100% response rate. As suggested by Hair et al. (2010) the responses from the questionnaires were checked for outliers and missing data before the validation process was conducted. Both independent and dependent items on the questionnaire were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The demographic characteristics of the respondents are indicated in Table 1.

RESULTS

This section presents the findings from the quantitative primary data collected from northern technical and Kabwe institute of technology students. The findings show that 60.7% of the respondents were male and only 39.3% were female. This is attributed to the fact that the College enrolled more males than females and very few

females are willing to take up engineering-related courses. From Table 1 it can be seen that the highest age range of respondents in this research was above 25 years old. This represents 49% of the total respondents sampled followed by 24% which catered for the age range of 22 to 23 years old. The age category from 24 to 25 years followed by those less than 20 years of age took up 14% and 10% respectively.

Of the 300 students surveyed, 40.3% of the respondents were from the Mechanical department, 11.3% from the Applied Sciences and Business Studies while 8.7% were from the automotive department and 39.7% from the Electrical department. This is to say of all the students that are currently pursuing entrepreneurship as a subject, the Mechanical department was more responsive while the Electrical was less responsive.

Lastly, the results show that 35.7% of the respondents were pursuing diploma programs while 47% and 17.3% were pursuing Advanced and Craft certificate programmes respectively.

Factor analysis

To conduct factor analysis, 41 items were used to measure the constructs based on the research model developed to test the hypotheses. Out of 41 items, 4 of them loaded weakly below 0.63 and were excluded from further analysis. The remaining 39 items loaded above 0.63 which indicated the suitability of the measuring instrument (Table 2). Tabachnick and Fidell (2007) recommended factor loadings of 0.63 and above as being very good.

Structural equation modelling

Before SEM was conducted, confirmatory factors analysis was performed to establish the reliability and construct validity of the measurement model (Hair et al., 2010). The proposed model reported an absolute fit (Ahmed and Ward, 2016) of the data ($X^2 = 511.221$; RMSEA= 0.091; CFI=0.985; TLI=0.910). All 7 constructs reported factor loadings above 0.5 which is fair (Tabachnick and Fidell, 2007) and confirmed the discriminant validity of the constructs. Reliability was achieved using the inter-consistency analysis as shown in Table 2. All the nine constructed reported Cronbach alpha values were above 0.5. Additionally, the CR values for all the constructs were greater than 0.5. According to Tabachnick and Fidell (2007), where the AVE values are too strict, the CR values can be used to determine reliability.

To establish the best fit for the data, direct paths were added from RST, CE and EE to EI and from ATE to PBC and vice versa. Only the path from RST to EI and the covariance (ATE and PBC) were significant ($P < 0.05$).

Therefore, the revised model (Figure 1) reported the best fit for the data and was tested.

Table 3 shows the SEM results indicating the hypotheses accepted and rejected. The results have reported a positive association between RST and EI (Coef. 5.246; $p=0.010$). Thus hypothesis *H5* is supported. Also, the interaction between CE and EI was statistically significant (Coef. 0.1717; $p= 0.000$). Hypothesis *H6* is accepted as well. Additionally, EE reported a significant relationship with EI (Coef. 0.4882; $p= 0.000$). Based on these results hypothesis *H4* is accepted.

Testing for mediation

From Table 3, it can be seen that ATE has a significant relationship with EI (Coef. 0.1611; $p= 0.000$), but its association with CE was not statistically significant (Coef. 0.0528; $p=0.151$). Therefore, ATE was not found to mediate the relationship between CE and EI. Thus, *H1b* was not supported. However, ATE reported positive associations with RST (Coef. 0.4774; $p=0.000$) and hypothesis *H1a* was not supported. Furthermore, its association with EE (Coef, -0.0108; $p=0.778$) was not statistically significant and hypothesis *H1c* was also rejected.

The relationship between SN and the two independent variables yielded non-significant results. SN had a negative relationship with EE (Coef. -0.0476; $p=0.068$) and CE (Coef. -0.0277; $p=0.268$). Its relationship with RST was statistically significant (Coef. -8.4234; $p=0.000$). Additionally, its relationship with EI was significant (Coef. 0.6134; $p= 0.000$). Thus SN mediates the relationship between the independent variable RST and EI. Based on the above discussion, hypothesis *H2c* was accepted.

PBC was found to be positively related to all the independent variables; CE (Coef. 0.2663; $p=0.000$), EE (Coef. 0.2663; $p=0.000$) and RST (Coef. 0.7279; $p=0.000$). The interaction between PBC and EI was also significant (Coef. -0.1622; $p=0.000$). The findings indicate that PBC mediates the relationship between the independent variables and EI. Therefore hypotheses *H3a*, *H3b* and *H3c* were supported.

DISCUSSION

In this study, the personality factors (RST) and environmental factors (CE and EE) were added to the TPB and examined to determine their influence on the EIs of College students in the Zambian context. The analysis in Table 3 revealed a significant association between the RST and EIs. The results are in agreement with the findings from previous studies which reported a positive interaction between RST and EIs (Ozaralli and Nancy, 2016; Antoncic, 2000; Omar et al., 2018; Moraes et al., 2018). Increasing students' ability to take up risks

Table 2. Factor Loadings and Composity Reliabilities.

Latent variable	Iten	Factor loading	CR	Cronba
ATE	B1: Starting my own business would offer great satisfaction to me than being employed given all resources.	0.902	0.909	0.755
	B2: Being an entrepreneur presents more advantages than disadvantages to me	0.682		
	B3: I can spot good business opportunities long before others can	0.780		
	B4: I am confident It would be easy for me to start my own business and be successful	0.784		
	B5: Nothing is more exciting than seeing my ideas turn into reality	0.761		
	B6: Entrepreneurship is one of my favourite subjects	0.824		
PBC	C2: In my college, there are lots of students pursuing their ideas for business	0.775	0.897	0.806
	C3: The entrepreneurship content taught at my college is good enough to equip students with the skills to start and manage a business.	0.657		
	C4: Entrepreneurship cannot be taught	0.700		
	C5: I am prepared to start a viable firm after learning about entrepreneurship	0.668		
	C6: In my college, there is a well-functioning support infrastructure to support the start-up of new firms	0.700		
	C7: I know many people in my college who have successfully started up their businesses after graduation	0.779		
SN	D1: If I became an entrepreneur, my family would consider it to be	0.853	0.908	0.844
	D2: If I became an entrepreneur, my close friends would consider it to be	0.915		
	D3: Overall I consider entrepreneurship a career	0.861		
EI	E1: I will take risks and make efforts to start and run my firm	0.839	0.913	0.818
	E2: My professional goal is to become an entrepreneur	0.799		
	E3: I have a strong intention to start a business someday	0.916		
	E4: I am determined to create a business in the future	0.849		
CE	F1: The college environment helps me to identify business opportunities	0.768	0.891	0.849
	F2: The college environment motivates me to want to open my own business	0.719		
	F3: The college environment develops my leadership skills through group work	0.899		
	F4: The college environment enhances my creativity and ability to innovate	0.672		
	F5: The college environment provides me with planning and strategy tasks in different disciplines, developing my ability to plan	0.817		
	F6: The college environment has enabled me to relate to and analyze the variables that influence the result of a problem, increasing my ability to take calculated risks.	0.675		
RST	G1: I would assume a long-term debt, believing in the advantages that a business opportunity would bring me	0.702	0.867	0.763
	G2: I admit to taking risks in exchange for possible benefits.	0.799		
	G3: My decisions are not predominantly based on my comfort zone	0.829		
	G4: I believe that getting involved in situations of higher risk will create results of great impact.	0.816		
EE	H1: Knowledge about the entrepreneurial environment	0.792	0.918	0.889
	H2: Greater recognition of the entrepreneur's figure	0.817		
	H3: The inclination to be an entrepreneur	0.864		
	H4: The necessary abilities to be an entrepreneur	0.873		
	H5: The intention to be an entrepreneur	0.817		

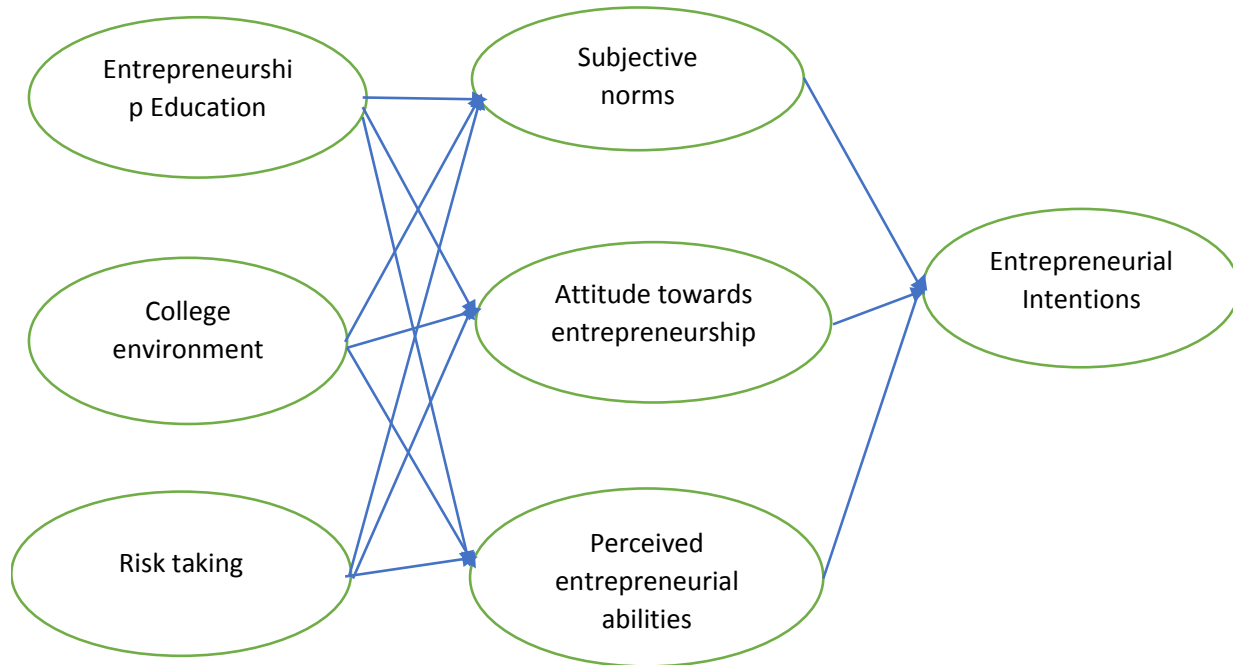


Figure 1. Conceptual model. Source Authors

Table 3. Structural equation model: Revised conceptual model.

		Ceof.	P>[z]
Structural EI <-	RST	5.246	0.010
	CE	0.1717	0.000
	EE	0.4882	0.000
	ATE	0.1611	0.000
	SN	0.6134	0.000
	PBC	-0.1622	0.000
ATE <-	RST	0.4774	0.000
	CE	0.0528	0.151
	EE	-0.0108	0.778
SN <-	RST	-8.4234	0.000
	CE	0.0277	0.268
	EE	-0.0476	0.068
PBC <-	RST	0.7379	0.000
	CE	0.2868	0.000
	EE	0.2663	0.000

Source: Authors

enhances their chances and abilities to identify and exploit new business opportunities and engage in entrepreneurial behaviour. Yurtkoru et al. (2014) suggested that risk-taking is one of the characteristics of

an entrepreneur. Therefore, enhancing the risk-taking abilities of College students will stimulate their formation of EIs and prepare them to create new business ventures.

Most studies have reported a positive relationship between EE and EIs (Maresch et al., 2016; Israr and Saleem, 2018; Kurniawan et al., 2021; Kwarbai et al., 2016). The results of this study are in agreement with the prior studies on entrepreneurial intentions. The relationship between EE and EI was statistically significant in Zambia. This can be attributed to the similarities in the design and offering of EE in developing countries like Zambia and developed nations. It was observed that students who are equipped with entrepreneurial knowledge and skills are more likely to undertake entrepreneurial activities (Zovko et al., 2020). Therefore, when the EE is properly designed and offered to students, their ability to recognise and exploit opportunities is enhanced and they can engage themselves in entrepreneurship behaviours. However, contrary results were reported in a study conducted by Mohammed (2020) who reported an insignificant relationship between EE and EIs.

Another positive association was observed between CE and EIs like in previous studies (Barral et al., 2018; Moraes et al., 2018). On the other hand, a study conducted by Wambua et al. (2020) reported a non-significant relationship between CE and EI. The explanation for this is that the assessment of the College environment differs between students in developed

economies and those in developing economies like Zambia. When students have a positive assessment of the College environment and other support services being offered, their formation of EI is stimulated (Moraes et al., 2018).

Several prior studies reported positive interaction between the three antecedents of entrepreneurial intentions (ATE, SN and PBC) and EIs (Linan and Chen, 2009; Nabi and Linan, 2013; Fantaye, 2019; Kwarbai et al., 2016; Zovko et al., 2020) this study was not exceptional. All three antecedents of entrepreneurial intentions (ATE, PBC and SN) reported significant interactions with EIs. With regards to independent variables, RST was reported to be positively related to ATE while EE and CE were not. This was an indication that ATE mediates the relationship between RST and EIs. A recent study conducted by Wambua et al. (2020) on students in Kenya found ATE to be a mediator in the formation of EIs. Similarly, Karla et al (2017) reported a significant association between ATE and EIs. Thus increasing students' ATE through enhanced RST could positively influence the formation of EIs among students. On the other hand, CE and EE were not found to be positively related to SN except for RST suggesting that RST mediates the relationship between RST and EIs.

On PBC, all three independent variables reported positive interactions highlighting the mediating effects of PBC on the relationship between EE, CE and RST and EIs. From the findings, it can be seen that improving EE, CE and RST strengthens students' PBC which could influence positively the formation of EIs.

Conclusion

This research aimed to investigate the influence of personality and environmental factors on the formation of students' entrepreneurial intentions in Zambia. The study has reported positive interactions between the independent variables (EE, CE and RST) and EIs. Also, the mediation effects of PBC on the relationship between three independent variables and EI have been established. Furthermore, the antecedents of entrepreneurial intentions ATE and SN have been observed both to mediate the relationship between RST and EIs while the other mediations on EE and CE failed.

The study results provide both theoretical and practical implications. Theoretically, the study has highlighted the significance of personality and environmental factors in the formation of entrepreneurial intentions of College students.

The study has demonstrated that environmental factors and personality factors studied in isolation to university students can be combined to College students to explain the formation of EIs. From the practical perspective, the study has identified the environmental factors that enhance the formation of entrepreneurial intentions. Improving CE in terms of infrastructure and material

resources, strengthening entrepreneurship education and enhancing students' RST ability could positively increase their ATE, PBC and SN and influence the formation of intentions. Therefore educators should provide the necessary infrastructure required for experiential learning to increase students' abilities and competencies needed for venture creation.

While some of the independent variables and antecedents of EI have not reported positive results. Additional research is needed to be conducted in different developing countries, incorporate more personality and contextual variables and operationalised them differently (Karimi et al, 2017). Furthermore, there needs to be studied further on the CE by focusing more on the impact close family and friends influence on students' EIs employing the mixed method of data collection which is one of the limitations of this study. Additionally, future research can also compare the formation of EI between students from private and public Colleges.

The theory of planned behaviour proves to be a tool that directly influences intention at the effect of other factors contextual or inherent. The research findings recommend that the study of Entrepreneurship is split into two to be offered in the first year of study as well as the final year to create an entrepreneurial environment conducive to business establishment and growth. An entrepreneurship centre is also recommended to be established that will have a database of graduates that become entrepreneurs for easy links and connections between students and graduates as well as other successful entrepreneurs.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

- Ahmed E, Ward R (2016). Analysis of factors influencing acceptance of personal, academic and professional development e-portfolios. *Computers in Human Behavior* 63:152-161.
- Ajike D, Kelechi NG, Hamed A, Onyia V, Kwarbai JD (2015). Entrepreneurship education and entrepreneurial intentions: The role of theory of planned behaviour. *International Journal of Advanced Research in Social Engineering and Development Strategies* 3(1):1-10.
- Ajzen I (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes* 50(2):179-211.
- Alok S, Kocherlakota N, Beernelly S (2017). 'Gender and Entrepreneurial Intentions: A Study Among BITS-Pilani Students. *IUP Journal of Entrepreneurship Development* 14(4):7-24.
- Antoncic B (2000). Intrapreneurship: Construct refinement and an integrative model development. Case Western Reserve University.
- Babbie E (2007). *The practice of social research*. Thomson Learning Academic Center. USA.
- Badhai B (2005). *Entrepreneurship for Engineers*. 5th ed. Gagan Kapur. New Delhi.
- Bagheri A, Pihie ZA (2015). Factors influencing students' entrepreneurial intentions: The critical roles of personal attraction and perceived control over behavior. *The International Journal of Management Science and Information Technology* 16:16-28.

- Barral MRM, Ribeiro FG, Canever MD (2018). Influence of the university environment in the entrepreneurial intention in public and private universities. *RAUSP Management Journal* 53:122-133.
- Bird B (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review* 13(3):442-453.
- Chinonye LM, Maxwell A, Musanmula A, Mayowa A, Inelo F (2016). Entrepreneurship education and entrepreneurial intentions: The moderating role of passion. *The Social Sciences* 11(5):645-653.
- Ebewo PE, Shambare R, Rugimbana R (2017). Entrepreneurial intentions of Tshwane University of technology, arts and design students. *African Journal of Business Management* 11(9):175-182.
- European Commission (EC) (2008). Needs and Constraints; Analysis of the Three Dimensions of Third Mission Activities. Available at: <http://www.E3mproject.Eu/Docs/Three-Dim-Third-Mission-Act.Pdf>
- Fantaye MD (2019). Factors Affecting Entrepreneurial Intention among Graduating Students at Debre Berhan University, Ethiopia. *Journal of Investment and Management* 1(8):25-31.
- Gedik Ş, Miman M, Kesici MS (2015). Characteristics and attitudes of entrepreneurs towards entrepreneurship. *Procedia-Social and Behavioral Sciences* 195:1087-1096.
- Hair JF, Black WC, Babin BJ, Anderson RE, Tatham R (2010). *Multivariate data analysis* (7th edition). Harlow: Pearson Education Limited.
- Israr M, Saleem M (2018). Entrepreneurial Intentions Among University Students In Italy. *Journal of Global Entrepreneurship Research* 1(8):1-14.
- Karimi S, Biemans JAH, Mahdel NK, Lens T, Chizari M, Mulder M (2017). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology* 52(3):227-240.
- Karla S, Guillermo H, Paulina G, Julián G (2017). Prior exposure and educational environment towards entrepreneurial intention. *Journal of Technology Management and Innovation* 12(2):45-58.
- Kazonga E (2019). Implications of Policy and Legal Frameworks on Higher Education in Zambia- Excellence in Higher Education 8:8-13.
- Keat OY, Selvarajah C, Meyer D (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science* 2(4):1-10.
- Kisolo M (2016). Factors determining entrepreneurial intentions among university students in Kenya: A case of USIU-Africa. Available at: <http://Erepo.Usiu.Ac.Ke/11732/2643>
- Krueger N (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship Theory and Practice* 18(1):5-21.
- Kurniawan M, Yudoko G, Basri M, Umbara A (2021). Do entrepreneurship students have an intention to become an entrepreneur? Available at: <http://www.Abacademies.Org./Articles/Do-Entrepreneurship-Students-Have-An-Intention-To-Become-An-Entrepreneur-7969.Html>
- Kwarbai J, Ajike E, Nnorom G, Akinlabi B, Valerie A (2016). Entrepreneurship education and entrepreneurial intentions: The role of theory of planned behaviour 1 2. Available At https://www.Academia.Edu/24439094/Entrepreneurship_Education_And_Entrepreneurial_Intentions_The_Role_Of_Theory_Of_Planned_Behaviour_1_2?
- Laguía A, Moriano JA, Gorgievski MJ (2019). A psychosocial study of self-perceived creativity and entrepreneurial intentions in a sample of University students. *Thinking Skills and Creativity* 31:44-57.
- Linan F, Chen Y (2009). Development and cross-cultural application of a specific instrument to measure Entrepreneurial Intentions. Available at: https://www.Academia.Edu/4568820/Development_And_Cross_Cultural_Application_Of_A_Specific_Instrument_dTo_Measure_Entrepreneurial_Intentions
- Luthje C, Franke N (2003). The making of an entrepreneur: Testing a model of entrepreneurial intentions among engineering students at MIT. *Research and Development Management* 33(2):135-147.
- Malik A, Muhammad A, Khattak S, Muhammad A (2020). Personality Traits and Entrepreneurial Intention: The Mediating Role of Risk Aversion. Available at: <https://Doi.Org/10.1002/Pa.2275>
- Maresch D, Harms R, Kailer N, Wimmer-Wurm B (2016). The Impact of Entrepreneurship Education on the Entrepreneurial Intention of Students in Science and Engineering versus Business Studies University Programs. *Technological Forecasting and Social Change* 104:172-179.
- Mohammed W (2020). Factors affecting entrepreneurial intention among graduating students at Mizan Tepi University. *Ethiopia Journal of Economics and Economic Education Research* 21(5):1-12.
- Moraes GH, Iizuka ES, Pedro M (2018). Effects of entrepreneurial characteristics and university environment on entrepreneurial intention. *Revista de Administração Contemporânea* 22:226-248.
- Muhumed A (2021). Entrepreneurship: What Is Entrepreneurship? Available at: https://www.Academia.Edu/25526008/ENTREPRENEURSHIP_What_Is_Entrepreneurship
- Mumba E (2017). Causes of Failure of Entrepreneurship in Zambia. *The International Journal of Multi-Disciplinary Research* 2017:1-22.
- Mustafa MJ, Hernandez E, Mahon C, Chee LK (2016). Entrepreneurial intentions of university students in an emerging economy. The influence of university support and entrepreneurial intention. Available At: <https://doi.org/10.1108/JEEE-10-2015-0058>
- Mwiya B, Yong W, Shikaputo C, Kaulung'ombe B, Kayekesi M (2017). Predicting the Entrepreneurial Intentions of University Students: Applying the Theory Of Planned Behaviour in Zambia, Africa. *Open Journal of Business and Management* 5:592-610.
- Nabi G, Linan F (2013). Considering business start-ups in recession: The role of risk perception and economic context in shaping entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour and Research* 19(6):633-655.
- Ohanu IB, Ogbuanya TC (2018). Determinant factors of entrepreneurship intentions of electronic technology education students in Nigerian universities. *Journal of Global Entrepreneurship Research* 8(1):1-17.
- Omar BD, Benachenhou SM, Arzi F (2018). The role of individual factors as a predictor of entrepreneurial intention: Case of female university students. *Management Review* 8(1):28-34.
- Ozaralli N, Nancy R (2016). Entrepreneurial intention: antecedents to entrepreneurial behavior in the USA and Turkey. *Journal of Global Entrepreneurship Research* 6(1):1-32.
- Pahuja A, Sanjeev R (2015). Introduction to Entrepreneurship. Available at: <https://Srn.Com/Abstract=2761878>
- Pejic B, Mirjana A, Merkač S (2018). Examining determinants of entrepreneurial intentions in Slovenia: Applying the theory of planned behaviour and an innovative cognitive style. *Economic Research-Ekonomska Istraživanja* 31(1):1453-1471.
- Peng Z, Lu G, Kang H (2012). Entrepreneurial intentions and its influencing factors: A survey of the university students in Xi'an China. *Creative Education* 3(8):95-100.
- Peris-Ortiz M, Álvarez-García J, Rueda-Armengot C (2016). Entrepreneurial intentions and entrepreneurship education to University students in Portugal. *Technology, Innovation and Education* 2(1):1-11.
- Saraih U, Zuraini A, Mutalib S A, Tunku S, Harith A (2018). Examining the relationships between attitude towards behaviour, subjective norms and entrepreneurial intention among engineering students. In *MATEC Web of Conferences* P 05011.
- Saunders M, Lewis P, Thornhill A (2009). *Research methods for business students*. 6th ed. Essex: Pearson Education Limited
- Schoch K (2020). Case study research. *Research design and methods: An applied guide for the scholar-practitioner* pp. 245-258.
- Shah N, Soomro BA (2017). Investigating entrepreneurial intention among public sector university students of Pakistan. *Education+ Training* 59(7/8):841-855.
- Tabachnick B, Fidell L (2007). *Using multivariate statistics*. New York.
- Tung DT, Hung NT, Phuong NTC, Loan N TT, Chong SC (2020). Enterprise development from students: The case of universities in Vietnam and the Philippines. *The International Journal of Management Education* 18(1):100333.
- Wambua B, Gichunge E, Mwit E (2020). University Learning Environment and Entrepreneurship Intentions among Business Students in Public Universities in Kenya. *IOSR Journal of Business and Management (IOSR-JBM)* 22(4):53-60.
- Wilfred I A (2015). The spirit of entrepreneurial education in Namibia:

- An exploratory study. Available At: <https://www.Intechopen.Com/Books/Entrepreneurship-Education-And-Training/The-Spirit-Of-Entrepreneurial-Education-In-Namibia-An-Exploratory-Study>
- Yıldırım N, Çakır Ö, Aşkun OB (2016). Ready to dare? A case study on the entrepreneurial intentions of business and engineering students in Turkey. *Procedia-Social and Behavioral Sciences* 229:277-288.
- Yurtkorua ES, Pınar A , Begüm ST (2014). Willingness to take risk and entrepreneurial intention of university students: An empirical study comparing private and state Universities. Available At: www.Sciencedirect.Com
- Zovko L, Želimir D, Ivana B (2020). Determinants of students' entrepreneurial intention: An Empirical Research. Available At: <https://Doi.Org/10.30924/Mjcmi.25.1.2.005.342-057.875>

Related Journals:

