

## **Impact of Business Efficiency, Market Expansion, and Quality Services on SMEs Performance: Moderating Role of Perceived Risk in Katsina State**

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### **ABSTRACT**

This study explores the determinants of SME performance in Katsina State, Nigeria, with a focus on the roles of market expansion, business efficiency, quality services, and perceived risk as a moderating variable. The analysis of a sample of 396 SMEs, conducted using SPSS version 23 and SmartPLS 3 to test the proposed structural model, yields significant findings. The study uses a quantitative method. It is found that both market expansion and business efficiency significantly boost SME performance, with Beta Values of 0.296 and 0.328, respectively, indicating strong positive effects. In contrast, quality services do not show a significant direct impact on performance. The study also highlights the significant moderating effect of perceived risk in the relationship between market expansion and SME performance, suggesting that effective risk management can amplify the benefits of market expansion strategies. This research extends the Resource-based View (RBV) and the Unified Theory of Acceptance and Use of Technology (UTAUT) by integrating perceived risk as a critical factor influencing SME performance. From a managerial perspective, the study offers actionable recommendations for SME managers in Katsina State, highlighting the importance of leveraging digital platforms for market expansion, enhancing operational efficiency through technology adoption, and developing robust risk management strategies. These practical insights are designed to empower SME managers, equipping them with the tools to enhance SME performance.

**Keywords:** Business Efficiency; Market Expansion; Quality Services; SME Performance; Katsina.

## 1. INTRODUCTION

Small and medium enterprises (SMEs) are not only vital but also indispensable to the economic growth of developing nations, as they generate revenue, create employment opportunities, and contribute to poverty reduction (Ayyagari et al., 2017; Thekkoote, 2024). Approximately 84% of the workforce is employed by SMEs in Nigeria, which contribute more than 48% of the country's gross domestic product (GDP) (SMEDAN, 2021). However, despite their significance, SMEs can encounter obstacles that impair their performance, especially in areas like Katsina State, where business environments and economic conditions are less favorable (Olawale&Garwe, 2010). It is our collective responsibility to support these businesses and ensure their sustained growth and success. It is observed that SMEs have experienced poor growth in performance, with a slow increase of 3.7 percent in their contribution to GDP, from 48 percent in 2013 to 49.78 percent in 2017, over four years (NBS-SMEDAN, 2017).

Quality services, expanding markets, and business efficiency are acknowledged as key factors influencing SME performance (Mukherjee et al., 2024). Higher profitability and SME growth are frequently associated with business efficiency, which is defined as the best use of resources to achieve desired objectives (Barney & Hesterly, 2019). By extending a company's market reach, however, market growth might result in higher sales and a larger market share (Kotler & Keller, 2020). Maintaining competition in the market also requires providing high-quality services that prioritize client happiness and loyalty (Parasuraman et al., 1988). These elements work together to impact SMEs' overall performance, although their effects may vary depending on external influences, such as perceived risks.

The relationship between business practices and SME performance is expected to be moderated by perceived risk, which is defined as the uncertainty and potential negative outcomes connected with company operations (Mitchell, 1999). Perceived risk has a significant impact on SMEs' decision-making, resource allocation, and strategy planning in unstable and unpredictable circumstances, such as those found in many parts of Nigeria (Brouthers et al., 2015). To create strategies that enhance business resilience and growth, it is crucial to understand how perceived risk influences the benefits of business efficiency, market expansion, and high-quality services on SME performance (Haruna et al., 2024).

Thus, the purpose of this study is to investigate how SME performance in Katsina State is influenced by business efficiency, market expansion, and high-quality services, with an emphasis on the moderating effect of perceived risk (Adam, 2024). The goal of this research is to shed light on these links, enabling SMEs in this area to achieve sustainable performance through risk mitigation and operational optimization. The results will contribute to the body of knowledge on SME performance and provide legislators and entrepreneurs in Katsina State and elsewhere with valuable insights that will enhance their companies' expansion and resilience.

Small and medium-sized enterprises (SMEs) are recognized as crucial for promoting economic growth (Abdul-Azeez et al., 2024); however, their performance in Nigeria, particularly in areas such as Katsina State, remains subpar (Adeoye&Elegunde, 2012). Numerous studies have shown that SMEs in Nigeria face challenges such as inadequate infrastructure, limited financial resources, and an unstable business environment (Onugu, 2005; SMEDAN, 2021). The growth potential of SMEs in Katsina State has been hindered by these variables, which are exacerbated by problems such as low business efficiency, restricted market penetration, and subpar service quality, resulting in high business failure rates (Ogechukwu et al., 2013). It is essential to understand the underlying causes of these challenges in order to develop effective plans that enhance the performance of SMEs.

Several variables related to SME performance have been studied in the literature. However, it remains unclear how these characteristics interact with the perceived dangers that enterprises face, especially in unstable areas (Llazo & Neza, 2024; Woldie et al., 2008). SMEs' strategic decisions are heavily influenced by their perception of risk, which includes social, political, and economic uncertainty (Brouthers et al., 2015). The moderating effect of perceived risk, however, has not received sufficient attention in the context of the relationship between Katsina State's SME performance and company efficiency, market expansion, and service quality. Policymakers and company owners are less able to create plans tailored to the specific risks and challenges that the region faces due to this gap in the literature.

Furthermore, to comprehend the variables affecting SME performance in Katsina State, theoretical frameworks such as the Resource-Based View (RBV) and the Unified Theory of Acceptance and Use of Technology (UTAUT) were employed. Venkatesh et al. (2003) established the UTAUT framework, which offers a strong framework for evaluating how SMEs

adopt and use technology to improve service quality, market expansion, and corporate efficiency. This is especially important in areas where adopting new technology can be pretty tricky. Conversely, Barney's (1991) RBV highlights the significance of a company's internal resources and competencies in attaining a competitive edge. This viewpoint is crucial for understanding how Katsina State's SMEs can utilize their unique resources to mitigate perceived risks and improve performance. This study aims to provide a comprehensive analysis of the direct effects of business practices on SME performance by integrating the UTAUT and RBV frameworks. It also aims to demonstrate how resource utilization and technological adoption can mitigate risks and enhance competitiveness in the area (BintiAbJalil & Zakaria, 2024).

This study examines how SME performance is impacted by market expansion, business efficiency, and high-quality services, with an emphasis on the moderating role of perceived risk in Katsina State. The research aims to provide a more comprehensive understanding of the factors influencing SME success in this environment by examining these relationships. The results seek to provide valuable insights for enhancing the competitiveness and resilience of SMEs, thereby supporting the state's broader objectives of poverty alleviation and economic growth.

### ***1.2 Research Questions***

- I. To what extents does market expansion affect SMEs' performance in Katsina?
- II. To what extents does business efficiency affect SMEs' performance in Katsina?
- III. To what extents does service quality affect SMEs' performance in Katsina?
- IV. To what extents do perceived risks moderate the relationship between market expansion and SMEs' performance?
- V. To what extents do perceived risks moderate the relationship between business efficiency and SMEs' performance?
- VI. To what extents do perceived risks moderate the relationship between service quality and SMEs' performance in Katsina State?

### **1.3 Objectives of the study**

- I. To examine the relationship between market expansion and SMEs' performance in Katsina State.
- II. To determine the relationship between business efficiency and SMEs performance in Katsina State.
- III. To evaluate the relationship between service quality and SMEs' performance in Katsina State.
- IV. To examine the moderating role of perceived risks on the relationship between market expansion and SMEs' performance in Katsina state
- V. To assess the moderating role of perceived risks on the relationship between business efficiency and SMEs' performance in Katsina state
- VI. To explore the moderating role of perceived risks on the relationship between service quality and SMEs' performance in Katsina state

### **1.4 Research Hypothesis**

- H<sub>01</sub> Market expansion has no significant effect on the performance of SMEs in Katsina State.
- H<sub>02</sub> Business efficiency has no significant effect on SMEs' performance in Katsina state.
- H<sub>03</sub> Quality services have no significant effect on the performance of SMEs in Katsina State.
- H<sub>04</sub> Perceived risks do not moderate the relationship between market expansion and SMEs' performance in Katsina State.
- H<sub>05</sub> Perceived risks do not moderate the relationship between business efficiency and SMEs performance in Katsina State.
- H<sub>06</sub> Perceived risks do not moderate the relationship between service quality and SMEs' performance in Katsina State.

## **2. LITERATURE REVIEW**

### **2.1 Conceptual Framework**

The conceptual framework for this study illustrates the relationships between the independent variables (market expansion, business efficiency, and service quality), the dependent variable (SME performance), and the moderating variable (perceived risk), grounded in the Unified Theory of Acceptance and Use of Technology (UTAUT) and Resource-Based View (RBV) theories.

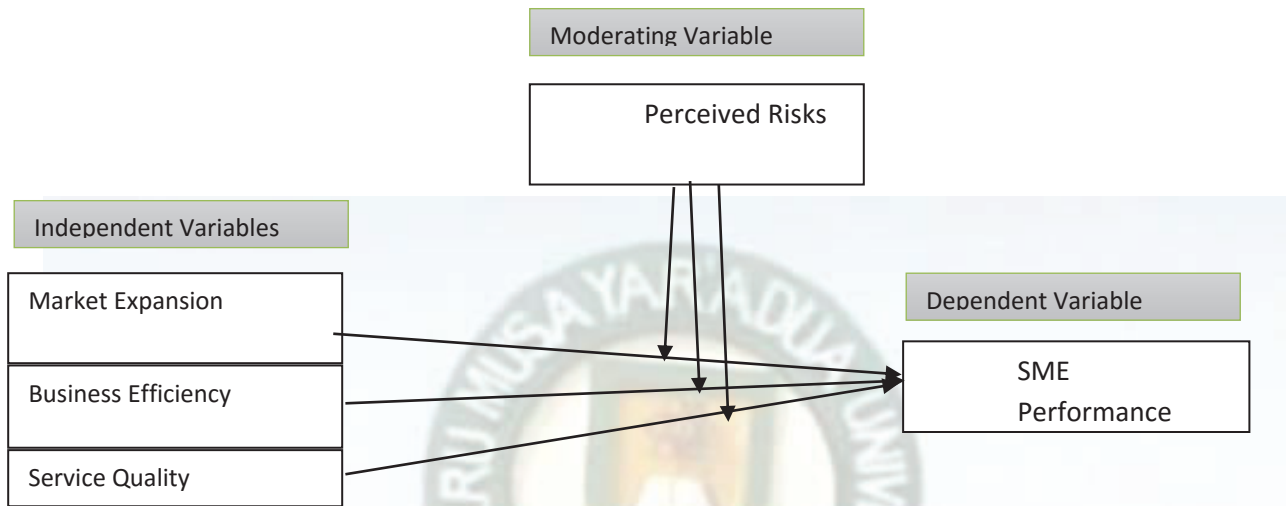


Figure 1: Conceptual Framework

## 2.2 Theoretical Framework

The resource-based view (RBV) and the unified theory of acceptance and use of technology (UTAUT) serve as the foundation for this study. Venkatesh et al. (2003) developed the UTAUT framework, a thorough model that describes the factors driving the adoption and use of technology in businesses. The four main factors that influence the adoption of technology, according to UTAUT, are performance expectancy, effort expectancy, social influence, and facilitating conditions. The UTAUT paradigm is particularly relevant to understanding how small and medium-sized enterprises (SMEs) in Katsina State adapt and utilize technology to enhance their operational efficiency, expand into new markets, and deliver higher-quality services. Using UTAUT provides valuable insights into the opportunities and challenges SMEs face in integrating technological solutions, particularly in situations with high perceived risk, given the vital role technology plays in current company operations.

This study is strengthened by Barney's (1991) Resource-Based View (RBV), which emphasizes the internal resources and competencies that SMEs can use to gain and maintain competitive advantage. According to RBV, businesses that own uncommon, precious, unique, and non-substitutable resources will succeed better than those that do not. RBV clarifies how SMEs in Katsina State can leverage their unique resources—such as organizational culture, skilled labor, or proprietary technology—to mitigate the negative consequences of perceived risks and enhance

overall performance in the context of this study. By combining RBV and UTAUT, this study provides a comprehensive understanding of how resource utilization and technology adoption impact SME performance. It also provides a solid theoretical framework for analyzing the dynamics at work in Katsina State's demanding business environment.

### ***2.3 Review of Empirical Studies***

Numerous studies have examined the connection between SME performance and market expansion, and the results consistently highlight the importance of this relationship in driving corporate success. SMEs can increase their market share, diversify their sources of income, and realize economies of scale through market expansion, all of which enhance their ability to conduct business (Kotler & Keller, 2020; Mokbel Al Koliby et al., 2024). According to research by Zahra and George (2002), entering new markets enhances sales and profitability while also improving organizational learning and adaptability—two key factors essential for long-term survival. Given the high degree of market fragmentation and fierce competition faced by Nigerian SMEs, market expansion is significant. As a result, businesses must continually seek new opportunities to grow (Olawale&Garwe, 2010; Wei &Duan, 2024).Research has consistently shown that entering new markets helps SMEs perform better by providing them with access to new client groups, boosting revenue, and strengthening their competitive edge (Zahra & George, 2002; Kotler & Keller, 2020).

Another important component affecting SME performance is business efficiency, which has a direct bearing on competition and profitability. The sustainability of SMEs depends on achieving cost savings and increased profit margins, which can be accomplished through efficient resource utilization, optimized production processes, and effective operational management (Barney &Hesterly, 2019). SMEs who implement effective business practices are better positioned to compete in both domestic and foreign markets, according to studies by Isik et al. (2017). Moreover, there is growing recognition that service quality is a significant factor influencing the success of SMEs. Better customer satisfaction, loyalty, and positive word-of-mouth are all correlated with high service quality and are essential for corporate success (Parasuraman et al., 1988). Delivering top-notch services is crucial for SMEs in Nigeria to maintain a competitive edge and ensure long-term survival in the face of increasing customer expectations (Ogechukwu et al., 2013). Because it enables businesses to maximize output while minimizing expenditures,

business efficiency is a crucial factor in determining performance (Barney & Hesterly, 2019). According to empirical data, SMEs with effective operations are more likely to generate larger profit margins and maintain their competitive advantages in the market (Isik et al., 2017).

The literature has also examined the perceived risk's moderating effect on the association between these variables and SME performance. Decisions and results in business can be significantly impacted by perceived risk, which encompasses concerns about market dynamics, governmental stability, and economic situations (Mitchell, 1999). For example, Brouters, Nakos, and Dimitratos (2015) found that high-risk environments diminish the benefits of market growth and that perceived risk moderates the relationship between market expansion and firm performance. Similarly, by influencing the amount of investment and strategic decisions that SMEs are ready to undertake, perceived risk can also mitigate the effects of service quality and business efficiency on performance (Woldie et al., 2008). Comprehending this moderating role is crucial for devising strategies that effectively improve the performance of small and medium-sized enterprises (SMEs) in areas such as Katsina State.

#### **2.4 Literature Gap**

Although the amount of research on small and medium-sized businesses (SMEs) is increasing, there are still unanswered questions about how various operational and strategic factors impact their success, particularly in the Nigerian context. Research has shown that enhancing SME competitiveness and development necessitates a focus on market expansion, operational efficiency, and service quality (Aremu & Adeyemi, 2011; Eniola & Entebang, 2015). The majority of earlier research, however, has either examined these elements separately or focused on more general macroeconomic issues, resulting in limited actual data on how they interact to affect the success of SMEs in specific areas, such as Katsina State.

Additionally, although the research acknowledges the difficulties that SMEs in Nigeria encounter, less focus has been placed on how perceived risk influences the link between these characteristics and performance (Abiodun, 2014; Neneh, 2019). This disparity is crucial, as managerial choices regarding growth, operational effectiveness, and service provision under unpredictable situations can be significantly impacted by risk perception. To provide a comprehensive understanding of SMEs' performance in Katsina State, a more context-specific

analysis is required that incorporates market expansion, company efficiency, service quality, and perceived risk.

### 3. METHODOLOGY

#### 3.1 Research Design

This research employs a quantitative study to investigate the relationship between several factors and perceived risk, to enhance SME performance. The population of this research comprises 21610 SMEs in Katsina State, identified by SMEDAN (2021). The Simple random sampling technique was used to select 432 SMEs cutting across various local government areas of the state. The unit of analysis for this study is the managers/owners of SMEs in Katsina State (SMEDAN, 2021).

The minimum sample size for the study was determined using the formula proposed by Yamane (1967). The formula is provided hereunder:

$$n = \frac{N}{1+Ne^2} \quad (I)$$

Where:

n= the minimum sample size.

N= the population size.

1= constant.

e= margin error, taken as 5 per cent (0.05).

Using the above formula will give  $n = \frac{21610}{1+21610(0.05)^2} \cong 393$  SMEs

Therefore, 393 SMEs is the minimum sample size for the study. To address the issue of incorrectly filled questionnaires and low response rates, 10 percent, as recommended by Israel (2013), was added to the initial sample size, resulting in a revised sample size of 432.

#### 3.2 Measurements of Variables and Instrumentation

Dawes (2008) reported that a scale with five or seven intervals is likely to produce better results, with the seven-interval scales having better results than five-interval scales. Thus, the questionnaire was designed using a five-point interval scale to measure the following constructs: market expansion, SME performance, business efficiency, perceived risk, and quality of service.

#### 3.3 Techniques for Data Analysis

The study employed PLS-SEM for several reasons. First, it is a well-recognized and accepted technique in social sciences and management research. Second, PLS-SEM could be suitably

applied to minimum measurement scales and sample sizes (Hair et al., 2011). Additionally, the Statistical Package for the Social Sciences (SPSS) was used to analyze the descriptive statistics.

## 4. RESULTS AND DISCUSSION

### 4.1 Response Rate

A total sample size of 432 small and medium-sized enterprises (SMEs) was identified for the study conducted in Katsina State, out of which data were successfully collected from 396 SMEs. This leads to a response rate of 91.7%.

### 4.2 Normality Test

Figure 2 shows that the current investigation did not violate any of the normality assumptions (Hair et al., 2011).

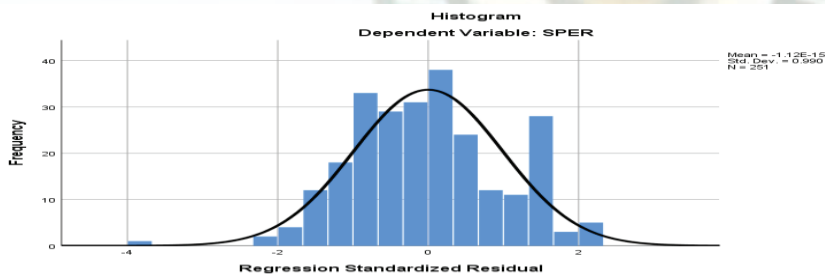


Figure 2: Histogram Normal Curve

### 4.3 Heteroskedasticity Test

The scatterplot graph method was adopted for this study. The scatterplot graph between the predictive values of the independent variables (ZPRED) and the residuals (SRESID) is presented in Figure 3.

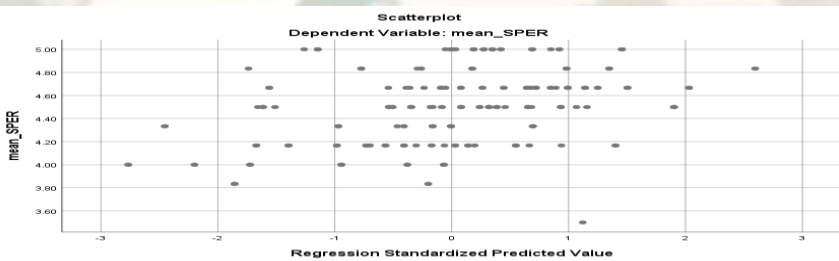


Figure 4.3: Scatterplot Graph

**4.4 Demographic Profile of the Respondents**

The demographic characteristics of the respondents include 396 SMEs in Katsina State. The gender distribution shows a higher number of males (50.8%) compared to females (49.2%). Age-wise, the largest group is 18-30 years (26.8%), followed by 31-40 years (29.3%), 41-50 years (25.0%), and above 50 years (18.9%). In terms of marital status, 25.8% are single, 50.3% are married, and 23.9% are divorced. The majority hold a Master's Degree (30.3%), while others have a Diploma (44.9%) or a Bachelor's Degree/HND (24.8%). Staff strength varies, with most SMEs having more than 40 workers (33.3%), followed by 31-40 workers (25.5%), 21-30 workers (26.0%), and 10-20 workers (15.2%). Regarding positions, 51.3% of respondents are owners, and 48.7% are managers. Experience with e-commerce platforms is predominantly between 1-3 years (38.9%), with others having more than 3 years (44.2%) or below 1 year (16.9%) of experience.

**4.5 Descriptive Statistics of Variables**

Table 1 presents descriptive statistics. The mean and standard deviation of each variable are reported. Market Expansion, with a mean of 4.5210 and a standard deviation of 0.35982, indicates a moderately high perceived importance and relatively consistent responses among respondents. Business Efficiency follows closely with a mean of 4.3094 and a standard deviation of 0.31540, suggesting slightly lower but still significant importance and moderate variability in responses. Quality Services, with a mean of 4.4821 and a standard deviation of 0.37805, exhibits a high perceived importance, albeit with slightly greater variability than Market Expansion. Perceived Risk, with a mean of 4.3263 and a standard deviation of 0.30720, indicates a moderate level of concern among respondents, who generally hold relatively consistent views. SME Performance, with a mean of 4.5007 and a standard deviation of 0.32779, indicates a high perceived level of business performance, accompanied by moderate variability in responses.

Table 1: Descriptive Statistics

Construct	N	Mean	Std. Deviation
Market Expansion	396	4.5210	0.35982
Business Efficiency	396	4.3094	0.31540
Quality Services	396	4.4821	0.37805
Perceived Risk	396	4.3263	0.30720
SME Performance	396	4.5007	0.32779

#### 4.6 Measurement Model Evaluation

Smar-tPLS 3.0 software was utilized to analyze the research model using partial least squares (PLS) (Hair et al., 2011). The study examines the measurement model first, followed by the structural model, using a two-stage analytical approach suggested by Hair et al. (2011). Using the bootstrapping method, the significance of the path coefficients and loadings was assessed (Hair et al., 2011). The study specifically assessed the convergent validity and discriminant validity of the measurement model.

#### 4.7 Convergent validity

Examining the composite reliability, loadings, and average variance extracted (AVE) allowed for the determination of convergent validity (Hair et al., 2011). Each construct achieves loadings above 0.7, as shown in Table 2 and Figure 4, and, as recommended by Hair et al. (2011), the composite reliability (CR) of all the constructs is greater than 0.7, and AVE is above 0.5. Therefore, convergent validity is achieved in this study.

Table 2: Convergent validity

Construct	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
<b>Business Efficiency</b>	0.867	0.904	0.653
<b>Market Expansion</b>	0.859	0.904	0.702
<b>SME Performance</b>	0.879	0.912	0.675
<b>Perceived Risk</b>	0.820	0.886	0.721
<b>Quality Services</b>	0.867	0.904	0.653

#### 4.7 Discriminant Validity Fornell and Larcker (1981)

According to the Fornell and Larcker (1981) criterion, the discriminant validity (the degree to which items measure separate concepts) was evaluated by contrasting the square root of the AVE with correlations between the constructs. The square root of the AVEs (values in bold) on the diagonals is bigger than the corresponding row and column values, as seen in Table 3, demonstrating the discriminant nature of the measures in this study.

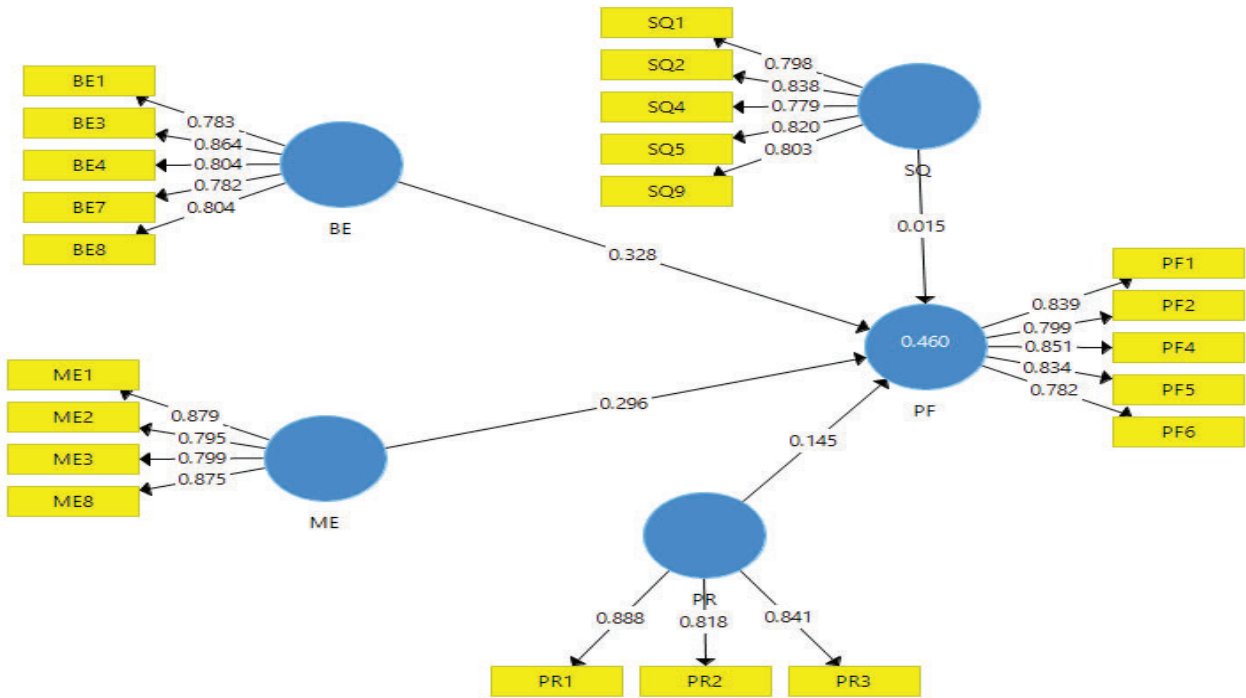


Figure 4 Measurement Model

Table 3 Discriminant Validity Fornell and Larcker (1981)

	BE	ME	PF	PR	SQ
<b>Business Efficiency</b>	<b>0.808</b>				
<b>Market Expansion</b>	0.738	<b>0.838</b>			
<b>SME Performance</b>	0.627	0.614	<b>0.821</b>		
<b>Perceived Risk</b>	0.483	0.447	0.444	<b>0.849</b>	
<b>Quality Services</b>	0.659	0.706	0.520	0.547	<b>0.808</b>

#### 4.8 Discriminant Validity HTMT Ratio

Considered a reliable measure because it is thought to be a trustworthy measure for assessing discriminant validity (Henseler et al., 2015). In this study, the HTMT criterion demonstrates that discriminant validity is attained. As demonstrated in Table 4, only one correlation exceeded the accepted range of 0.85 (Henseler et al., 2015).