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Perceived Risk and External Finance Usage in Small- and Medium-Sized Enterprises: Unveiling the Moderating Influence of Business Age

Nawal Abdalla Adam

College of Business Administration, Princess Nourah bint Abdulrahman University, Riyadh 11671, Saudi Arabia; naadam@pnu.edu.sa

Abstract: The attainment of adequate finance remains a substantial hindrance for small- and medium-sized enterprises (SMEs) across many countries. This study aim to investigate the association between SMEs' external finance utilization and perceived risk (PR). Additionally, it intends to explore the moderating role of business age (BAge) in the relationship between SMEs' external finance utilization and PR. The study employed a structured online questionnaire to gather data from 711 SME owners/managers in Saudi Arabia. SmartPLS 4 software was utilized to analyze the research data. The results of the partial least squares structural equation modeling confirmed that the decision of SMEs to use external financing is significantly and negatively impacted by the PRs associated with external finance. Furthermore, BAge moderates the relationship between PR and SMEs' external finance usage (EFU). However, the study found that BAge does not significantly affect both the PRs and the SMEs' EFU. This study highlights the intricate dynamics of PR, BAge, and an SME's decision to employ external finance. The practical and theoretical implications of the study findings are thoroughly discussed.

Keywords: perceived risk; external finance; business age; SMEs

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1. Introduction

The sustainability and growth of small- and medium-sized enterprises (SMEs) have captured the attention of policymakers and academics. SMEs represent the largest and most dynamic economic sectors in numerous countries, acting as a vital engine for sustainable development and economic resilience (Amoah et al. 2022). These enterprises are widely recognized as one of the primary pillars of economic growth (Ljajić 2021) and as an effective catalyst for social transformation (Okello-Obura and Matovu 2011). Rooted in national economies, SMEs are instrumental in propelling innovation, nurturing inventive concepts for products and technologies, and fostering sustainable growth (Jamali et al. 2018; Ludlow 2018; Nafisi and Mohammad Kazemi 2023). Their influence extends beyond the economic realm, positively influencing social welfare (Ayyagari et al. 2021). Additionally, SMEs contribute to larger enterprises by instilling vigor into economic competition (Belás et al. 2015) and promoting both domestic and international trade (Dowling et al. 2019). Furthermore, as SMEs navigate an ever-evolving landscape, they distinguish themselves through their rapid embrace of technological progress (Farsi et al. 2019). Consequently, identifying and harnessing the factors that propel SME growth and development takes center stage, as their achievements hold far-reaching implications for the overall expansion and prosperity of the economy.

Small- and medium-sized enterprises, however, face a multitude of formidable challenges, contributing to their high failure rate (Endris and Kassegn 2022). Alarmingly, statistics from various countries underscore the pervasive nature of SME failures, accompanied by soaring transaction costs and heightened risk levels (Ramalho et al. 2018). Adding to their struggles, SMEs grapple with a distressing lack of access to finance (Wang 2016),

which severely restricts their growth potential (Jones-Evans 2015). The literature indicates that insufficient financing is one of the primary and formidable obstacles impeding SMEs' survival (Peredy et al. 2022; Wang 2016; Woldie and Ubrurhe 2018). The uninterrupted and consistent flow of financial resources becomes an indispensable prerequisite for SMEs to realize their full growth and expansion potential, thereby enabling them to fulfill their expected economic and social roles (Dowling et al. 2019). Thus, recognizing and addressing these challenges head-on is of paramount importance, as it is only by overcoming these obstacles that SMEs can thrive, thereby catalyzing broader economic advancement and prosperity.

External finance is a paramount factor in empowering SMEs to fully realize their potential in productivity, growth, innovation, talent acquisition, expansion, and competitive advantage. Extensive research underscores the vital role of external finance in promoting SME productivity (Butler et al. 2009), enhancing growth (Chandra et al. 2020), driving innovation (Kokot-Stępień 2022), facilitating expansion plans, and aiding in employee recruitment (Steinerowska-Streb and Steiner 2014), as well as creating a competitive edge (Zeebaree and Siron 2017).

Small- and medium-sized enterprises are consistently challenged by a persistent financing gap, struggling with limited access to external finance sources (Esho and Verhoef 2022; Hu et al. 2023; Yao and Yang 2022). A 2020 survey revealed that approximately 40% of SMEs in European Union countries refrain from utilizing external finance (Frankfurt am Main 2021). Similarly, a 2019 survey by the U.S. Small Business Administration (SBA) found that only 30% of SMEs in the U.S. depend on external financing sources (U.S. SBA 2019). Notably, emerging economies exhibit higher rates of SME utilization of external finance compared to their counterparts in developed countries (The World Bank 2023). Primarily, SMEs secure funding through borrowing from financial organizations (Lucia 2015). However, several limitations have hindered SMEs' access to alternative sources, such as capital markets and bond issuance, including restricted financial resources, the relatively modest scale of SME assets, narrow profit margins, and weak credit evaluations (Agarwal 2022). Consequently, SMEs often rely on internal financing and informal external financing, which can potentially hinder their growth (Batrancea et al. 2022). In Saudi Arabia, for example, bank loans are the most commonly utilized type of financing by SMEs (Waked 2016). However, research indicates that Saudi Arabian banks have the lowest SME lending rates (2%) compared to the average in other Gulf countries and developing economies (20%) (Alhawel et al. 2020). This disparity highlights the significant challenges SMEs face in accessing affordable and adequate financing options.

Despite the breadth of research on factors contributing to the financing gap for SMEs, significant gaps persist. Prior research has pinpointed a multitude of factors contributing to the financing gap in SMEs. Some studies have focused on finance-provider-related factors or the supply side (Jude et al. 2021; Nkansah-Sakyi 2023; Rahid 2023), while others have examined factors related to a country's business environment, such as the regulatory environment and financial infrastructure (Andrieș et al. 2018; Ghosh 2022; Morsy 2020). In addition, a separate group of researchers has investigated enterprise-specific factors, or the demand side (Nizaeva and Coşkun 2018; Nkansah-Sakyi 2023; Ramachandran and Yahmadi 2019). It is notable, however, that prior studies have largely overlooked the influence of the psychological factors associated with SME owners/managers on their decisions to utilize external finance. The subjective factors influencing the behavior of SME owners/managers toward external finance warrant consideration (Dvorský et al. 2020). It is argued that it is crucial to understand risk perception, as it shapes the type and magnitude of responses to risks (Le and Arcodia 2018). Risk perception involves feelings of uncertainty and the assessment of potential consequences linked with specific actions (Grima et al. 2021). The attitudes of SME owners/managers toward external finance sources may be influenced by the anticipated consequences of utilizing those sources.

Moreover, numerous factors are cited in the literature as impacting SMEs' financial decisions. For instance, a study by Laaouina et al. (2024) found that an SME's finance

decision is influenced by the manager's/entrepreneur's age, revealing that the association between perceived risk (PR) and the financing decision is moderated by the age of the manager/entrepreneur. Various scholarly studies have consistently shown that the phase of an SME's life cycle is of the utmost importance in shaping its financial decisions (Cowling et al. 2018; Hastuti et al. 2021; Mallinguh et al. 2020). Nonetheless, previous studies have reported conflicting results regarding the impact of business age (BAge) on financial decisions. For example, Serrasqueiro et al. (2016) argue that BAge negatively impacts financial decisions, while Hyytinen and Pajarinen (2008) argue that BAge positively affects the use of external financing.

This current study aimed to achieve three objectives using a quantitative approach. First, this research strives to comprehensively investigate the link between the PR of finance and SMEs' propensity to use external financing. Specifically, it focused on SMEs operating in an emerging economy, such as Saudi Arabia, which has significant potential. Second, the study aimed to investigate how BAge influences the relationship between PR and the decision to seek external financing. Lastly, this research endeavored to determine how BAge affects PR and the use of external financing by SMEs.

This current research provides essential insights for SME owners/managers, finance providers, and policymakers about the impact of psychological factors, such as risk perception, on the utilization of external finance opportunities, thereby promoting SME development and sustainability. The study contributes to the literature in several significant ways. First, examining the relationship between external finance usage (EFU) and PRs provides an additional explanation for SMEs' limited access to external financing sources. This study introduces a psychological dimension to SMEs' access to external finance. While prior studies have primarily focused on factors related to financing conditions as the main barriers to SME financing, this research addresses a critical factor linked to enterprises' finance requests. Thus, the study's findings augment the existing literature on SME development and shift attention toward the need to mitigate PRs among SMEs to encourage greater use of external finance sources. Second, the study's framework integrates enterprise-specific characteristics, such as BAge, with PR and EFU. This integration enhances our understanding of how SMEs of different ages utilize external financing. This insight could guide efforts toward prioritizing projects within age groups underutilized for external finance, offering opportunities for risk-mitigating strategies and development.

Following the introduction, the paper includes the following sections: Section 2 discusses the research's theoretical framework and hypotheses. Section 3 describes the methods employed in the research. Section 4 presents the results of the research's data analysis. Section 5 deliberates the study's findings. Finally, Section 6 encapsulates the study's conclusions and implications.

2. Theoretical Framework and Hypotheses

The use of external finance in SMEs is a crucial aspect that influences their growth and sustainability through the decision-making process. Understanding the determinants impacting this decision is of the utmost significance. Among these factors, PR should be considered, which is the subjective judgment of probable negative outcomes resulting from business financial decisions. This literature review delves into the theoretical underpinnings of PR, its dimensions, and its relationship with EFU among SMEs and examines the expected moderating role of BAge in this relationship.

The concept of PR is fundamental to understanding the decision-making process (Grimmelikhuijsen 2023). It is defined as the subjective assessment of the likelihood and severity of adverse consequences resulting from a decision or an action (Zhanbirov et al. 2023). It encompasses both uncertainty and potential consequences (Featherman and Pavlou 2003). As defined, PR represents the cognitive evaluation of SME owners/managers regarding the potential negative consequences associated with utilizing external finance (Sindhu and Kumar 2014). Risk perception is influenced by various personal and societal factors, which can vary significantly among individuals and across different environmental

contexts (Diacon and Ennew 2001). This study specifically focuses on the PRs of SME owners/managers in Saudi Arabia and their relationship with the decision to utilize external financing.

Originating from consumer behavior research, PR theory provides a comprehensive framework for understanding how individuals evaluate potential negative outcomes in decision-making (Chiu et al. 2014). According to PR theory, this risk is a crucial component of consumer behavior research, thereby enhancing understanding of the various factors that impact consumers' decision-making processes (Ross 1975; Zhang and Yu 2020). This theory elucidates how consumers assess and estimate the potential risks associated with the purchase of products or services. It has also been applied to explore how individuals perceive and evaluate risks related to new financial products or services, influencing their financial decisions (Diacon and Ennew 2001). The theory posits that consumers evaluate the likelihood and severity of negative outcomes when making decisions, particularly in purchasing contexts (Yeung and Morris 2006).

Previous research has identified multiple dimensions of PR (Diacon and Ennew 2001; Peter and Ryan 1976; Schiffman and Kanuk 1994; Stone and Grønhaug 1993). For example, Stone and Grønhaug (1993) categorized PR into financial, product performance, physical, social, psychological, and time/convenience dimensions. "Financial risk" (FinR) is related to the likelihood of consumers incurring monetary losses when purchasing specific products or services. This present study incorporated these dimensions in its approach to measuring PR. The operationalized definitions of these dimensions are as follows: "Performance risk" (PerformR) refers to the probability of a product not meeting customer expectations. "Physical risk" involves safety concerns associated with product usage, particularly those related to health and security. "Psychological risk" (Psy) includes the alignment of a product with a consumer's self-image. "Social risk" (SocR) involves the perception of significant others toward products or services. Potential negative consequences arise from factors such as inadequate information about external financing products, their increasing complexity, lack of transparency, or the absence of reliable guidance. "Time risk" (TimeR) represents the possibility of time wastage due to financing procedures. This classification of PR has been extensively explored in the academic literature on consumer behavior and financial services (Arora and Kaur 2018; Beqaj and Baca 2022).

External finance, which involves capital acquisition from external sources, is essential for the growth of SMEs. However, the decision to pursue external finance is complex due to inherent financial and operational risks (Cubeddu et al. 2023). Factors such as business size, creditworthiness, and the economic environment influence SMEs' access to external financing (Nordin and Zainuddin 2023; Simba et al. 2024; Wasiuzzaman et al. 2020). SMEs in Saudi Arabia face additional challenges in obtaining external financing. Studies have shown that factors such as stringent requirements imposed by banks, limited collateral options, and a lack of financial literacy among SME owners/managers hinder their ability to acquire external financing (Alharbi et al. 2022). Therefore, SMEs in Saudi Arabia must navigate these specific contextual factors, along with general multifaceted considerations, when formulating their financing strategies. Understanding the unique challenges and opportunities within the Saudi Arabian SME landscape enables them to effectively align their financing choices with their specific circumstances and goals.

Researchers have emphasized that an individual's PR, often stemming from a lack of information and understanding of financial services, can adversely impact their decision-making regarding utilizing these services (Beqaj and Baca 2022). Furthermore, Lyu et al. (2023) argued that customers may feel hesitant to use a service, leading to increased PR and uncertainty about outcomes. In the field of finance, studies have identified various factors that contribute to the PR associated with external financing. These include high interest rates, stringent collateral requirements, distrust in financial institutions, and complex application procedures (Aswicahyono et al. 2013; Morsy 2020; Osano and Languitone 2016). Addressing PR is, therefore, pivotal in promoting SMEs' utilization of external finance to bridge financing gaps.

Moreover, numerous studies have demonstrated that different types of PRs—such as privacy, financial, psychological, social, time, and performance risks—negatively impact the frequency of SMEs' use of banking services (Beqaj and Baca 2022; Chen 2013; Sanayei and Bahmani 2012). When SME managers perceive the high risks associated with external financing, it induces doubt and uneasiness, thus influencing their decision-making process (Morrison et al. 2023). In light of this, this current study emphatically argues that SME owners/managers who perceive significant risks associated with external financing are substantially less inclined to utilize it to meet their financing needs. This study firmly contends that addressing PR is pivotal in promoting SMEs' utilization of external financing, considering its crucial role in bridging their financing gaps. Based on these compelling arguments, this study hypothesizes the following:

H1. *There is a negative relationship between PR and SMEs' decision to use external financing.*

Furthermore, existing studies have robustly confirmed the influential role of business-related factors in shaping the preference for external finance sources (Alakaleek and Cooper 2018; Rydehell et al. 2019). Mateev et al. (2013) identified a significant correlation between BAge and SMEs' preference for specific finance sources. Additionally, Wignaraja and Jinjarak (2015) found a positive association between an SME's BAge and the utilization of bank loans, while Mohamed Zabri et al. (2021) and Finnegan and Kapoor (2023) concluded that a negative relationship exists between an SME's BAge and reliance on debt as a source of external finance. Numerous researchers have also extensively examined the association between enterprise age and business risks (Nguyen and Vo 2020). Fink et al. (2004) discovered a negative correlation between the anticipated degree of risk and the age of the business. Scholars, including Klapper and Richmond (2011) and Usman and Zahid (2011), confirmed the link between the age of a business and its continuity. In line with these findings, Nkundabanyanga et al. (2020) demonstrated that older enterprises are more likely to survive compared to their younger counterparts. There is also a significant and favorable correlation between the perception of risk and enterprise performance (Shahzad et al. 2020).

Given the significant documented link between BAge and SMEs' use of external financing, as well as the connection between enterprise performance and SMEs' EFU (Li et al. 2022), it can be argued that BAge affects both how much risk is perceived and SMEs' decision to use external finance. Therefore, this study proposes that SMEs' exploitation of external finance is, indeed, influenced by their BAge. Furthermore, it posits that an SME's BAge moderates the inverse relationship between PR and the use of external financing. Based on these assertions, the following hypotheses are formulated:

H2. *BAge significantly affects SMEs' usage of external finance.*

H3. *BAge significantly affects SMEs' PR.*

H4. *BAge moderates the relationship between PR and EFU.*

Figure 1 illustrates the conceptual framework of the research. This framework visually depicts the theoretical model underpinning the research. The model incorporates PR as an independent variable, encompassing six dimensions: Psy, FinR, TimeR, SocR, PerformR, and convenience risk (CovR). Conversely, the dependent variable is EFU. Additionally, the model includes BAge as a crucial moderating variable.

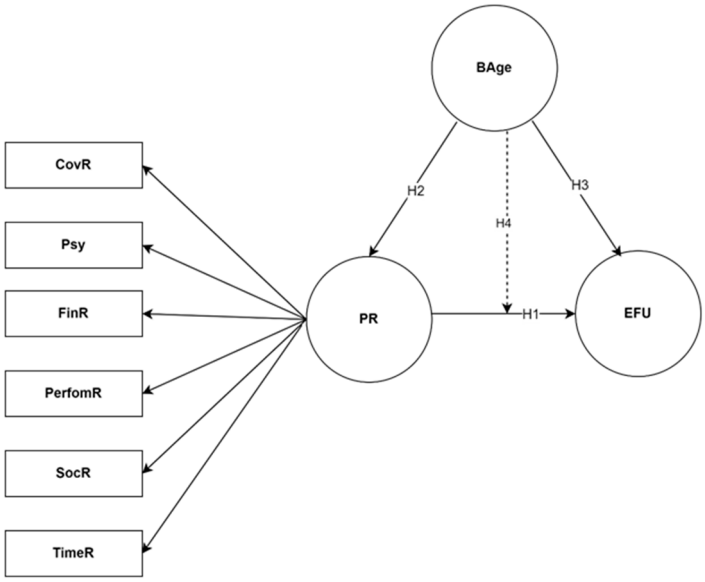

Figure 1. The conceptual framework.

3. Methods

3.1. Data

The research data were gathered through a structured questionnaire, as it is an efficient method for rapidly collecting a large number of responses at a relatively low cost (Robson and McCartan 2015). The questionnaire comprised three distinct parts, each focusing on a specific purpose. The first part focused on gathering background information about the respondents and SMEs. The second part examined SMEs' EFU and included nine questions on this topic. The third part aimed to assess the PR dimensions among SME managers and owners. This section utilized six dimensions of PR: Psy, FinR, SocR, PerformR, CovR, and TimeR. The first five dimensions were adapted from Peter and Ryan (1976), while the sixth dimension was borrowed from Roselius (1971). A measurement scale consisting of 25 items was employed in this section, with specific questions relating to each PR dimension. The questions were derived from the relevant literature on consumers' PRs, including sources such as MacGregor et al. (1999), Mitchell and Greatorex (1993), and Pires et al. (2004).

3.2. Sample

The target population consisted of SMEs in Saudi Arabia listed in the General Authority for Statistics (GaStat) database. A random sampling method was employed to select the study sample. This technique is well suited for obtaining representative and unbiased results, as it ensures that every SME in the target population in Saudi Arabia has an equal opportunity to be included in the study sample (Rahman et al. 2022). The utilization of the random sampling technique is of the utmost significance when striving to derive inferences about a wider population based on a relatively small sample (Drum et al. 2009). By randomly selecting 1000 SMEs from the GaStat database, the study aimed to avoid selection bias and generate findings that can be generalized to the broader population of SMEs in the country. The sample was specifically limited to SMEs with a number of employees ranging between 10 and 249, in accordance with the definition of SMEs in the Kingdom of Saudi Arabia provided by Monsha'at (General Authority for Small and Medium Enterprises 2017).

We used an unincentivized approach to conduct the survey, meaning that the participants received no compensation for their participation. This approach has proven effective in obtaining data on a variety of business-related factors without external incentives to predict meaningful business outcomes (Buser et al. 2024). Many earlier studies have used this method, demonstrating its validity and reliability (Brown et al. 2021; Hurwitz et al. 2022). The decision between incentive-based and unincentivized survey approaches has

garnered attention in the literature on survey methodology. For instance, Dressler and Mugerman (2023) tested both approaches and confirmed the advantages and reliability of each. To ensure participants' understanding and engagement, the questionnaire was translated into Arabic, the local language, to eliminate any language barriers and ensure accurate interpretation of the survey items. Subsequently, an email was sent to SME owners/managers containing the questionnaire link and a clear explanation of the research purpose. Participants were given two weeks to complete the questionnaire, allowing for sufficient time and flexibility. Of the 1000 participants, 711 successfully completed the questionnaire, resulting in a response rate of 71.1%. The majority of participants (84.5%) were male, and the largest age group, comprising 29.6% of respondents, was between the ages of 41 and 45. This age distribution indicates a well-rounded representation of SME owners/managers within the specified age range.

The participating SMEs are profiled in Table 1, which provides important details such as the number of workers, annual revenue, and years in business for each enterprise. The sample demonstrates a diverse range of enterprise sizes, with the majority falling within the medium-sized category. Specifically, 57% of the participating SMEs had an estimated number of employees ranging from 50 to 249, affirming the sample's representativeness within this size segment. Additionally, the largest percentage (52%) of the enterprises covered by the study had annual revenues ranging from 40 to 200 million Saudi Riyals. A significant proportion of participating SMEs (40%) had been operating their business for less than five years.

Table 1. Demographic characteristics of study participants.

Characteristic	Frequency	Percentage
Estimated number of employees		
6–49	305	43%
50–249	406	57%
Total	711	100%
Estimated annual revenue		
3–40 M SR	339	48%
40–200 M SR	372	52%
Total	711	100%
Years in business		
Less than 5 years	277	39%
5–10	206	28%
11–15	111	16%
16–20	82	12%
More than 20	35	4%
Total	711	100%

The sample was drawn from diverse industries with various forms of financing, with a significant number of SMEs relying primarily on personal funds. Descriptive statistics indicate that the services sector represents 36.3% of SMEs in the sample, followed closely by retail at 17.4%, food and beverage at 16.2%, and industrial sectors at 11%. A limited proportion of institutions working in the industrial and information technology sectors (7.3%), e-commerce (5.6%), and education and training industry (6.2%) were included in the study sample.

In terms of sources of finance, most SMEs rely on personal funds (67.2%), followed by family/relatives (10.8%), dividend returns (2.5%), personal loans (2.1%), and venture capital (4.1%). The remaining SMEs reported that their finance was obtained from a variety of

sources, including commercial banks (1.8%), credit (1.8%), crowdsourcing (1.7%), financing companies (2.6%), and other sources (1.1%).

4. Results

The research data were analyzed using SmartPLS 4 software (Ringle et al. 2005). The research hypotheses were examined through partial least squares structural equation modeling (PLS-SEM). The PLS-SEM technique is effective in assessing the strength of relationships between model constructs, including complex and moderating interactions, and in verifying the theoretical basis of inter-variable relationships (Chin et al. 2003). Initially, a measurement model for the constructs was developed. This was followed by the application of PLS-SEM to thoroughly examine the proposed connections between the latent variables in the structural model (Hair et al. 2016).

4.1. Measurement Model

The measurement model was developed to assess the reliability and validity of scales measuring latent constructs and their observed indicators (Loehlin and Beaujean 2016). Table 2 presents the reliability and validity measures, which include Cronbach's alpha, composite reliability (CR) (rho_a and rho_c), and average variance extracted (AVE) for the variables CovR, EFU, FinR, PR, PerformR, Psy, SocR, and TimeR. The table shows that the Cronbach's alpha values for each construct are well above the acceptable level of 0.50 (Nunnally 1967). All constructs demonstrated a good level of internal consistency, exceeding the criterion value of 0.70 (Hair et al. 2016), with Dijkstra and Henseler's rho_A (rho_a) values ranging from 0.771 to 0.95 and rho_c values ranging from 0.79 to 0.98 (Dijkstra and Henseler 2015). Furthermore, all constructs achieved AVE values above 0.5, indicating good convergent validity (Fornell and Larcker 1981).

Table 2. Internal consistency, convergent validity, composite reliability, and average variance extracted.

Item	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
CovR	0.874	0.884	0.906	0.620
EFU	0.711	0.848	0.839	0.643
FinR	0.805	0.823	0.868	0.574
PR	0.920	0.925	0.929	0.550
PerformR	0.773	0.784	0.869	0.688
Psy	0.714	0.771	0.789	0.562
SocR	0.833	0.837	0.881	0.556
TimeR	0.950	0.950	0.975	0.952

The discriminant validity results in Table 3 reveal that all diagonal values exceed the corresponding correlation coefficients with other variables. This compelling observation suggests that each variable's variance is primarily explained by its respective construct rather than being shared with other constructs. Consequently, the variables examined in the study demonstrate strong discriminant validity, confirming their ability to effectively measure distinct constructs (Fornell and Larcker 1981). Furthermore, this analysis provides strong empirical evidence supporting the suitability of these variables for future studies and research endeavors.

Table 4 presents the outer loadings of the measurement items for each construct in the PLS analysis. The constructs examined include CovR, EFU, FinR, PerformR, Psy, SocR, and TimeR. The majority of the outer loadings listed in the table surpass the threshold value of 0.60, with most exceeding 0.70 (Hair et al. 2016). Measurement items with loadings below

0.60, such as EFU2, FinR2, Psy2, and SocR5, were excluded from the analysis due to their lower correlation strength.

Table 3. Discriminant validity—Fornell–Larcker criterion.

Item	CovR	EFU	FinR	PR	PerformR	Psy	SocR	TimeR
CovR	0.828							
EFU	0.089	0.934						
FinR	0.397	−0.086	0.822					
PR	0.811	0.086	0.727	0.592				
PerformR	0.556	0.132	0.491	0.768	0.830			
Psy	0.361	−0.025	0.645	0.628	0.385	0.859		
SocR	0.518	−0.045	0.432	0.722	0.437	0.315	0.799	
TimeR	0.465	0.198	0.318	0.653	0.549	0.337	0.307	0.976

Table 4. Outer loadings of measurement items.

Item	CovR	EFU	FinR	PerformR	Psy	SocR	TimeR
CovR1	0.789						
CovR2	0.859						
CovR3	0.793						
CovR4	0.865						
CovR5	0.786						
EFU1		0.864					
EFU3		0.916					
FinR1			0.812				
FinR3			0.852				
FinR4			0.756				
FinR5			0.801				
PerformR1				0.771			
PerformR2				0.846			
PerformR3				0.869			
Psy1					0.835		
Psy3					0.83		
SocR1						0.684	
SocR2						0.723	
SocR3						0.829	
SocR4						0.860	
SocR6						0.793	
TimeR1							0.975
TimeR2							0.976

4.2. Structural Model

After a thorough evaluation of the measurement model, the hypothetical research structural model was assessed using PLS-SEM. A bootstrapping t-statistic was employed to identify the relationships between the components (Hair et al. 2011). Path coefficients and

coefficients of determination (R^2), structural model evaluation of effect size (f^2), predictive fit (Q^2), and quality of fit (GoF) were examined based on the recommendations of Memon and Rahman (2014). Additionally, the moderation effect of BusA was assessed.

Results from the structural model examination revealed that the exogenous latent variable (PR) had an R^2 value of 0.68, which is deemed significant according to Chin et al. (2003). This indicates that PR explains 68% of the variation in the endogenous variable (EFU) (Hair et al. 2014). The saturated model was found to be more appropriate for the data, as indicated by its lower SRMR score of 0.053, compared to the estimated model's 0.064.

4.3. Results of Hypotheses Testing

The study employed SEM-PLS bootstrapping to rigorously examine the proposed relationships between different constructs in the research model, namely, PR, BAge, and EFU. Table 5 and Figure 2 provide an overview of the path coefficients, significance levels, and t-values. The findings confirm the first hypothesis (H1), showing that PR has a detrimental effect on SMEs' EFU, as evidenced by a significant standard beta coefficient of 0.087 (p-value < 0.05). The second hypothesis (H2), which proposes a link between EFU and BAge, is not supported (Beta = −0.001, $p > 0.05$), suggesting that BAge has a negative and insignificant impact on EFU. Similarly, the third hypothesis (H3), positing an association between PR and BAge, is not supported (Beta = 0.039, $p > 0.05$).

Table 5. Results of hypothesis testing.

Path	Original Sample (O)	Sample Mean (M)	STDEV	t-Statistics	Confidence Interval		Decision
					LL (2.5%)	UL (97.5%)	
H1: PR -> EFU	−0.087	0.089	0.042	2.060 **	−0.015	0.163	Supported
H2: BAge -> EFU	−0.001	0.001	0.039	0.031 *	−0.076	0.076	Not supported
H3: BAge -> PR	0.039	0.039	0.033	1.174 *	−0.028	0.103	Not supported
H4: BAge × PR -> EFU	0.032	0.029	0.047	0.671 **	−0.066	0.118	Supported

** $p < 0.05$, * $p > 0.05$.

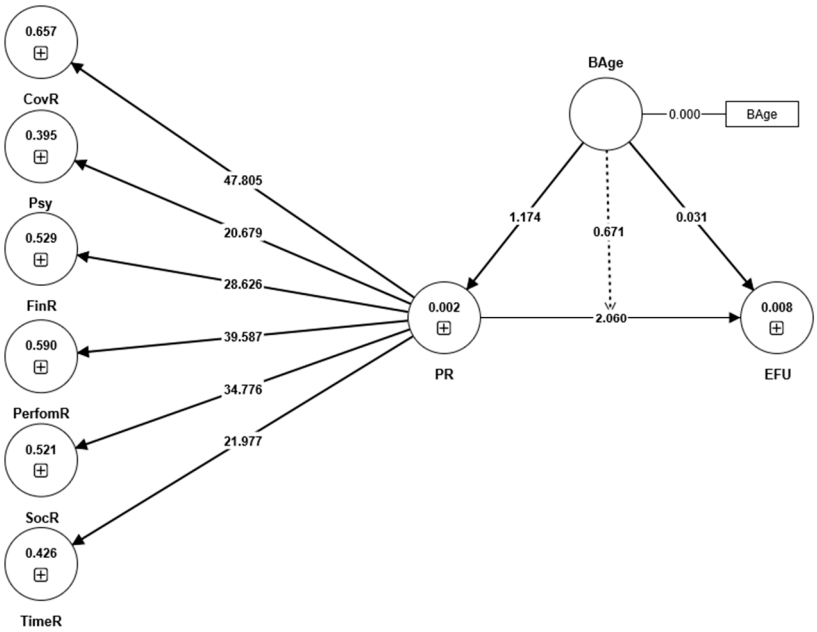

Figure 2. Path coefficients.

The fourth hypothesis (H4), regarding the moderating impact of BAge on the relationship between PR and EFU, is supported (Beta = 0.032, p-value = 0.00). This indicates that

BAge exerts a significant and positive moderating impact on the relationship between PR and EFU.

5. Discussion

The primary objective of this study was to investigate the association between PR, BAge, and EFU in SMEs. The results from the structural equation modeling (PLS-SEM) analysis demonstrated a significant negative impact of PR on EFU. These findings substantially support the first hypothesis (H1) and provide compelling evidence that SMEs with a higher PR exhibit a lower propensity to engage in EFU decisions. The high costs associated with SMEs' use of external finance, along with the expectation of financial losses, can explain the negative relationship between PR and EFU. These findings align with the results reported by Chen (2013), Sanayei and Bahmani (2012), and Gu et al. (2009), who all emphasized the influence of PR on the utilization of banking services. Consequently, this current study suggests that as SME owners/managers perceive higher levels of risk, their inclination to utilize external finance diminishes. These results enhance our understanding of the factors affecting financing decisions for small projects and confirm the importance of PRs in decisions to use external financing.

Contrary to original expectations, the study did not find a significant association between BAge and EFU, nor a relationship between BAge and PR. These results suggest that BAge may not have a significant impact on either PR or EFU, leading to the disproval of hypotheses H2 and H3. Specifically, the regression analysis revealed an insignificant negative effect of BAge on SMEs' EFU (Beta = -0.001, $p > 0.05$), indicating that younger SMEs are more prone than older ones to employing external finance. This might be due to the financial difficulties faced by SMEs in their early stages of operation, necessitating the need for external financing. These findings contradict those of Wignaraja and Jinjarak (2015), who emphasized the positive and significant impact of BAge on SMEs' bank loans. Therefore, this study indicates that BAge does not significantly influence an SME's decision to employ external finance. Additionally, these findings align with those of Laaouina et al. (2024) regarding the influence of PR on SMEs' financing decisions, although they concluded that this relationship is moderated by the entrepreneur's age. Our study contributes a more thorough understanding of the dynamics of financing decision-making in SMEs by exploring the significance of BAge and how it interacts with PR.

The study also found that BAge did not exhibit a statistically significant positive effect on PR, meaning that the duration of an SME's lifetime does not lead to a noteworthy increase in PR. These results indicate that factors other than BAge, such as managerial experience, established business plans, solid relations with suppliers, positive firm reputation, and strong customer base, play a more influential role in shaping the perception of risks among SMEs. The results also suggest that older SMEs have a higher level of PR compared to younger enterprises, possibly due to older enterprises' tendency to avoid the costs resulting from the use of external funding.

The study also investigated the moderating role of BAge in the relationship between PR and EFU, as hypothesized in H4. The results indicate that BAge has a significant and positive moderating impact on the relationship between PR and EFU, which supports H4. This finding suggests that the positive effect of PR on EFU is more pronounced in older SMEs than in younger ones. This result can be attributed to the fact that SMEs with a longer BAge have accumulated more experience and knowledge in utilizing external financing sources, resulting in lower PR. As the SME progresses in age, it may embark on many activities, developing greater experience and confidence in using external funding.

The study's findings have significant implications for finance organizations, SMEs, and policymakers. SME owners/managers need to be aware of how PR affects their utilization of external finance. They must develop strategies to mitigate the consequences of PRs on their reliance on external finance. Additionally, they should be aware that as an enterprise ages, the negative effects of PR associated with external funding lessen. Policymakers and financing institutions should develop financing programs and products

to help mitigate the PRs of SME owners/managers, thereby increasing their use of external finance. Policymakers can play a pivotal role in mitigating the PR levels of SME owners/managers by implementing initiatives aimed at enhancing financial literacy, fostering stronger relationships between SMEs and finance providers, and alleviating financial conditions and constraints.

This study provides additional insights into the determinants of SMEs' EFU. The findings show that BAge has a moderating influence on the connection between PR and EFU and that PR negatively impacts the usage of external finance by SMEs. This study significantly contributes to enriching the current literature on SME finance, deepening our understanding of the factors affecting SMEs' decisions to use external finance. This study highlights the significant influence of a psychological factor, such as PR, on SME decisions regarding external finance use.

While this study contributes to the theoretical and practical aspects related to finance and SMEs, it has several limitations. First, the study focused on how PRs and firm age affect SMEs' use of external funding; it disregarded other factors, such as enterprise size and the nature of the business's industrial sector, which could have had an influence. Future studies can provide a greater understanding of the financial behavior of SMEs by addressing these aspects. Second, the study's findings did not compare the various industries comprising the SME sector. Future research exploring the effects of PR and BAge on the utilization of external financing by firms across different SME sectors is warranted.

6. Conclusions

Enhancing the growth and resilience of SMEs requires a comprehensive exploration of the key determinants that shape their utilization of external financing. This study embarked on a rigorous examination to empirically assess the profound impact of PRs on SMEs' engagement in external financing and to shed light on the pivotal role played by BAge in shaping this relationship. The study's findings demonstrate that PR has a significant detrimental effect on how frequently SMEs employ external financing. These results imply that SMEs with a high level of PR are less inclined to engage in business activities requiring finance from outside sources. As indicated by the study, the age of a business might not affect the SME's utilization of outside finance or its perception of risk. However, the study did reveal that PR has a greater impact on older businesses than on younger ones when using external capital. This suggests that as SMEs become more established and experienced, they increase their confidence in managing risks and engage more in entrepreneurial endeavors that necessitate financial resources. Building on the findings of the current research, more practical initiatives can be implemented to assist in the expansion and sustainability of SMEs. Since the study has highlighted the importance of PR and BAge in the extent to which SMEs use external financing, the future holds significant opportunities for exploration and intervention in this area.

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