

**DETERMINANTS OF INVESTMENT DECISIONS IN SMALL AND MEDIUM ENTERPRISES:
EVIDENCE FROM KHYBER PAKHTUNKHWA, PAKISTAN**

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Abstract

Small and medium-sized enterprises (SMEs) are really important for the economic growth and development; however, their investment behavior is influenced by such factors as psychological traits, ability to take risks (financial capacity), the larger economic picture (macroeconomic environment), and the institutional background, especially in some regions like Khyber Pakhtunkhwa where there is a high level of uncertainty. The main purpose of this study is to explore the influence of all the mentioned factors, i.e., psychological, economic, financial, and government policy, on the investment determinations of small and medium enterprises. It also tests the mediation of risk perception, which is essential in the context of SMEs due to their usual way of assessing the potential of an opportunity, that is, through subjective means rather than objectively. A quantitative cross-sectional design was the chosen research design, with 356 SMEs owner-managers who were the respondents from whom the data were collected. The data were analyzed through the use of Partial Least Squares Structural Equation Modeling (PLS-SEM) in the testing of both measurement and structural models. The results disclose that both psychological and financial factors are the main drivers of investment decisions; nonetheless, the government's practice is the third most important driver, but through risk perception. Economic factors are also a major player, but in a less significant way vis-à-vis the psychological and financial factors. That the risk perception plays a part in the determination of the magnitude of the relationships is well evident from the results of the mediation analysis. It is, however, also very interesting to note that the effect of the government policy on the investment is largely, if not all, mediated by the risk perception. The relationship between risk perception and decision-making is also a direct one; hence, the risk perception is frequently the principal factor in the mechanisms that govern the choices of the new entrepreneurs. In sum, the study proves through a process that integrates behavior and structure that SME investment behavior is an integrated-behavioral-structural process, with the implication that policy stability, enhanced financial access, and confidence-building measures can encourage the investment of emerging countries by developing economies.

Keywords: SMEs, investment decision, psychological factors, financial factors, government policy, economic factors, risk perception, behavioral finance, PLS-SEM, Khyber Pakhtunkhwa

INTRODUCTION

Small and medium enterprises (SMEs) are at the heart of the economic system in the developing nations; hence they are responsible for creating a huge number of jobs, industrial diversification, and sustainable economic development (Ayyagari et al., 2014). SMEs have been the main economic driver in every country by contributing over 90% of the world's business and employing more than half of the global workforce (World Bank, 2022). The SME sector in Pakistan is very much the same, it is a significant contributor to the economy, especially in the regions that lack infrastructure development and are relatively less industrialized. Khyber Pakhtunkhwa (KP) is one of these regions and is very interesting as an industry is developing here and the province is strategically located. The government is also bringing about changes through structural reforms in order to condition the environment for an increase in investments (Government of Pakistan, 2023). There have been policies but still, the SMEs of KP are not adequately invested in, have their finance constrained, and market growth limited, hence, a study on the various factors that determine largely the investment decisions as put forward by theories concerned with the behavioral and structural aspect is essential.

The behaviours of investments among Small and Medium Enterprises (SMEs) are very different from that of large corporations due to the fact that usually small firms are directly managed by their owners, work with scarce resources, and face the bigger risks in the market (Beck & Demirgüç-Kunt, 2006). Such kind of structural constraints plays a significant role in the entire investment process through the elevation of the role of emotions, personal judgments and attitudes among the investors. The long-standing finance view is that investors base their

decisions on reasonable and objective calculations given the existing data and conditions. On the other hand, the modern behavioral finance view is that the actual-world decisions are mostly characterized as occurring due to cognitive biases, psychological dispositions, and heuristic shortcuts (Shefrin, 2020; Mansour & Salar, 2025). The behavior of the owners in SMEs could be governed by such major psychological tendencies that include overconfidence, optimism, loss aversion, and herd (Barberis, 2018; Safyan & Othman, 2025), and hence this can lead to the owners' decisions not entirely compliant with the rational model. Particularly in the case of SMEs, where the information systems are not well-developed and the uncertainty is very high, these behavioral factors get even more prevalent (Coad et al., 2020; Marc, 2025).

While at the same time, we must account for the impact of both the structural and economic forces. One of the external factors that is a big part in making the investment decisions happen is inflation, interest rates, market expectations, and policy stability. It is proven by research that the maturing of the macroeconomic marketing system is what leads to the investment in entrepreneurship but the investment in volatile sectors is risky and thus bankers avoid giving loans to them. Sirin, Uz & Sevindik (2022) already showed in his research that the volatile etc.... this risk. As for the policy fluctuations and security-related issues deterring the business activities of the SMEs in KP, the business owners tend to view such macroeconomic events with skepticism and consider their impact on the feasibility of investing in their businesses (Ullah et al., 2019; Holton & Holten, 2025). The difficulties of financial limits are some of the issues that even more complicate the investment-related behavior. The respective institutions Express in Pakistan that the constraints of reported difficulties basically always whenever they are trying to obtain a new loan or applying for credit.

Government policies - regulatory procedures, taxation, incentives, industrial zones, and administrative reforms - also play an important role in shaping investment behaviours. Transparent and supportive regulatory environments increase entrepreneurial confidence, reduce compliance burdens, and encourage long-term investment (Djankov et al., 2002). Over the past decade, multiple reforms in KP, such as the establishment of special economic zones and facilitation services under the Khyber Pakhtunkhwa Economic Zones Development and Management Company (KPEZDMC, 2022), have been designed to promote investment. However, inconsistencies in implementation, limited awareness among SMEs, and bureaucratic hurdles continue to dampen investor sentiment, making it essential to empirically assess how policy perceptions influence investment decisions in this region.

Risk perception is the critical dimension that connects the structural and emotional aspects. On the basis of Prospect Theory, it is considered that people evaluate the outcomes in relative terms to the risks perceived, rather than the objective chances (Kahneman & Tversky, 1979). Thus, it is likely that e.g. SME owners will interpret the same financial or policy features differently depending on their aversion to risk, previous business activity, and expectations of future stability. Studies revealed that the perceived risk is often a determining factor when people decide about investments under circumstances of uncertainty besides the actual risk (Weber et al., 2002). In the KP sector of SMEs where uncertainty is historically a part of the economic environment, the perception of risk becomes an especially powerful mediator. The knowledge of the interactions of risk perception, financial, economic, psychological, and policy determinants provides a more comprehensive perspective on the decision-making process.

Most of the existing research in SME financing and investment in Pakistan is mainly centered around capital structure, or financial constraints using macroeconomic indicators (Hussain et al., 2021; Mughal et al., 2020; Gomez & Edward, 2025). A very small number of studies have tried to bring in the behavioral and structural determinants altogether within a single framework, and even smaller have looked at the mediating role of risk perception – particularly in the socio-economic and institutional environment. This gap prevents the development of the policies and the enlightenment of the academics regarding the actual means and ways through which SME owners take investments under the conditions of high uncertainty. Therefore, the closing of this gap will be advantageous in both the scholarly growth and the process of forming special interventions that support the SMEs in the areas of their financial capacity, investment readiness, and resilience in the Pakistan's developing regions.

Hence, the very purpose of the ongoing study is to know about the factors of psychology, economy, finance, and government policies that affect the decision of KP-based SMEs to invest and at the same time to look at the issue of risk perception as an intervening factor. The study innovatively develops a composite theoretical framework by integrating behavioral finance, institutional theory, and financial constraints which will give it a comprehensive viewpoint regarding the investment behavior of SMEs. Also, by doing so, the study contributes to the building of

the regional policy and through the designing of the strategies with the aim of making the local economy stronger and more dynamic.

LITERATURE REVIEW

In the SME sector, the way business owners invest their money is very much done under the influence of psychology, economy, finance, regulation, and most importantly their own perception of risk. Studies show that an ever-growing number of researchers agree with the idea that SMEs work in circumstances where there is a lack of information, higher volatility, and resource constraints, and this environment brings the necessity of deprecating the cognitive capabilities of the problem solver.

Nevertheless, a combination of several factors can be seen - these being the particularities of the different types of investment, the influence of the local and institutional environments and the personality trait of the decision-maker DOI:4q3rg9_d_PartA Introduction dispels this relationship-guidance as determined by what the firm-venture is or what influences apart from the "actor" are – they would both result in bottom-up decision-making.

PSYCHOLOGICAL FACTORS AND INVESTMENT DECISIONS

The importance of psychological behavior in determining the decisions of investors is strongly stressed in many studies in the field of behavioral finance. Kengatharan and Kengatharan contend that psychological inclinations do have a great impact on investment selections especially under uncertain conditions. Investors frequently (Kumar, 2021; Kumar et al., 2025) display with confidence, optimism, loss aversion, and herd behavior, all of which work together with their subjective beliefs to affect their financial decisions. These traits have also been verified in the further experiments in the field of behavioral finance which have proved that overconfidence and loss aversion can affect risk assessment and can distort the rationality of investment behavior (Barberis & Thaler, 2003; Khan et al., 2025). In support of this, Barber and Odean's research state that the investors usually take in more risks by trading more than necessary simply because they think that their predictions are successful whereas the opposite is happening and thus their profitability is being reduced (Barber & Odean, 2001). The latest findings have also indicated that investment behavior in the contexts of the equity and SME market is still being influenced by mental biases such as anchoring and herd behavior, thereby making a strong case that psychological components of the phenomenon are largely in control of the investment performance.

The basis of the Prospect Theory was set up by Kahneman and Tversky in 1979. As per this theory, people are more likely to give more weight to negative things than to positive situations of equivalent value, thus becoming risk-averse even in investment environments where everything goes in their favor. Confirmation bias and the framing effect are examples of cognitive biases that disrupt the process of rational thinking and result in suboptimal decision-making (Barberis & Thaler, 2003). Therefore, the fact that human psychology is involved in financial decisions must be considered and applied seriously. According to Shalom (2013), it is very evident that the investor's psychological state is the key factor in building the belief about market stability which will later modify the investor's readiness to invest money. From the studies on emerging markets, it was observed that the unreasonably high level of optimism can lead to permission of investment intentions while behaviors of the crowd may give different outcomes: as for the market type, the herd may either consolidate or disperse (Faris, 2019; Sattar et al., 2025). The following is the definition of herding: an investor will mimic the act of another under particularly unstable market conditions, leading to the likelihood of mutual movements that are not rooted in the principle of the process (Bikhchandani & Sharma, 2000). When over half a million stocks were chosen at random for testing, it was the herd behaviours that was the top influence on the financial health of the company when examined in terms of perturbed capital (Huang et al., 2018; Niaz et al., 2025). In addition, Alquraan et al. (2016) revealed a couple of cases wherein the investment activity of the overconfident investor was raised to a very high level that it was almost as significant as the influence of the whole market in some instances. On the whole, it is the psychological causes that play a major role in the way people perceive risk, value assets, and choose investments. Researchers on the topic are unanimous in their opinion that the psychological factors i.e., confidence, optimism, loss aversion, and herding among others are the crucial determinants that mold the perception of investors, thereby affecting their investment choices overall. This, consequently, bolsters the case that psychological factors together with risk considerations are the major parts and parcels of any complete model of investment behavior the one needs to take into consideration.

ECONOMIC DRIVERS OF INVESTMENT DECISIONS

Economic factors are a crucial ingredient in investment decisions so that they form the main background of investors' operation. Previous studies like Akbar et al., underline macroeconomic conditions to be the prime

movers in making investment results change by just changing expectations and risking. Experience is often the best teacher and market behavior has been shown by surveys to be influenced by inflation, interest rates, and exchange rates fluctuations as well. They show the stronger effect on investor sentiment and market participation Sirin, Uz & Sevindik (2022). Equally, the international evidence indicates that macroeconomic downturns... etc. (Bahmani-Oskooee & Gelan, 2018).

Economic behavior is affected by a variety of external factors including political situations, legal arrangements, and availability of resources. The said external forces play a crucial role in influencing market expectations by either motivating or restraining the investment process. Investors feel secure with political stability, enduring fiscal system, and business environments that can be anticipated, while on the other hand, inconsistency or instability in policy causes unexpected movements and, thereby, discourages investment (Bloom, 2014). According to some researchers, the investment activity is directly influenced by the so-called macroeconomic shocks such as energy crises or supply chain disruptions, which result in more operational uncertainty (Khan & Gill, 2021; Ghauri et al., 2025). Furthermore, the interlinkages in the global economy imply that the external factors such as the fluctuations of the prices of commodities or the changes in the international interest rates can affect the conditions of investment within the country to a great extent; this phenomenon is most prevalent in emerging markets.

Moreover, the claims of several pieces of research that the negative news of the market has a stronger impact on the investor's psychology rather than the positive news and the claimed behavioral theories such as loss aversion (Kahneman & Tversky, 1979) support this statement. That is why, the moment they see an inflation increase or a GDP slowdown, they instantly consider it a higher risk and they recall it in their investment plans. But the other side of the coin, the continuous economic expansion, is the rise of the expectations among the investors and more into the investment pool, as stated by Sirin, Uz & Sevindik (2022). Investment decision-makers are mainly affected by the economic environment and thus economic determinants have direct and indirect impacts on investor behaviors by participating in the formation of expectations, the shifting of perceiving risks, and the changes in the financial environment where decisions are made as stated by Korkmaz et al., (2020).

FINANCIAL FACTORS AND ACCESS TO CAPITAL

Investment behavior in businesses is affected in highly significant ways by financial factors and even more so in the cases of small and medium-sized enterprises wherein the financial constraints are generally present. As it is reported by the literature, one of the major hindrances is the shortage of the available finance which makes one among the usual things for the firms' productive investments, their activities expanding, or even the company's innovating (Beck et al., 2008; Qaisrani et al., 2025). It is a common thing that the SMEs often come across the difficulties to get the money from the market and it is because of the conditions set by the bank such high collaterals, interest rates, and information not been shared between borrowers and banks in a fair way that banks are unwilling to lend to small firms. Consequently, financing for most of the SMEs is a matter of non-existing external sources of funds. as a result, the SMEs rely heavily on internal funds due to a lack of cash flows or/and informal sources of credit thus, both of which bind the firm's investment decision in terms of scale and timing.

Liquidity and internal financial strength are equally vital elements of firms. Firms whose liquidity levels are higher tend to invest more because they face fewer restrictions in absorbing risks or financing new opportunities (Carpenter & Petersen, 2002). On the other hand, firms with lower cash flows often put off or cancel their investment plans, even if those investments promise high returns. Also, companies that anticipate a higher profit in the future tend to more frequently reinvest their gains and launch an expansion (Fazzari et al., 1988). SME studies in emerging economies have shown that growth and investment decisions of these firms are heavily dependent on their ability to generate internal funds because of the restricted availability of formal financial instruments (Love & Martínez Pería, 2015; Khalil et al. 2025).

The efficiency of the financial sector and the credit availability have a significant impact on the investment. Small and medium-sized businesses are more likely to plan long-term investments when banks are giving credit easily and on just terms and their approval procedures are quick and smooth (Mughal et al., 2020; Nasir et al., 2025). But on the other hand, the variation or uncertainty in the interest rates usually raises the cost of raising money, and then it becomes less attractive to borrow and in this scenario, the risk of investment is also amplified (Mughal et al., 2020). The SME financing situation in many developing countries is further deteriorated by a combination of various risk factors and a poorly established credit guarantee framework (Banerjee & Duflo, 2014). These all support the view that financial variables such as credit accessibility, liquidity, and cost of capital, are among the dominant factors affecting the willingness of SMEs to invest.

GOVERNMENT POLICY AND INSTITUTIONAL ENVIRONMENT

Government policy significantly determines the investment climate by impacting the regulatory, administrative, and institutional settings in which SMEs do business. Previous scholarly studies argue that clear rules, uniform taxes, and good governance can bring down the business risk and create a more favorable climate for investment (North, 1991). Good regulatory quality reduces entrepreneurs' costs of compliance and gives them more security, hence, the funds will be more likely to go to businesses (Djankov et al., 2002). On the other hand, the environment characterized by the frequent rewriting of policies, slow functioning of regulations, and excessive requirements for compliance presents instability that warns off SMEs investors as the risks of the ventures are higher and the operations are slowed down.

Subsidies, tax incentives, credit guarantee schemes, and the establishment of industrial zones which have been introduced by the government are the most commonly found ways of stimulating the private investment environment in the developing countries where the institutional framework is always changing (Zeng, 2011; Ditta et al., 2025). According to the studies, these programs usually cause the relaxation of financial constraints and in such a way give SMEs the possibility for increasing production or even entering new markets. On the other hand, there have been cases where the successful outcomes of such policies were contingent upon the good quality of the policy implementation, their accessibility, and perceived fairness (Khwaja & Iyer, 2006). Instances wherein policy implementation and design are at variance can lead to public trust erosion, making entrepreneurs reluctant to engage in long-run investment commitments through public resources.

Studies carried out in South Asia and developing country conditions point out that SMEs in particular regard governmental policies to be something they can evaluate based on not merely its written side but also on how far the administrative efficiency, transparency, and enforcement consistency will be present (Carlin et al., 2006). When regulatory procedures become more and more cumbersome or less predictable, the outlook of SMEs is more likely to be that government institutions are sources of risk instead of support, which in turn affects their investment decisions in a negative way (Ayyagari et al., 2008; Rafique et al., 2025). In Pakistan procedural delays that are due to the complexity of the system or just plain procrastination, the little coordination between the various government agencies regarding regulatory issues, and an ineffective means of control and implementation regarding taxes are some of the criteria upon which SMEs' evaluations are based and to certain extent which impact the level of their investment.

In areas like Khyber Pakhtunkhwa, the government has taken the initiative to support investment and entrepreneurship through the provision of industrial estates, tax incentives, and business facilitation services (KPEZDMC, 2022). However, the business community's reaction to the government support is not the same, which reflects the different levels of knowledge, facility, and faith in the mechanisms of governance. Generally, the research and studies have identified that there is a very close connection between government policy and investment decisions as government policy is a determinant of the regulatory control environment, and the latter also affects how the entrepreneurs perceive the risk, opportunity, and institutional reliability.

ROLE OF RISK PERCEPTION

Risk perception is the most salient factor in the behavioral model of investment decisions, especially in the cases where there is a considerable amount of uncertainty, lack of information, and volatility. What traditional behavioral theories have to do with is to demonstrate that (1) risk is not and cannot be evaluated by individuals on the basis of objective probabilities only, but rather (2) they view it subjectively more often giving more significance to losses than gains of tantamount size or probability (Kahneman & Tversky, 1979). The impact of this subjective exercise, which is extremely important for SMES operating with tight financial positions and thus more susceptible to market disruptions, is also highlighted by another layer of subjectivity at the firm level. The truth is that SMEs owners feel that a business opportunity is as risky as they feel it is rather than its perceived risk in financial terms (Weber et al., 2002). As a result, the perceived risk factor is among the most influential predictors of investment commitment even stronger than the market or financial indications themselves as the research has shown.

It is well-founded in empirical research that entrepreneurs are more cautious in their investments once they perceive a higher level of risk because of inflation, policy uncertainty, credit scarcity, or unstable market conditions. This was it, however, the other way round, and the environment was looked as a stable or supportive one, entrepreneurs increasing their investment predisposition, even though the difficulties were not very large. The behavior model offered here gives a big reason corporations that go through the same kind of conditions might end up with different investment pronouncements. Moreover, it is also important to know that the perception of

risk is not a simple matter, and it is influenced by many factors such as personal pre-dispositions, previous experiences, and external cues (Sitkin & Pablo, 1992). For example, the positive-minded entrepreneurs would tend to underestimate the uncertainties, meanwhile the loss-averse decision-makers, from the same data, would see the greater threat (Delgado-García et al., 2015; Zahid et al., 2025).

It has been found in the most recent studies that risk perception is the mediator of the link connecting environmental factors and investment behavior (Cummings et al., 2022). Indicators of economics have a direct impact on the level of uncertainty which is perceivable from the points of demand and price stability; Conditions of finance delineate the extent to which firms feel secure when making new investments; and the policy of government, by means of its signals, affect the level and subject of trust in institutions. It is observed that strong regulations lead to the decrease of investment risks, hence making the relation of SMEs stronger and more intent in doing business. On the other hand, inconsistent or heavy burdens of public policies amplify the risk, then the SMEs get discouraged and not committed for the long term at all (Carlin et al., 2006; Khalid et al., 2025).

Risk perception is a very significant issue in small and medium enterprises, especially in places like the Khyber Pakhtunkhwa region where the market is very volatile, political swings are very frequent, and the entrepreneurs can hardly get any authoritative information. They heavily depend on their own interpretation and the experiences of their peers as well as the informal indications they get while they are assessing their investment options. Therefore, risk perception is a major determinant that combines the causes and the ways in which they affect the individual's psychological responses into real financial decisions. In general, the literature is of the opinion that risk perception is an important contributor that mediates among the determinants of finance, economics, and psychology so as to give the investment behavior the specified direction.

THEORETICAL FRAMEWORK

Investment behavior of small and medium enterprises is a result of a mix of psychological inclinations, structural restrictions, and institutional scenarios that necessitates the application of multiple theoretical perspectives to understand how SMEs owners perceive and evaluate opportunities and risks. The typical model in economic theory presupposes that investors act rationally and make their choices on the grounds of objective financial data. But the truth is that there is plenty of evidence from behavioral finance to the contrary, i.e., that human mental shortcuts and the corresponding emotional reactions are very often the factors influencing the decision-making process (Shefrin, 2020). This is why the current work utilizes a mix of Prospect Theory, Finance Gap Theory, and Institutional Theory to conceptualize a multifaceted framework that would not only capture both the psychological and the structural aspects of SME investment decisions but also the existence of the mediating factor risk perception.

Prospect Theory, which was presented by Kahneman and Tversky (1979), can be considered as the cornerstone of the research into how people go about the evaluation of risks and uncertainties. The theory states that people compare the outcomes with a reference point, and they are too worried about the potential losses and are not enthusiastic about gains. The predispositions give rise to loss aversion, over confidence, and framing effects each of them having impact on the investment behavior. In particular, SMEs, which are often directly managed by the owners who are personally taking the financial risk, are more likely to base their decisions on subjective considerations rather than objective financial models. It has been proven by research that entrepreneurs often simplify their decision-making processes by overlooking details when they are faced with complex situations—an action that gives rise to either positive or negative results depending on their mental attitude (Barber & Odean, 2001; Coad et al., 2020). In the model of the present study, psychological variables of confidence, optimism, and cognitive biases influence not only the perception of risk but also the decision-making in investment, therefore confirming the assumption of Prospect Theory that the subjective evaluation of risk determines the choices under conditions of uncertainty.

Prospect Theory is the theory that explains the mechanisms of behavior that drive investment decisions, whereas the Finance Gap Theory recognizes the financial constraints structurally as encountered by the SMEs quite often. The theory of Beck et al. (2008) & Stiglitz and Weiss (1981) has it that SMEs become subject to credit rationing because of the presence of information asymmetry among market participants, the collateral provided by the SMEs being inadequate, and the financial institutions' conservative lending attitude. The situation gives rise to the financing gaps which are uninterrupted and thus restricting the companies to go in for the most suitable investment opportunities. Another aspect of these effects is that there are the undesirable effects that come from these situations and they are the ones that create personal inhibitions that hinder the SME firms from engaging in the so

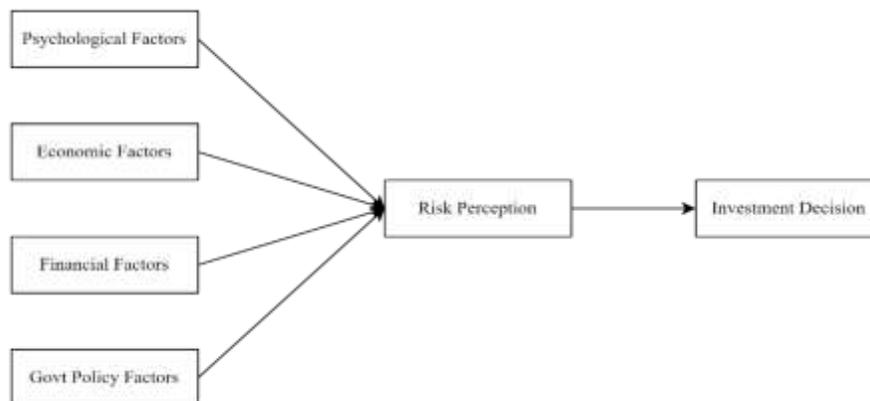
much desired growth through investing in more profitable ventures. From a practical point of view, the availability of funds, internal cash flows, and the ability to have sales receivable-based financing, in other words, the benign low-interest rate, are possibly the main business-environmental factors which, at the very same time, are the most critical indicators of the small and medium-sized firms' investment programs (Carpenter & Petersen, 2002). It is, therefore, impossible to talk about the Financial Dt among the above-mentioned factors, they being the key ones—only if the company has funds that are at its disposal, only if the borrowing of funds is bearable as well as only if the company is in a stable financial condition—and not taking them into consideration means not understanding the “problem” itself. Beyond affecting the decisions of businesses directly, the financial constraints also have the power to alter the risk perception of the companies by making them feel more secure or vulnerable when it comes to evaluating new opportunities.

A frame of reference which the broader environment that SMEs work in becomes one of the concepts that Institutional Theory focuses on the framework and enhances the view that formal rules, regulations, and government interventions play a significant role in the forming of business behaviours (North, 1991). It is to be noted that institutional environment that is stable and predictable minimizes the degree of uncertainty faced and is likely to have a positive impact on the country. On contrary, if there exist policy inconsistency, bureaucratic obstacles and regulatory opacity that certainly not only incite but also sustain a high level of uncertainty by doing so the gain for attaining investments decreases perceived risk, discouraging investment (Djankov et al., 2002). Khyber Pakhtunkhwa's government has been taking several policy measures and industrial promotion campaigns having the SMEs in its focus area. The entrepreneurs' attitudes towards government policies then become very crucial and will greatly affect investment decisions. It is then, the institutional signals that call for investment and also point the environment to be the one which has a risky level.

Incorporation of the interrelated theories is a key determinant of the SMEs' investment behavior. The Psychological variables contribute to the interpretation of an opportunity provided by the entrepreneur; financial limitations can either hinder or support the readiness to invest; while the institutional contexts influence the overall level of trust and uncertainty. The way risk is seen by the entrepreneur highly influences investment behavior and decision-making. For that reason, it can be said that the perception of risk is the driving force of the whole system. Building on the premises of Weber et al. (2002) and Blais and Weber (2006), the risk perception model provides a pathway for mingling the cognitive and economic bases of human behavior and, thereby, revealing why at times many similar SMEs may show considerable variability with respect to their investment decisions which is otherwise expected under the conditions in which they operate

As a consequence, the theoretical model in this case is that the investment decision-making is the outcome of the intertwining mental-structural factors and that subjective risk perception mediating the impact of psychological traits, financial conditions, market signals, and institutional setups. Resulting from this, there is a deeper and more realistic insight into the SME investment behavior in emerging markets e.g. KP.

CONCEPTUAL MODEL



METHODOLOGY

This research uses a quantitative study layout to look into the influence of psychological, economic, financial, and government policy factors on the investment decisions of SMEs in Khyber Pakhtunkhwa with the mediation of risk perception. Quantitative methods are the perfect choice for modelling behaviours and structures as they offer

a consistent analysis of many interrelated variables and they are also good for making statistical generalizations (Bryman, 2016). The nature of SME investment behavior which is rooted in a mix of personal judgments and objective ambient conditions makes indirect and direct fore effects include in between constructs well explained through quantitative means and hence a quantitative approach is well placed in this study to help the researchers come up with the needed information for decision making.

RESEARCH DESIGN

A cross-sectional survey design had been carried out, which is common in SME and behavioral finance studies where attitudes, perceptions, and decision-making are all looked at in a certain time period (Hair et al., 2022). This is a good choice of a design if the purpose of the study is to investigate risk perception, psychological tendencies, and policy-related perceptions since these are all subjectively experienced and could be best measured through standardized instruments. Additionally, cross-sectional designs are the most effective way to collect data from different SME populations at one time and at the same time provide enough statistical power for structural equation modeling (SEM).

In the study, the target population was defined by the owner-managers of small and medium enterprises, particularly those in seven major districts of Khyber Pakhtunkhwa, comprising industrial, service, and commercial sectors. SMEs were picked based on the classification that the Small and Medium Enterprises Development Authority (SMEDA, 2023) provided. It was the stratified sampling method that made sure that the distribution of samples across regions and industries was fair, a step that turn out to be quite useful in the case of diverse SME setting. (Sekaran & Bougie, 2020).

The collected number of valid respondents totaled to be 356, which is higher than the minimum numbers specified as adequate in SEM if the sample size ranges from 200 and above are concerned (Kline, 2016; Hair et al., 2022). The respondents were people playing an active role in the planning of investments, making financial decisions, and top management, and that was why the collected data were reliable and management-orientated.

INSTRUMENTATION AND MEASURES

The researchers administered a structured survey that was consisted of several items taken from various previous studies, all of which had been validated through different methods. The individual items in the psychological aspect were from Barber & Odean (2001) and Coad et al. (2020), and together these items are confidence, optimism, and behavioral tendencies. The economic side of the survey was again taken from two previous sources of Apergis & Payne (2016) and Bahmani-Oskooee & Gelan (2018) where the items measure the participants' inflation perceptions, market stability, and the expected demand. Measures used in financial factors were totally of two sources namely Carpenter & Petersen (2002) and Fazzari et al. (1988), specifically talking about liquidity, access to credit, and cost of financing in terms of indicators. Government policy pertained to the question to what extent the government tools could influence the economy by imposing taxes or adding legal restrictions on a certain industry, thereby easing access or helping capital supply. Government control in theory can help the economy move in the right direction and give a strong basis both through taxes and by lessening the reference charges, said Hans Tamm, chief economist at SEB. Investment was one of the variables, the other being risk perception that we borrowed from the studies of the authors who have recently focused on the investment behavior of small and medium-sized enterprises. The researchers used the domain-specific risk framework by Weber et al. (2002) in order to assess the respondents' risk perception in various risk areas. All survey items used five-point Likert scales that went from "strongly disagree" to "strongly agree." Prior to the main data collection, a test was run on the questionnaire with a small number of sample subjects to check for clearness, relevance, and alignment to the construct. Reliability and validity analysis were carried out later on the same instrument using CFA.

DATA COLLECTION AND ANALYSIS

A combination of in-person distribution questionnaire was distributed to gather data that were mostly from urban and semi-urban areas of KP to ensure that all respondents from the area have equal access to the survey. Participation in the survey was not obligatory and the respondents were to quickly informed about the purposes of the research. In order to reduce response bias which generally is the recommendations for behavioral and financial perception studies (Podsakoff et al., 2003), this study used the simplest form of anonymity and confidentiality. The data collection period extended over a period of eight weeks to make sure that a variety of sectors were covered. Data analysis was carried out in a very comprehensive way. Descriptive statistics were developed to summarize the characteristics of the respondents and for reviewing the variables' distribution. Confirmatory Factor Analysis (CFA) that used the analysis's most recent guidelines was carried out to check whether there was measurement

reliability, convergent validity, and discriminant validity (Hair et al., 2022). Model fit was checked using indices such as SRMR, NFI, AVE, CR, and HTMT.

SmartPLS 4 was employed to examine and evaluate the relationships amongst psychological, economic, financial, and policy factors. The drivers of investment decisions were risk perception acting as a mediating variable. It was concluded that PLS-SEM is the ideal method for elaborate behavioral models, non-normally distributed data, and predictive modeling research based on (Hair et al., 2022). Bootstrapping along with the Preacher & Hayes (2008) recommendation was used to estimate the indirect effects more precisely.

RESULTS AND DISCUSSION

In this segment, the study's empirical results are laid out and analyzed through descriptive analysis, measurement validation, model fit assessment, and structural equation modeling. The findings are discussed to elaborate on the different aspects of the investment decisions among SMEs that are influenced by psychological, economic, financial, and government policy factors, with risk perception as a mediator. The text of the chapter is organized chronologically, starting with data characteristics and then moving on to more profound structural inferences.

Table 1: Descriptive Stats

Variable	Mean	SD	Min	Max	Skewness	Kurtosis
Psychological Factors	3.55	0.75	1.67	5.00	-0.255	-0.837
Economic Factors	3.46	0.66	1.50	5.00	0.000	-0.115
Financial Factors	3.55	0.74	1.67	5.00	-0.189	-0.752
Government Policy Factors	3.37	0.78	1.00	5.00	0.055	-0.681
Risk Perception	3.47	0.61	1.17	5.00	0.005	0.273
Investment Decision	3.36	0.67	1.67	5.00	0.132	-0.325

Descriptive statistics summarized the central tendencies and dispersion of all study variables before going to the measurement and structural models. The findings show that the respondents generally perceived the psychological, economic, financial, and government policy factors moderately positively, with the mean values falling inside the mid to upper part of the five-point Likert scale. Standard deviations across variables are all within acceptable limits, which means that the responses were fairly consistent and not extremely variable. Skewness and kurtosis values are all within the recommended ± 1 thresholds, thus closer to approximate normality, which makes the data more suitable for multivariate analyses such as CFA and SEM (Hair et al., 2022).

Table 2: Convergent Validity and Reliability

Variables/Items	Convergent Validity		Reliability	
	Factor Load	(AVE)	(rho c)	Cronbach's Alpha
Economic Factors	0.799-0.839	0.682	0.928	0.907
Psychological Factors	0.813 – 0.830	0.684	0.928	0.907
Financial Factors	0.807 – 0.847	0.671	0.924	0.902
Government Policy Factors	0.789 – 0.841	0.670	0.924	0.902
Risk Perception	0.756 – 0.782	0.600	0.900	0.866
Investment Decision	0.761 – 0.811	0.632	0.911	0.883

Source: Author Calculation

Confirmatory factor analysis was performed to examine the trustworthiness and accountability of the measurement model prior to conducting a hypothesis test. The results of CFA show that all of the factors have been able to meet the requirements for factor loadings, internal consistency, and convergent validity positively. The loadings of so-called standard loadings were more than 0.70, thus, the items were declared valid and reliable in terms of their latent factors. Composite reliability of CR for all factors as well as Cronbach's alpha values for the constructed scales reflected internal consistency of more than 0.80 and 0.70, respectively, for psychological, economic, financial, government policy, risk perception, and investment decision variables.

Average Variance Extracted (AVE) confirmed that convergent validity was met. The AVE was greater than 0.50 for all constructs and this suggested quite a significant portion of the signal in the items was explained by variation. By both the Fornell–Larcker criterion and the HTMT ratio, it was shown that the differentiation degree was not too low. The square root of the average variance extracted for each construct was greater than its inter-construct

correlations while the HTMT values were within the recommended maximum of 0.85, implying that the constructs were unique. Hence, from the validation of measurement perspective, we can say that the model is both statistically robust and theoretically coherent and hence is suitable for the structural equation modeling.

Table 3: Heterotrait-monotrait (HTMT)

	EF	FF	GP	ID	PF	RP
Economic Factors						
Financial Factors	0.788					
Govt. Policy Factors	0.750	0.776				
Investment Decision	0.775	0.808	0.804			
Psychological Factors	0.775	0.785	0.771	0.802		
Risk Perception	0.762	0.777	0.833	0.870	0.769	

Source: Author Calculation

Table 4: Model Fitness Indicator

Model Fit Criteria	Fit summary	Estimated model	
SRMR	0.036	0.036	
d_ ULS	0.843	0.843	
d_ G	0.340	0.340	
NFI	0.920	0.920	
Robustness of Model Indices	Q ²	R ²	Adjusted R ²
Investment Decision	0.481	0.697	0.694

Determination of how well the proposed measurement and structural models were in line with the observed data was made through evaluation of the model fit. As per the commonest procedures in structural equation modeling, signs were apparent that the models were good through the assessment of several global fit indices which included the Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), and predictive relevance (Q²) (Hair et al., 2022). The selected SRMR was considerably lower than the 0.08 limit which showed that the model was very good. The NFI, however, was above the 0.90 limit, hence showing that the model was indeed a better one than the null one (Kline, 2016).

The predictive relevance was evaluated based on the value of Q² using the blindfolding method; all constructs showed the Q² greater than zero indicating a good predictive accuracy and model relevance for the endogenous variables (Hair et al., 2022). The coefficient of determination (R²) for the investment decision construct was evidence of a sufficiently strong explanatory ability that was a result of the aggregate effect of psychological, economic, financial, and government policy factors. The adjusted R² for the investment decision construct and all the variables demonstrated a very strong set of predictors that would help to explain the variations in the dependent variable. The combined use of these variables as predictors tests the reliability, accuracy, and the strength of the model, and that they are statistically meaningful which implies that the model is appropriate for the purposes of structural composition and hypothesis testing.

HYPOTHESIS TESTING

Another statistical tool that found use is Structural Equation Modeling (SEM), and it was through this tool that the interdependent and interdependent relationships within the constructs were explored. The SEM methodology becomes important for the present research on multiple perspectives since it allows to arrive at comprehensive results that involve error contribution (Hair et al., 2022). Further to the approval of the measurement model, the structural model was however examined so as to check the strength, direction, and significance of the relationships postulated among the different variables like psychological, economic, financial, government policy, risk perception, and investment decision. Moreover, bootstrapping with 5,000 resamples was employed to obtain standard errors, t-values, and significance levels, ensuring that the estimates are more robust as meticulous PLS-SEM proponents would like to see (Preacher & Hayes, 2008).

The Table 4 results agree that every structural path is greater than zero and they are statistically meaningful, showing that each of the predictors in question actually contributes to the investment decision-making in a substantial way. The significance level at which the factor of the economy affects the investment decision ($\beta = 0.120, p < 0.001$) indicates that the small and medium enterprises are reactive to the signals of the broader economy but prefer to rely on some other factors to a far larger extent for their Investment decisions. Their effect, however,

on the definition of the risk perceptions ($\beta = 0.176$) suggests that economic stability reduces the uncertainty that is perceived to be coming from the economy. For the financial factors, however, the direct effect they show on the investment is even stronger ($\beta = 0.185$), thus emphasizing the significance of the liquidity and the ease of access to credit. The strong effect on risk perception ($\beta = 0.18$) consolidates the view that the capital constraints affect the psychological readiness to invest. The government policy not only affects the investment decisions directly but also has a high percentage of the government policy effect mediated by the risk perception ($\beta = 0.138$ and $\beta = 0.371$, respectively), so the institutional stability is a core feature of the human decision-making process. The psychological factors are quite good for the prediction of investments ($\beta = 0.185$) and even the risk perception ($\beta = 0.173$) in this case, speaking about the overconfidence and optimism as the cornerstones of the small business owner's behavior. Setting things in the order would lead to the conclusion that the mediators are of at least as big an importance as the direct effect when it comes to financing influences.

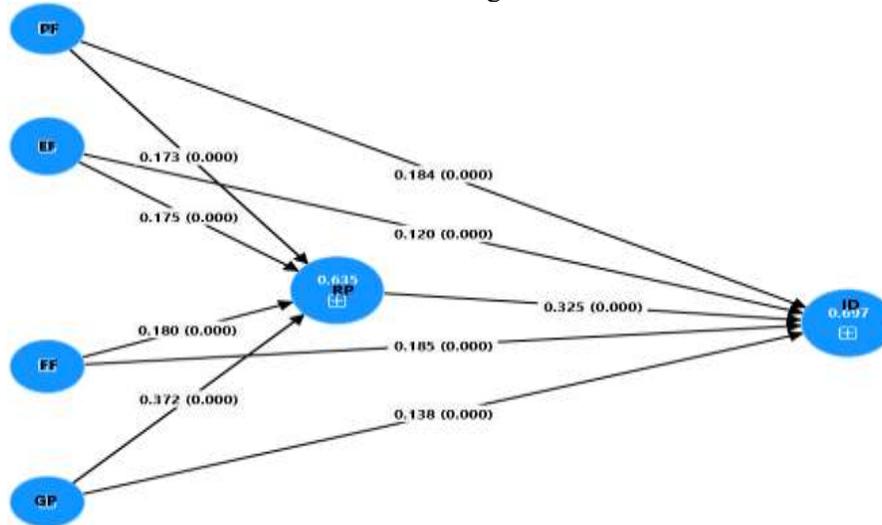


Table 4: Path Analysis

Path	Coefficient	Std Deviation	t-Statistics	p-Value
EF -> ID	0.120	0.033	3.659	0.000
EF -> RP	0.176	0.034	5.160	0.000
FF -> ID	0.185	0.033	5.623	0.000
FF -> RP	0.180	0.033	5.423	0.000
GP -> ID	0.138	0.037	3.769	0.000
GP -> RP	0.371	0.042	8.922	0.000
PF -> ID	0.185	0.034	5.410	0.000
PF -> RP	0.173	0.034	5.072	0.000
RP -> ID	0.326	0.047	6.952	0.000

Table 5: Mediation Analysis

Path	Direct Effect (β)	Indirect Effect (β)	Total Effect (β)	VAF (%)	Mediation Type
PF → ID → RP	0.185	0.057	0.242	23.6	Partial Mediation
EF → ID → RP	0.120	0.057	0.177	32.2	Partial Mediation
FF → ID → RP	0.185	0.059	0.244	24.2	Partial Mediation
GP → ID → RP	0.138	0.120	0.258	46.5	Partial Mediation

Note. VAF = Variance Accounted For. Mediation type is classified as full (>80%), partial (20%–80%), or none (<20%) (Hair et al., 2022) By examining the mediation results in the Table 5, it can be inferred that the risk perception plays a critical part as a barrier to the investment decisions' implementations by the means of the psychological, economic, financial, and policy-related influencers. The indirect effects of all positive and statistically significant and the Variance Accounted For (VAF) values are in the range of 23.6% and 46.5%, showing partial mediation in every connection.

This signifies that Small and Medium-sized Enterprises are not reacting only to the objective signals but rather perceiving risk, and in this way, they are also the ones creating the external and internal conditions side by side. A modest mediated effect (VAF = 23.6%) is displayed by the psychological factors, which implies that confidence and optimism are partly affected by investment decisions through the process of reducing perceived uncertainty. The economic factors were the next strongest with a mediation proportion of 32.2%, which was when economic changes affected SMEs and the main reason was a change in perceived market risk. Financial factors also had partial mediation (24.2%) in terms of accessible financing and perceived vulnerability. The governmental policy's mediation was the most at 46.5%, done by these policy changes making institutional clarity substantially lower perceived risk and hence, raise investment readiness. The figures on mediation by the paths confirm that the risk perception through which the SMEs perceive the structural and psychological cues is the main mechanism influencing the actual investment behavior.

DISCUSSION

The quantitative investigation promotes a better understanding of the accompanying attributes of internal behavior, economic conditions, finance readiness and institutional quality that together contribute to the decision-making process of SMEs when it comes to investments. An estimated example, since it is usual in scientific studies, a discussion chapter provides an interpretation of the results in connection with the theory, and a comparison of results with previous work is also made. However, the emphasis is on practical implications of the results by this manner (Saunders et al., 2019; Cooper & Schindler, 2022). This method was approved in this case by joining the output of the model with the already existing empirical verification as the next step in the process.

Psychological factors have a strong effect on investment decisions based on the first major finding. The positive path coefficient that is significant ($\beta = 0.185$) shows that confidence, optimism, and cognitive framing have a major role in the whole process and mostly in entrepreneurial decision-making. One important thing that should be noted here is that the results are similar to those from the behavior finance field. This field describes the influence of cognitive biases like overconfidence and optimism that can make a person more prone to taking risks and thus his/her investment strategies would get affected (Barberis, 2018; Coad et al., 2020). The situation applies also to the research that gives evidence of the fact that SMEs, by virtue of their owner-controlled forms, really trust the personal judgment over the formal cybernetics, thus making psychological factors the most-chosen reason for strategic directions (Puri & Robinson, 2013). This is why the latest studies agree with the fundamental claim of Prospect Theory, as decision-makers in the business world are not only guided by reason, but also influenced by emotions—especially by the fear of failure and the prospect of success (Kahneman & Tversky, 1979).

The findings demonstrate that economic factors still have an impact on the decisions of SMEs to invest, although the impact is rather slight ($\beta = 0.120$). The result is in line with earlier works that claim SMEs make their decisions based on inflation, demand conditions, and overall economic stability but look at the economic cues in a more individual way (Apergis & Payne, 2016; Khan & Gill, 2021). Inactive firms access financing and equity markets less frequently and at larger discounts, by using "amortizations" to facilitate financing and to unlock equity; the unsustainable access to cheap funding using the so-called distributed ledger technologies thus impairs the proper pricing and availability of traditional equity and debt. SMEs in developing markets and valuation are typically conducted on the basis of "expert" judgments, the expert being the respective market player, instead of through formal methods (Valérie & Camilo, 2020). The argument for the additional upward bias from the smaller firms' current bad credit policies depends critically on the validity of the term "efficient" in the case of the banks (Litvak & Schevelling, 2016).

One of the major driving factors for the investment actions is the financial aspects ($\beta = 0.185$), this reproducing credit facilities, liquidity and the capital cost arguments as the major causes of growth and investment for small and medium-sized companies (Beck et al., 2008; Love & Martínez Pería, 2015). The mediation statistics (VAF = 24.2%) showed that the different types of financing were one of the ways to affect the investment behavior of the businesses, as they were controlling new opportunities in the sense of certainty and uncertainty which companies are more or less able to evaluate. This reasoning was supported by the theory of the Finance Gap, suggesting that credit rationing and lenders' risk aversion in credit markets were more negative to SME business compared to large businesses because of the uncertainty and collateral necessary in debt markets (Stiglitz & Weiss, 1981). Simultaneously, the scarce availability of financial resources or the high cost of capital would be the reason behind the high-risk perception from the investment to SMEs, and thus eventually reducing investment.

Besides that, the research further indicates that the government policies have a significant and direct impact upon investing decisions ($\beta = 0.138$) and the perception of risk ($\beta = 0.371$). This finding is in-line with the major argument of Institutional Theory that the establishment of investor trust amounts of the presence of institutions, which render the regulatory environments transparent, predictable, and supportive (North, 1991; Djankov et al., 2002). When it comes to the majority of SMEs, they are influenced by the government through actions i.e. transparency in regulations and procedures' approval, and the non-changing character of the industrial situation. The very significant mediating impact of government policy (VAF = 46.5%) on the one hand is indirect and in terms of shaping the perception of risks by entrepreneurs through environmental uncertainty. This is parallel to the regional analysis with one demonstrating that the SMEs in Pakistan are facing significant increase in risks induced by policy enforcement inconsistencies and bureaucratic uncertainties, (Hussain et al., 2021).

One of the most important results refers to the pivotal role of risk perception, a factor found to have a significant direct effect on investing decisions ($\beta = 0.326$). It is an indication that the behavior of SMEs in the investment process is tightly linked to whether or not they feel certain about the future—a conclusion which is to be found in the behavioral decision-making literature (Weber et al., 2002; Blais & Weber, 2006). When dealing with high uncertainties, the investors' behavior as a whole implies a reduction or postponement of the planned investments. On the other hand, the more backup the entrepreneurs feel they have, the more they expose themselves to investing through many and successful ventures. This is the main reason two companies with similar financial and economic status may act differently. Therefore, the current research results provide empirical support of the position put forward in the literature that perceived rather than real risks are a stronger forecast of investment behavior mainly in volatile markets.

It is a psychological, financial, economic as well as institutional factor-wise inclusive significance that makes SME investment determinations very much clear, and that is the point where the explanation from the common rational model is not the only one. They, parallel to standard economic or institutional investment, constitute a peculiar domain of decision making, which is the behavioral-profiling perspective, in which cognitive biases, financial bindings, and institutional signals are the investment-ready determinants of the kind that assist firms in making the right investments as they reduce the explanation space for behavior analysis. Moreover, new small and medium-sized enterprise studies stress the significance of infusing behavioral theory with economic and institutional viewpoints. Lerner, 2020; Cummings, et al., 2022 On the other hand, it is the very case here that strong mediation effects underscore the necessity to regard risk perception not as a latent variable but as a major mechanism for investment behavior in the studied markets and in this case specifically emerging markets.

Concisely, the discussion points out to SME investment decisions in Khyber Pakhtunkhwa to come from a difficult balance between subjective views and objective circumstances. In simple words, personal preferences and financial power lead the way; economic expectations and the quality of the institution set the whole picture; and the perception of risk mixes every factor to choose the final investment. The results presented in the paper refine the existing theory by declaring that both emotional and institutional forces should be considered while building up the deliberative SME investment decision-making process. This has a practical implication because, on the one hand, the policies must address the hurdles that SMEs face in the credit market through promoting the availability of credit, on the other hand, they must also work on the demand side of the equation to make the SME investment environment less risky and uncertain by providing a transparent and stable governance, which is a relatively low investment in terms of the amount of money.

CONCLUSIONS

The study's results as a whole clearly indicate the connection between the four factors, and offer a full insight into the very different ways in which participation in investment is centered upon the participants' psychological traits, the economic conditions of the environment in which they operate, and the signals coming from the state and non-governmental organizations which will eventually be bundled with the participants' assessments of the risk and therefore help to create better pictures of their investment decision-making process that happens in a vacuum of uncertainty and very limited resources. By the ends of all these influences, investment decisions are thus shaped in different ways, yet the same factors' importance—government, economy, individual psychology, and risk perception—can strongly vary across different investment cases. The said factors are of enormous importance since they indeed co-represent the risk in investment decision-making. In addition, actually, different instances combined will necessitate a different change to existing theory. The point here can be made to mean that although we certainly do not consider traditional economic logic as the only explanatory factor of SMEs' investment

decisions in a given market economy, yet we required the business people to show interactions that were not only between themselves and their environment but were also guided by the processes of cognition, funding and institutional stability at the same time. The contributions of the study are, therefore, not simply one but manyfold; on the theoretical front, it does advance the existing behavioral finance and SME investment models considerably with the help of empirical evidence, making the point, that the psychological and structural are together in the risk interpretation and in the end, the investment behavior producing the outcome; methodologically, it provides an alternative which is more comprehensive to the existing methods for the analysis of the SME industry, and it gives credibility to the use of strong measurement and model; contextually, it complements the insufficient empirical edge on SME investment from the Khyber Pakhtunkhwa region and practically it suggests directions or at least touches the points on which policymakers and industry partners can concentrate to fuel the investment culture across the SME sector. Though the study generates valuable insights, several constraints need to be acknowledged. Firstly, the use of cross-sectional data was limiting on the causal side, as investment behavior might change in the presence of the evolving economic or policy landscape, and not vice versa. Secondly, the data were self-reported which may mean that the answers may be seen through perceptual biases or tendencies that society wants to admire. Third point is that the study is confined to the SMEs of just one province, so now one can only draw the generalizability of these results from an emerging market which is the case of Pakistan; one cannot go further towards the different business environment of the same country. Fourthly, the current observation includes psychological and structural variables but is silent on the industry-specific dynamics and digitalization readiness, whose presence there, according to the current market, would have a significant influence on the investment behavior too. The study comes up with critical research questions. Some of which may be: How do investment decisions change over time with different policies and economic shocks, future studies could answer this question with the increase of financial performance indicators alongside the survey response, and not only will this enhance the empirical robustness of the research but also open the venue for comparative studies on the SME investment patterns of the different provinces or even South Asian countries. They may even want to consider technological adoption, resilience on the entrepreneur's part, as well as innovative potential and the element of changes in business conditions as other constructs that can be integrated into the study of investment decision-making. In the end, this study has set a solid base, both conceptually and empirically, for a continued exploration into the issues of risk, opportunity, and institutional conditions facing SMEs and thus it urges researchers to carry on the work of discovery by building on the initial research. By including more mediators, one can augment or replace variables in this model.

REFERENCES

- Ayyagari, M., Beck, T., & Demirgüç-Kunt, A. (2008). Small and medium enterprises across the globe. *Small Business Economics*, 29(4), 415–434.
- Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2014). Who creates jobs in developing countries? *Small Business Economics*, 43(1), 75–99.
- Banerjee, A., & Duflo, E. (2014). Do firms want to borrow more? Testing credit constraints using a directed lending program. *Review of Economic Studies*, 81(2), 572–607.
- Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, 116(1), 261–292.
- Barberis, N. (2018). Psychology-based models of asset prices and trading volume. In *Handbook of Behavioral Economics* (Vol. 1, pp. 79–175). North-Holland.
- Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. In *Handbook of the Economics of Finance* (Vol. 1, pp. 1053–1128). Elsevier.
- Beck, T., & Demirgüç-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943.
- Beck, T., Demirgüç-Kunt, A., Laeven, L., & Levine, R. (2008). Finance, firm size, and growth. *Journal of Money, Credit and Banking*, 40(7), 1379–1405.
- Bikhchandani, S., & Sharma, S. (2000). Herd behavior in financial markets. *IMF Staff Papers*, 47(3), 279–310.
- Blais, A.-R., & Weber, E. U. (2006). A domain-specific risk-taking (DOSPERT) scale for adult populations. *Judgment and Decision Making*, 1(1), 33–47.
- Bloom, N. (2014). Fluctuations in uncertainty. *Journal of Economic Perspectives*, 28(2), 153–176.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.

- Carlin, W., Schaffer, M., & Seabright, P. (2006). Where are the real bottlenecks? *CEPR Discussion Paper No. 5719*.
- Carpenter, R. E., & Petersen, B. C. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and Statistics*, 84(2), 298–309.
- Coad, A., Frankish, J., Roberts, R. G., & Storey, D. J. (2020). Fear of failure and entrepreneurship. *International Review of Entrepreneurship*, 18(1), 77–108.
- Cooper, D. R., & Schindler, P. S. (2022). *Business research methods* (14th ed.). McGraw-Hill.
- Cummings, C., Schmidt, J., & Baltes, B. (2022). Risk perception and entrepreneurial decision-making. *Journal of Small Business Management*, 60(4), 955–987.
- Delgado-García, J. B., De Quevedo-Puente, E., & Blanco-Mazagatos, V. (2015). How affect relates to entrepreneurship. *International Journal of Management Reviews*, 17(2), 191–209.
- Ditta, K. Ali, A., & Audi, M. (2025). Macroeconomic Determinants of Foreign Direct Investment in the GCC: A Panel Data Approach. *Policy Journal of Social Science Review*, 3(2), 391–412.
- Djankov, S., La Porta, R., Lopez-de-Silanes, R., & Shleifer, A. (2002). The regulation of entry. *Quarterly Journal of Economics*, 117(1), 1–37.
- Dushnitsky, G. (2010). Entrepreneurial optimism in the market for technological inventions. *Organization Science*, 21(1), 150–167.
- Fazzari, S., Hubbard, R. G., & Petersen, B. (1988). Financing constraints and corporate investment. *Brookings Papers on Economic Activity*, 1988(1), 141–206.
- Ghuri, M. A. Z., Mudassar, M., & Audi, M. (2025). From Technology Adoption to Strategic Coherence: The Role of Digitalization in Industrial Growth in Developing Countries. *Qualitative Research Journal for Social Studies*, 2(3), 392-407.
- Gomez, C., & Edward, S. (2025). Economic and Institutional Drivers of Transfer Pricing: A Global Perspective. *Journal of Business and Economic Options*, 8(3), 48-62.
- Government of Pakistan. (2023). *Economic Survey of Pakistan*.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
- Holton, R., & Holton, F. (2025). Mobile Payments, Financial Literacy, and Borrowing Behavior: Evidence from the European Union. *Journal of Business and Economic Options*, 8(3), 35-47.
- Hussain, J., Salia, S., & Karim, A. (2021). Financial literacy and SMEs' performance. *International Journal of Productivity and Performance Management*, 70(2), 371–390.
- Kahneman, D., & Tversky, A. (1979). Prospect theory. *Econometrica*, 47(2), 263–291.
- Khalid, U., Ali, A., & Audi, M. (2025). Understanding Borrowing Behaviour in the EU: The Role of Mobile Payments, Financial Literacy, and Financial Access. *Annual Methodological Archive Research Review*, 3(5), 41-66.
- Khalil, S., Audi, A., & Ali, A. (2025). Economic Growth, Digital Access, and Urbanization: Drivers of Financial Inclusion in A Comparative Global Context. *Contemporary Journal of Social Science Review*, 3(2), 52-61.
- Khan, A., & Gill, A. (2021). Macroeconomic determinants of SME investment. *Journal of Small Business Management*, 59(4), 655–674.
- Khan, M. S., Audi, M., & Ali, A. (2025). Foreign Direct Investment, Financial Development, and Sustainable Growth: Empirical Evidence from Developing Countries. *Journal of Social Signs Review*, 3(8), 189–211.
- Khwaja, A. I., & Iyer, L. (2006). *Doing business in South Asia*. World Bank Policy Research Working Paper.
- Kline, R. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- KPEZDMC. (2022). *Annual report*.
- Kumar, S. (2021). Behavioral biases in investment decision-making. *Journal of Behavioral and Experimental Finance*, 30, 100469.
- Kumar, S., Ali, A., & Alam, M. (2025). Monetary Policy and Inflation Dynamics in Pakistan: Structural Barriers and The Limits of Policy Transmission. *Pakistan Journal of Social Science Review*, 4(4), 270–292.
- Lerner, J. (2020). Entrepreneurship and the macroeconomy. *Journal of Economic Perspectives*, 34(3), 3–30.
- Love, I., & Martínez Pería, M. S. (2015). How bank competition affects firms' access to finance. *World Bank Economic Review*, 29(3), 413–448.

- Mansour, K. B., & Salar, H. (2025). Democracy, Institutions, and Economic Drivers of Financial Sector Growth in OECD and Non-OECD Economies. *Journal of Business and Economic Options*, 8(3), 1-12.
- Marc, A. (2025). Corporate Governance and Profitability: Evidence from Leadership Role Segregation and Gender Diversity in Dubai. *Journal of Business and Economic Options*, 8(3), 24-34.
- Mughal, M. M., Aslam, A., & Saeed, R. (2020). Interest rate volatility and SME investment decisions. *Pakistan Development Review*, 59(2), 221–236.
- Narjoko, D., & Hill, H. (2007). Winners and losers during a deep economic crisis. *Asian Economic Journal*, 21(4), 343–368.
- Nasir, F. B., Audi, A., & Ali, A. (2025). Determinants of Corporate Tax Planning Strategies Among Multinational Corporations in The United Arab Emirates. *Contemporary Journal of Social Science Review*, 3(2), 2187-2196.
- Niaz, A., Audi, M., & Ali, A. (2025). Operational outcomes of mergers and acquisitions: evidence from PSX-listed firms. *Contemporary Journal of Social Science Review*, 3(1), 753-763.
- North, D. C. (1991). Institutions. *Journal of Economic Perspectives*, 5(1), 97–112.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2003). Common method biases in behavioral research. *Journal of Applied Psychology*, 88(5), 879–903.
- Puri, M., & Robinson, D. (2013). Optimism and economic choice. *Journal of Financial Economics*, 107(3), 1–39.
- Qaisrani, M. A., Audi, A., & Ali, A. (2025). Perceptions of ERM Adoption Across Industries: Firm Size, Regulation, And Maturity Effects. *Journal for Current Sign*, 3(3), 917–941.
- Rafique, A., Ali, A., & Audi, M. (2025). Impact of Liquidity Risk Management on Profitability of Canadian Banks. *Annual Methodological Archive Research Review*, 3(1), 1-20.
- Sattar, S., Alvi, A. A., & Audi, M. (2025). Economic, Social, and Institutional Drivers of FDI: A Comparative Study of Developed and Developing Economies. *Contemporary Journal of Social Science Review*, 3(3), 217-229.
- SBP. (2023). *Financial stability review*.
- Sekaran, U., & Bougie, R. (2020). *Research methods for business* (8th ed.). Wiley.
- Shefrin, H. (2020). *Behavioral corporate finance* (2nd ed.). Cambridge University Press.
- Sitkin, S. B., & Pablo, A. L. (1992). Reconceptualizing the determinants of risk behavior. *Academy of Management Review*, 17(1), 9–38.
- Stiglitz, J. E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71(3), 393–410.
- Sufyan, A., & Othman, S. (2025). Governance, Ethics, and Transparency: A Comparative Analysis of Takaful and Conventional Insurance in Malaysia. *Journal of Business and Economic Options*, 8(3), 13-23.
- Ullah, S., Mahmood, T., & Afridi, F. (2019). Determinants of SME investment in Pakistan. *Asian Economic Review*, 61(3), 45–62.
- Weber, E. U., Blais, A.-R., & Betz, N. (2002). A domain-specific risk-attitude scale. *Journal of Behavioral Decision Making*, 15(4), 263–290.
- World Bank. (2022). *SME finance: Improving access to finance for SMEs*.
- Zahid, H. Ali, A., & Audi, M. (2025). Cryptocurrency Regulation and Financial Disclosure: Cross-Jurisdictional Evidence on Corporate Reporting Practices. *Bulletin of Management Review*, 2(2), 348–377.
- Zeng, D. Z. (2011). *How do special economic zones work?* World Bank.