Enhancing SME Financing through Addressing Asymmetric Information Challenges in Algeria

تعزيز تمويل المشاريع الصغيرة والمتوسطة من خلال مواجهة تحديات المعلومات غير المتماثلة في الجزائر

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Abstract:

Small and Medium-sized Enterprises (SMEs) are pivotal contributors to economic growth and innovation globally, yet they often encounter difficulties in accessing financing due to asymmetric information issues. This paper investigates the mechanisms bankers and financial organizational bodies employ to assess credit risk for SMEs, aiming to alleviate information-related challenges and enhance financing opportunities. Drawing on theoretical frameworks of asymmetric information and credit risk management, the study conducts an analysis to uncover effective strategies utilized by Algerian bankers. Through a comprehensive examination, the research illuminates practical approaches that can improve risk evaluation processes and foster a supportive environment for SME lending in Algeria. The findings offer valuable insights for policy makers, financial institutions, and SMEs seeking to navigate the complexities of financing in emerging markets.

Keywords: SME; asymmetric information; Finance; Banking.

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I. Introduction :

Small and Medium-sized Enterprises (SMEs) form the backbone of many economies, contributing to economic growth, job creation, and innovation (Audretsch & Thurik, 2001), (Acs & Armington, 2004), the pioneering work of Schumpeter in the 1930s stands as a prominent example of early investigations in this area. However, SMEs often face challenges in accessing financing, hindering their growth potential and limiting their contribution to the economy (Beck et al., 2008), (Demirgüç-Kunt & Maksimovic, 1998). The IFC (International finance corporation, 2013) sees that Africa, in particular, faces a significant financial gap for SMEs, both formal and informal, hindering their growth potential. The IFC have reported a substantial percentage of SMEs in emerging markets lacking access to necessary financing, impeding their ability to thrive and contribute to economic development. One of the primary obstacles to SMEs financing is the lack of information about the SMEs' business and credit status for financial intermediaries (eg. Banks), in this situation Banks tend to consciously cut down loans lending to SMEs in fear of the presence of asymmetric information and thus all the risks related to it (Myers & Majluf, 1984), (A. N. Berger & Udell, 1998).

The inherent flexibility and agility of SMEs play a pivotal role in fostering economic development through the generation of wealth and employment opportunities. These enterprises contribute significantly to augmenting production levels and income, mitigating unemployment rates, promoting diversification across industries, and fostering innovation (Lévesque, 2001).

As economies worldwide undergo dynamic shifts, the focus on encouraging and nurturing SMEs has become a universal priority. Countries, including Algeria, have embarked on this journey to promote SMEs, transitioning from centrally planned economies to market-driven ones.

In Algeria's case, the recognition of SMEs' potential emerged during the transition from an administered economy to a market-oriented system. This shift in economic approach has sparked a surge in interest and support for SMEs as integral drivers of growth and prosperity.

Nevertheless, from the perspective of financial institutions, such as banks, maximizing profit and managing risk are primary concerns. Banks seek borrowers who can offer high returns and are unlikely to default, making it challenging for SMEs to secure loans (Boushnak et al., 2018). The lack of credit history, limited financial information, and absence of official documentation further hinder SMEs' ability to borrow from banks. Consequently, banks rely heavily on the experience and efficiency of credit employees in assessing SMEs during the lending process. Consequently, understanding the dynamics of SME financing and information asymmetry is crucial for policymakers, financial institutions, and SMEs themselves.

Financial theory, as highlighted by Hubert de La Bruslerie in (2010), recognizes that the incomplete information provided by one party to the other is the root cause of these risks. The credit risk evaluation problem stems from this informational asymmetry, making the assessment of SMEs' solvency more challenging. (De la Bruslerie, 2010) Furthermore, as noted by Frédéric Kalala Tshimpaka, banks face the risk of credit due to their inability to identify reliable borrowers accurately. However, effective credit risk management primarily relies on the bank's capacity to collect and process information during the credit application selection process. Thus, understanding and managing the implications of asymmetric information in the banking sector are essential to enhance credit risk assessment and to foster more successful relationships between banks and SMEs. Minimizing credit risks through improved information handling can facilitate sustainable and robust financial practices for banking institutions.(Tshimpaka, 2007), (Kalala Tshimpaka, 2006).

In the economic and financial literature, asymmetric information has been extensively addressed. Prominent examples include the works of Akerlof (1970), Grossman and Stiglitz (1980), French and Poterba (1991), Lang et al. (1992), and Gehrig (1993), among many others. Numerous studies have been conducted in the field of economics, highlighting the theoretical and empirical evidence that economic agents (clients, businesses, financial and monetary institutions, and even government entities) possess different information. This

reality significantly influences their decisions and behaviors in the market. (Akerlof, 1970), (S. J. Grossman & Stiglitz, 1980), (French & Poterba, 1991), (Lang et al., 1992), (Gehrig, 1993).

Asymmetric information characterizes a market situation where one party has superior information compared to the other party for a given set of information (Van-Ees and Garretsen 1993). For instance, considering the purchase of a product, the seller determines the price at which they want to sell the product based on their prior knowledge of similar products in the market and the positioning of their product relative to others. On the other hand, the buyer may have information about the prices of different products existing in the same market but generally lacks the same level of information as the sellers regarding the qualities of the various products. Thus, it is evident that there is an information asymmetry between these two types of economic agents. According to Grossman and Stiglitz (1980), asymmetric information can have significant implications for markets, policies, and institutions. They argue that in the presence of information asymmetry, the market may fail to exist or may not function efficiently. This occurs because one party has an informational advantage over the other, leading to adverse selection and moral hazard problems.

The objective of this study is therefore to empirically test the theoretical conclusions of certain mechanisms that can alleviate information-related problems. Specifically, the aim is to identify the mechanisms Algerian bankers rely on to assess credit risk in the context of small and medium-sized enterprises (SMEs).

By conducting an in-depth analysis, this research seeks to provide valuable insights into the literature review of asymmetric information theory as well as the related theories, and the practical strategies and approaches employed by Algerian bankers in evaluating credit risk for SMEs. The study will explore the effectiveness of these mechanisms in mitigating information-related challenges and enhancing the accuracy of credit risk assessment.

Through a comprehensive examination of the practices and strategies used by Algerian bankers, this study aims to contribute to the existing knowledge on credit risk management in the Algerian banking sector. The findings will shed light on the specific mechanisms that can help bankers make informed decisions, enhance risk evaluation processes, and ultimately foster a more stable and supportive environment for SME lending in Algeria.

II. Asymmetric information, adverse selection, and counteracting institutions:

The concept of asymmetric information has been extensively discussed in economic and financial literature (Frankel & Schmukler, 1997). Notable contributions include Akerlof's (1970) influential paper, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," discusses how asymmetric information—where sellers know more about product quality than buyers—can lead to a market dominated by low-quality products, known as "lemons." This imbalance can decrease transaction volumes or eliminate markets entirely. Akerlof uses the used car market as an example, showing how sellers with more information can exploit this to sell inferior goods at premium prices. He suggests that mechanisms like warranties can mitigate these effects by allowing buyers to better assess product quality. Grossman and Stiglitz (1980), however, argue that because information has cost, perfect market efficiency is unattainable, and information-related costs justify the returns that investors seek for their efforts in gathering and processing information (Campbell et al., 1997).

Grossman (1976) and Grossman and Stiglitz (1980) argue that perfect informational efficiency in markets is unachievable because if markets were perfectly efficient, there would be no incentive to gather information, as it would yield no return. Market inefficiencies actually motivate investors to expend effort in information collection, allowing for profit opportunities that are essentially economic rents for those who engage in such activities. (S. Grossman, 1976), (S. J. Grossman & Stiglitz, 1980).

Additionally, various strategies are employed by companies to signal their quality and reduce information asymmetries, notably through debt levels, debt maturity, and management involvement, as discussed by Flannery (1986), Lobez (1997), and Lobez and Vilanova (2006). Guigou and Vilanova (1999), Fields et al. (2006), and Freixas and Rochet (2008) also highlight how these signaling mechanisms help mitigate adverse selection and moral hazard in financial markets. Banks, recognizing the challenges in assessing borrower solvency and risk, are motivated to diminish information asymmetry through credible signaling, particularly evident in how debt levels can indicate a company's capacity to meet its obligations and thus its quality. Conversely, borrowers with low quality are less likely to increase their debt, facing higher risks of financial distress.((FLANNERY, 1986), (Lobez, 1997), (Lobez & Vilanova, 2006), (Guigou & Vilanova, 1999), (Fields et al., 2006), (Freixas & Rochet, 2008)).

Lobez and Vilanova (2006) discuss how managers' involvement in funding and diversifying project portfolios serves as a signal of project quality. This signaling indicates their confidence in project success, as they risk sharing losses if projects fail. Similarly, banks play a crucial role by assessing and disseminating information about borrowers' quality, effectively managing risks associated with information asymmetry (Freixas and Rochet, 2008). Banks, acting as delegated controllers, hold an informational advantage and achieve economies of scale in managing credit, which is less costly compared to individual depositors managing it themselves. In the broader context of signaling and screening, Stiglitz (1975) extends these ideas to the labor market, illustrating how employers use screening to differentiate potential employees based on their productivity, addressing problems akin to Gresham's law where less productive workers could dominate if not properly identified and compensated differently.

Stiglitz categorizes workers into two types based on their productivity ($\theta 1$ for high and $\theta 2$ for low) and discusses the implications of screening costs on labor market equilibria. Screening costs are significant enough to discourage $\theta 1$ workers from being identified under a non-screening equilibrium where all workers earn an average wage. However, under a full-screening equilibrium, $\theta 1$ workers have an incentive to be identified to earn higher wages commensurate with their productivity, despite the associated costs. Conversely, $\theta 2$ workers, with lower productivity, do not benefit from screening and thus avoid the costs. Stiglitz notes that while screening redistributes income among workers, it also incurs social costs that could lead to a net loss in social income. He suggests that similar screening mechanisms could be effectively applied in educational settings to differentiate between students' capabilities. (Stiglitz, 1975)

III. Asymmetric Information and Credit Rationing

Stiglitz and Weiss's seminal 1981 paper, "Credit Rationing in Markets with Imperfect Information," explores how banks use interest rates as a tool not just to maximize returns but to manage the risk associated with loans. They identify two critical phenomena—adverse selection and incentive effects—that exacerbate risk under conditions of asymmetric information. Adverse selection occurs because higher interest rates tend to drive away credit-worthy borrowers (who are averse to high costs), leaving a pool of higher-risk borrowers. Incentive effects relate to how the terms of the loan (particularly the interest rate) can influence borrower behavior, potentially encouraging riskier projects if the borrower perceives that the downside risks are mitigated by potentially not having to repay (Stiglitz & Weiss, 1981).

Following the publication of Stiglitz and Weiss's paper, various scholars have built on their framework. For instance, studies like those by De Meza and Webb (1987) and Besanko and Thakor (1987) explored further nuances of how information asymmetry can affect credit risk perceptions and interest rate settings, confirming the foundational insights of Stiglitz and Weiss. (De Meza & Webb, 1987), (Besanko & Thakor, 1987), (Stiglitz & Weiss, 1981).

The broader implications of their theory are substantial. Stiglitz and Weiss argue that credit rationing can lead to suboptimal investment levels, negatively impacting productivity, economic growth, and capital accumulation. This argument aligns with findings from later

studies, like that by Bencivenga and Smith (1991), which used a neoclassical growth model to demonstrate that adverse selection due to information asymmetry can indeed lead to persistent credit rationing and its attendant economic harms.(Bencivenga & Smith, 1991).

However, the model proposed by Stiglitz and Weiss has its limitations, primarily in not accounting for broader economic variables that influence credit risk, such as macroeconomic conditions or market competition dynamics. These factors can also significantly impact the success of investments financed through bank loans.

The debate between neoclassical and neo-Keynesian economists regarding the implications of information asymmetry adds another layer of complexity. While neoclassical economists tend to emphasize the efficiency of markets and rational behaviors, neo-Keynesians highlight how imperfect information can lead to market failures, including mispriced risk and suboptimal investment decisions. These differing viewpoints underscore the ongoing challenges in fully understanding and modeling economic behaviors in the presence of asymmetric information.(Loaba, 2022)

Stiglitz and Weiss's work remains a cornerstone in the study of financial markets, especially in understanding how banks manage lending under uncertainty and the broader implications of these strategies on economic performance.

Bose and Cothern (1969) and Ho and Wang (2005) studied the impact of information asymmetry and adverse selection on economic growth, particularly in cases with high credit risk. In situations where there is information asymmetry between lenders and borrowers, banks must either ration certain credits or implement a screening mechanism, which indirectly implies rationing certain borrowers. The authors concluded that the use of these methods certainly leads to credit market equilibrium while negatively affecting economic growth (Bose & Cothern, 1996), (Ho & Wang, 2005). Furthermore, the use of such methods makes credit less profitable as banks typically apply credit verification costs, which in turn affect the level of production and economic growth (Bhattacharya et al., 1998). However, Tsiddon, and Shi (1996) argue that long-term economic growth is not affected by information asymmetry, especially when considering technological progress, which is enhanced by the creation of high-risk enterprises and projects that have the potential to generate faster and more significant economic growth. (Tsiddon, 1992), (Shi, 1996).

In addition to its implications in credit rationing, the theory of asymmetric information has found applications in many economic domains, helping to better understand the effects of asymmetric information on economic outcomes, negotiation mechanisms, agent decisions, and incentives in contractual relationships. Some examples of this may be summarized into a) Agency Theory: Agency theory examines principal-agent relationships, where a principal hires an agent to perform a task on their behalf. Asymmetric information between the principal and the agent can lead to problems of incentives and moral hazard. The work of Michael Jensen and William Meckling (1976) contributed to the development of this theory by considering the asymmetric information between shareholders (principals) and managers (agents) of companies. (Jensen & Meckling, 1976).

b) Theory of Incomplete Contracts: This theory, developed by Oliver Hart (1989) and Bengt Holmström (1979), studies situations where contracts cannot specify all possible contingencies due to asymmetric information. Contracts are therefore "incomplete." The objective is to design incentive mechanisms to align the interests of the parties involved in the contract, taking into account the information asymmetries. It is also worth noting that asymmetric information can occur in various contexts, such as negotiations, mergers and acquisitions, and financial communication. In each case, information asymmetries can affect the decisions made by the parties involved and lead to economic outcomes different from those that would be obtained in the absence of asymmetric information. (Hart, 1989), (Holmstrom, 1979).

These theories are closely related to the theory of asymmetric information as they all focus on situations where one party has private or asymmetric information that can influence economic outcomes and decision-making mechanisms.

IV. Countermeasure of Financing Difficulty under Asymmetric Information

There exist several strategies and tactics used to reduce information asymmetry and improving access to financing for SMEs, through applying these countermeasures stakeholders can work collaboratively to overcome the challenges posed by asymmetric information in SME financing and create a more inclusive and conducive environment for SMEs to access the financing they need to thrive and contribute to economic growth; in this section we aim at discussing these countermeasures in the case of the Algerian SME's:

IV. 1. Enhancing the Financial Transparency of SMEs:

SMEs can adopt practices that promote greater financial transparency, such as maintaining accurate and up-to-date financial records, providing comprehensive financial statements, and disclosing relevant business information to potential lenders. Improved financial transparency can enhance the credibility of SMEs and reduce information asymmetry. Currently, Algerian SMEs also face several common challenges, including unsound corporate financial systems and inaccuracies in financial reporting. To address these issues, it is crucial for Algerian SMEs to strengthen their internal governance mechanisms and enhance the standardization of their financial systems and information transparency. By improving financial reporting practices with high authenticity, SMEs can provide commercial banks with reliable data to facilitate informed decision-making.

Moreover, SMEs should prioritize credit consciousness and strive to build a positive credit image with financial institutions; by demonstrating responsible financial behavior and establishing a strong credit reputation, SMEs can positively influence financial institutions' perception of their creditworthiness. As the credit level of Algerian SMEs rises, financial institutions are more likely to adjust their credit orientation towards these enterprises, leading to improved access to financing and overcoming financing difficulties.

Emphasizing these measures and adopting best practices in financial management and creditworthiness can significantly contribute to alleviating financing challenges for Algerian SMEs. By proactively addressing these issues, Algerian SMEs can enhance their growth prospects and contribute more effectively to the country's economic development.

VI- 2. Credit Scoring Models:

Credit scoring models are sophisticated statistical tools used by lenders and financial institutions to assess the creditworthiness of borrowers. These models utilize a combination of financial and non-financial data to evaluate the credit risk associated with a potential borrower. Credit scoring plays a vital role in the lending process, enabling lenders to make objective and consistent decisions while minimizing the impact of subjective judgments.

In their study entitled" Modelling Credit Risk for SMEs: Evidence from the U.S. Market", Altman, E. I., & Sabato, G. (2007) explore the use of credit scoring models for SMEs in the U.S. market, providing insights into the effectiveness and challenges of applying these models to assess credit risk for small and medium-sized enterprises; while the research of Berger, A. N., et al. (2005), examines the impact of credit scoring models on the availability, pricing, and risk of credit for small businesses, shedding light on how these models influence lending decisions and credit outcomes for SMEs.(Altman & Sabato, 2007), (A. Berger, Frame, et al., 2005).

Moreover, Jokipii, A., & Milne, A. (2008) conducted a research which is not directly focused on SMEs, this study investigates the cyclical behavior of bank capital buffers, which can indirectly affect credit availability for SMEs during economic fluctuations. (Jokipii & Milne, 2008)

The use of credit scoring models is an important tool for making loan decisions. Credit scoring models provide a standardized and efficient approach to assess the creditworthiness of potential borrowers based on their credit history, financial information, and other relevant

factors(Udell, 2008). This helps banks in efficiently allocating credit and reducing the costs associated with traditional manual credit evaluation processes.

There are two types of credit scoring models: internal scores and external scores. Banks that use external scores rely on scores provided by specialized credit bureaus, which offer standardized credit evaluation data (A. Berger, Frame, et al., 2005). On the other hand, banks that develop their internal scoring systems have more discretion in tailoring the credit evaluation criteria to their specific context.

The use of credit scoring models allows banks to make quicker loan decisions, reducing the time required for credit approval. It also helps in minimizing operational costs and improving the overall efficiency of the loan processing system (Godlewski, 2004). However, it is essential to note that credit scoring models do not guarantee that banks have the best information or evaluations of borrowers. They are tools that aid in decision-making but must be complemented by deeper analyses when applicants have scores near the acceptance threshold.

By adopting credit scoring models, banks can improve competitiveness in the credit market, as the standardized scores are accessible to all banks and facilitate consistent credit evaluations. However, there is a challenge related to transparency, as internal scoring systems are specific to each bank, making it difficult for regulators to monitor and control the risk-taking behavior of individual banks (A. Berger, Frame, et al., 2005).

It is worth mentioning that the implementation of credit scoring models aligns with the international banking guidelines, such as Basel II, which aim to minimize risk-taking behavior in banks (Fees & Hege, 2004). However, there can be a potential agency problem arising from these internal scoring systems. As banks calculate their own internal scores, it may lead to conflicts and difficulties in monitoring risk-taking behavior by external regulators.

In conclusion, credit scoring models offer a valuable tool for Algerian banks to enhance their loan evaluation process, improve efficiency, and make informed credit decisions for SMEs. While credit scoring models have benefits in terms of speed and cost-effectiveness, banks should complement these models with additional in-depth analyses to ensure accurate risk assessment. It is essential for regulators to strike a balance between encouraging the use of these models for better credit decisions and monitoring potential agency problems arising from internal scoring systems.

In general, credit scoring models have gained prominence as an effective tool to evaluate the creditworthiness of these enterprises. Traditional credit assessment methods may be limited by the lack of comprehensive credit histories and collateral assets typically associated with large corporations. Therefore, credit scoring models offer a more inclusive approach, taking into account various factors beyond financial statements and collateral.

The construction of a credit scoring model involves several stages. Initially, historical credit data from diverse borrowers is collected and analyzed to identify patterns and trends. Variables such as payment history, credit utilization, debt-to-income ratio, and industry-specific indicators are considered. The next step involves developing a mathematical algorithm that assigns weights to these variables based on their relative importance in predicting credit risk.

Once the credit scoring model is established, it is applied to assess the creditworthiness of new loan applicants. The model generates a credit score or credit rating for each applicant, which serves as an objective measure of their credit risk. A higher credit score indicates a lower credit risk, and vice versa. Financial institutions use these scores to determine the terms of financing, such as interest rates, loan amounts, and repayment periods.

Credit scoring models offer several advantages for both lenders and SMEs. For lenders, they provide a consistent and efficient method for evaluating credit risk across a large number of loan applicants. This streamlines the decision-making process and reduces the reliance on subjective judgments. For SMEs, credit scoring models can help level the playing field, as decisions are based on objective criteria rather than personal biases or subjective assessments.

In the Algerian context, adopting credit scoring models can significantly enhance the accessibility of financing for SMEs. By considering a broader range of factors beyond traditional credit metrics, credit scoring models allow financial institutions to make well-informed decisions about lending to SMEs, thereby promoting financial inclusion and supporting their growth and development.

To successfully implement credit scoring models for Algerian SMEs, collaboration between financial institutions, industry experts, and policymakers is essential. Additionally, educating SMEs about the importance of creditworthiness and how credit scoring works can help build a culture of financial responsibility and transparency.

VI- 3. Collateral and Guarantees:

Collateral and guarantees serve as essential tools for mitigating lenders' risk and increasing their confidence in providing financing to Algerian SMEs. By offering valuable collateral or reputable guarantees, SMEs can strengthen their creditworthiness and improve their chances of obtaining financing on favorable terms. However, SMEs should carefully assess the associated risks and benefits before committing to collateral or guarantees as part of their financing strategy.

Collateral refers to assets or property that SMEs pledge to the lender as security for the repayment of the loan. In the event of default, the lender can seize and sell the collateral to recover the outstanding loan amount. By providing collateral, SMEs demonstrate their commitment to repay the loan, which reduces the lender's risk and provides a sense of security in case of repayment difficulties (A. Berger & Udell, 2006). Examples of collateral can include real estate, machinery, inventory, or accounts receivable.

Moreover, guarantees can also act as a risk mitigation tool for lenders. A guarantee is a promise made by a third party, such as a reputable institution or individual, to repay the loan in case the SME borrower defaults. This third-party guarantee strengthens the creditworthiness of the SME borrower and provides an additional layer of security for the lender (A. Berger, Espinosa- vega, et al., 2005). Government-backed guarantees or guarantees from well-established financial institutions can be particularly valuable in boosting lenders' confidence.

The availability and acceptance of collateral and guarantees by lenders can vary depending on the specific lending policies and regulations in Algeria. Therefore, it is essential for SMEs to understand the requirements and preferences of lenders regarding collateral and guarantees. By providing valuable collateral or reputable guarantees, SMEs can negotiate better loan terms and interest rates, further enhancing their ability to access financing.

It is worth noting that while collateral and guarantees can significantly mitigate lenders' risk, they also involve some risk for SMEs. Pledging valuable assets as collateral may restrict the SME's ability to use those assets for other purposes, and providing personal guarantees can expose the guarantor to financial liability in case of default. SMEs should carefully evaluate the potential risks and benefits before offering collateral or guarantees.

VI- 4. Government Support:

Governments can play a critical role in addressing financing difficulties by implementing supportive policies and initiatives. This includes offering credit guarantees or loan subsidies for SMEs, creating dedicated funding programs, and promoting financial education among SMEs. In Algeria, The Law No. 17-02 of January 10, 2017, concerning the orientation of the development of small and medium-sized enterprises (SMEs) in Algeria, is a crucial legislation aimed at fostering the growth and advancement of SMEs in the country. This law is designed to provide a supportive legal framework and facilitate an enabling environment for the development of SMEs.

The main objectives of this law are to promote the growth of SMEs, enhance their competitiveness, and encourage their participation in economic development. It seeks to

achieve these goals through various measures and provisions that address key aspects of SME development.

One of the significant elements of this law is the simplification of administrative procedures and the reduction of bureaucratic hurdles for SMEs. By streamlining the registration and licensing processes, the law aims to make it easier for entrepreneurs to establish and operate SMEs (Loi n° 17-02, 2017).

Additionally, the law focuses on enhancing access to financing for SMEs. It establishes mechanisms to facilitate SMEs' access to credit and provides incentives to financial institutions to extend loans to SMEs. By improving access to finance, the law aims to support SMEs in their growth and expansion efforts. The law also emphasizes the importance of promoting innovation and research within SMEs. It encourages the development of innovative products, processes, and technologies and provides incentives to support research and development activities in SMEs.

Furthermore, the law aims to enhance the competitiveness of SMEs by fostering skill development and training. It provides for the establishment of training programs and capacity-building initiatives to enhance the skills and capabilities of SME employees (Loi n° 17-02, 2017).

Overall, the Law No. 17-02 of January 10, 2017, reflects the government's commitment to promoting SMEs as key contributors to economic development and job creation in Algeria. It provides a comprehensive framework to support and facilitate the growth of SMEs and to enable them to play a more significant role in the country's economy.

However, in Algeria, there are several mechanisms and agencies in place to support small and medium-sized enterprises (SMEs) and foster their growth and development. These mechanisms aim to address the specific challenges faced by SMEs and provide them with the necessary resources and support to thrive in the market. Some of the key mechanisms and agencies used in Algeria to support SMEs include:

4.1 The National Unemployment Insurance Fund (CNAC) is a government initiative established by the executive decree No. 94/188 of July 6, 1994, and in accordance with the provisions of the legislative decree No. 94/1 of May 11, 1994. This program targets unemployed individuals aged between 35 and 50 years old (the age condition has been expanded to include individuals aged between 30 and 50 years) with the aim of complementing the functioning of ANSEJ, which is limited to individuals aged 35 and under. The CNAC specifically targets workers who have lost their jobs due to economic reasons such as the dissolution of public enterprises, layoffs, downsizing, and other economic factors, and who are not eligible for retirement due to their age. For this category of unemployed individuals, CNAC provides substantial support, enabling them to start their own small businesses and meet their social needs; The National Unemployment Insurance Fund (Caisse Nationale d’Assurance Chômage - CNAC) in Algeria has implemented various measures to support unemployed individuals in their reintegration into the workforce. From 1998 to 2004, the CNAC provided training in job search techniques to 11,583 unemployed individuals and assisted 2,311 individuals in creating their own micro-enterprises. Additionally, 12,780 unemployed individuals underwent training to acquire new skills and increase their employability.

Since 2004, the focus has shifted to supporting the creation of activities for unemployed individuals aged 35 to 50 years. Subsequently, new provisions in 2010 expanded the support to include individuals aged 30 to 50 years. These measures offer advantages such as increased investment thresholds and interest rate subsidies on bank credit, making it easier for unemployed promoters to start or expand their businesses. (CNAC presentation)

4.2 The Agency for the Development of SMEs and the Promotion of Innovation “ADPMEPI”

The Algerian Ministry of Industry has implemented various programs and created different support and assistance mechanisms to strengthen the small and medium-sized enterprises (SMEs) sector and enhance their competitiveness.

One of the significant support mechanisms is the "Agence de Développement des PME et de Promotion de l'Innovation (ADPMEPI)," which was established by Executive Decree No. 18-170 on June 26, 2018, and amended by Executive Decree No. 25-331 on November 22, 2020. The agency is responsible for implementing the policy of developing small and medium-sized enterprises in the areas of establishment, growth, and sustainability, in coordination with relevant sectors.

The Agency is responsible for supporting and enhancing the development of small and medium-sized enterprises (SMEs). It conducts studies to understand the needs of SMEs and proposes appropriate programs and systems to address them. The agency implements support programs for SMEs, focusing on modernization, industrial integration, innovation, digitalization, and sustainability. Through its initiatives, ADPMEPI aims to create a conducive environment for SMEs' growth and success in Algeria.

The ADPMEPI plays a crucial role in supporting SMEs by providing them with various services and assistance to foster their growth and competitiveness. This includes helping SMEs in the establishment phase, supporting their development and growth, and ensuring their sustainability in the market.

4.3 National Council for Consultation for the Development of Small and Medium Enterprises (CNCDPME)

The “National Council for Consultation for the Development of Small and Medium Enterprises (CNCDPME)” was established by the Algerian government to enhance consultation and dialogue between public authorities and SMEs, represented by associations and professional organizations. The council aims to form a genuine partnership to develop and implement policies that promote the growth and competitiveness of SMEs.

The council consists of specialized professional organizations and representatives from SMEs, as well as stakeholders and institutions involved in the creation and development of SMEs.

The main tasks of the council include expanding representation for SMEs, enhancing economic policy options related to SMEs, promoting dialogue among stakeholders responsible for the national economy, and achieving greater efficiency in economic and social development efforts to address future challenges in a continuously changing global economy.

The objectives of the council are to ensure better coordination between the bodies responsible for SMEs, enhance representation for SME associations within the council and its board of directors, and support the diversification of wealth sources and the substitution of imports with national products. This collective effort aims to facilitate the establishment, development, and sustainability of SMEs and start-ups, with the goal of achieving international standards for the number of SMEs per 1000 inhabitants, surpassing 45 SMEs per 1000 inhabitants (CNDPME presentation)

4.4 The Loan Guarantee Fund for Small and Medium Enterprises (FGAR).

The "Fonds de Garantie des Crédits aux Petites et Moyennes Entreprises (FGAR)" in Algeria is a special institution that aims to facilitate access to medium-term loans for viable investments by providing guarantees to small and medium-sized enterprises (SMEs). It supports various types of investments, including establishing new enterprises, expanding existing ones, modernizing production equipment, and supporting export operations. Eligible enterprises are those in the manufacturing industries that lack sufficient collateral required by banks. Priority is given to projects that introduce new products or services, add value to

manufactured goods, contribute to import reduction or export increase, promote regional development, and encourage the adoption of modern technology. Through its efforts, FGAR plays a significant role in fostering the growth and competitiveness of SMEs in Algeria.

The main objective of the FGAR is to facilitate access to medium-term bank financing to support the establishment and expansion of SMEs. It achieves this by providing credit guarantees to commercial banks, thereby complementing the financial structure of viable business projects aimed at creating and/or developing enterprises. The FGAR plays a crucial role in enhancing the financial viability and growth prospects of SMEs in Algeria. (FGAR)

Since its establishment in 2004, the Fonds de Garantie des Crédits à la PME (FGAR) has been committed to facilitating and supporting SMEs in Algeria. As a facilitator, the FGAR works in alignment with the objectives set by the Algerian government, represented by the Ministry of Industry, to implement mechanisms that ease financing during the establishment and expansion of SMEs. Through its initiatives, the FGAR aims to foster a conducive environment for SME growth and development in the country. The FGAR supported 3568 SMEs projects with a total amount of more than 127 Billion Algerian Dinar, and have helped employing more than 101 thousand people (FGAR).

4.5 The National Agency for Support and Development of Entrepreneurship (ANADE)

This agency is a vital entity in Algeria, formerly known as ANSEJ was rebranded and established through Executive Decree No. 20-329 on November 22, 2020. Its mission is to foster entrepreneurship and job creation in the country. ANADE aims to empower young Algerians to establish and grow their own businesses by providing financial support, entrepreneurship training, and access to business incubators. The agency focuses on creating conducive ecosystems for business development, encouraging innovation-driven ventures, and monitoring the success of supported projects. ANADE has achieved significant impact, contributing to job creation, economic growth, and the success of numerous startups. Its future outlook involves continuous improvement and adaptability to emerging economic challenges. ANADE plays a pivotal role in driving entrepreneurship and economic resilience in Algeria. This modification amended and supplemented Executive Decree No. 96-296 from September 8, 1996, which initially created and defined the status of the National Agency for Youth Employment Support (ANSEJ). ANADE retains the core missions of its predecessor while introducing more flexible measures to enhance its support for entrepreneurship and job creation in Algeria.

One of ANADE's key objectives is to develop ecosystems that align with investment opportunities across various sectors. By creating a favorable business environment, ANADE encourages entrepreneurship and facilitates the growth of startups. The agency also focuses on streamlining and standardizing the processes involved in establishing, guiding, and monitoring micro-enterprises. This move is aimed at enhancing efficiency and ensuring the success of these ventures.

With the introduction of these new measures, ANADE aims to foster a dynamic and supportive ecosystem for startups in Algeria. By offering improved support mechanisms, ANADE seeks to boost entrepreneurship, stimulate economic growth, and increase job opportunities for young Algerians. The agency's efforts align with the government's commitment to fostering a thriving entrepreneurial culture and bolstering the nation's economy through youth-driven enterprises.

4.6 The National Agency for Microcredit Management (ANGEM)

The National Agency for Microcredit Management (ANGEM) was established in Algeria in 2004 to replace the Agency for Social Development (ADS) and promote microcredit

initiatives. ANGEM operates under the Ministry of National Solidarity, Family, and Women's Affairs. Its main objective is to provide efficient and decentralized microcredit services to entrepreneurs across the country.

To achieve this, ANGEM has set up 49 provincial coordinations and 548 local support cells to cover the entire national territory and offer guidance and assistance to beneficiaries. It collaborates closely with public banks, which provide 70% of the loans to microcredit applicants, with a 100% interest rate subsidy. ANGEM also manages the "Mutual Microcredit Guarantee Fund" (FGMMC) to ensure loan security for beneficiaries.

The agency's approach aims to stimulate entrepreneurship, especially among non-banked clients in both urban and rural areas, fostering a dynamic entrepreneurial environment throughout Algeria. Through its decentralized structure and partnerships with public banks, ANGEM strives to support the growth and success of microcredit projects, contributing to socio-economic development in the country. As of March 31st, 2023, the National Agency for Microcredit Management (ANGEM) has made a significant impact on entrepreneurship and economic growth in Algeria. ANGEM's commitment to promoting microcredit initiatives has led to granting a total number of 915,051loans, to aspiring entrepreneurs, enabling them to turn their business ideas into reality. Moreover; access to capital through microcredit has been a game-changer, empowering individuals to pursue their entrepreneurial dreams, Microcredit has not only fueled the growth of small businesses but also generated 1,420,109 job opportunities in various sectors. However, the agency goes beyond financial assistance by providing non-financial services to 406,545 beneficiaries. (ANGEM)

Overall, ANGEM's dedication to empowering entrepreneurs through microcredit has contributed to the growth of small businesses, strengthened local economies, and created a more resilient and inclusive entrepreneurial ecosystem in Algeria. The agency's efforts have proven to be a catalyst for economic development and social progress in the country.

V. Other countermeasures

1. Credit Information Sharing:

Establishing credit bureaus or credit registries that collect and share credit information can facilitate better risk assessment by lenders. Such systems enable lenders to access relevant credit data and make more informed financing decisions. Credit information sharing has emerged as a critical tool in the financial sector to facilitate better risk assessment and informed financing decisions. By establishing credit bureaus or credit registries that collect and share credit information, countries can significantly enhance their lending ecosystems and promote financial inclusion. These systems play a pivotal role in fostering economic growth and stability by providing lenders with access to essential credit data, enabling them to make more informed and responsible lending choices.

In their paper Berger, A. N., & Udell, G. F. (2006). present a comprehensive conceptual framework for understanding small and medium-sized enterprise (SME) finance. It emphasizes the role of credit information sharing as a crucial component in improving SME financing. The authors argue that credit information sharing enhances risk assessment by providing lenders with access to relevant credit data, allowing them to make more informed financing decisions. The authors find that credit information sharing positively impacts SME finance by reducing information asymmetry between lenders and borrowers. This leads to increased credit availability and lower credit risk for lenders, encouraging them to extend credit to SMEs. Consequently, improved access to finance contributes to the growth and development of SMEs, fostering economic development.

While in Claessens, S., & Van Horen, N. (2014). Paper entitled “Foreign banks: Trends, impact and financial stability” the authors examine the role of foreign banks in financial markets and their impact on financial stability (Claessens & Horen, 2014). It explores the relationship between credit information sharing and the presence of foreign banks in domestic financial systems. The authors suggest that credit information sharing may be particularly beneficial in countries with a significant presence of foreign banks, as these institutions often rely on credit information to assess risk in their lending decisions; The research finds that credit information sharing is associated with increased lending by foreign banks in host countries. The availability of reliable credit data enables foreign banks to better assess credit risks and build confidence in extending credit to local businesses. Additionally, credit information sharing contributes to the overall financial stability of the host country, as it enhances risk management and reduces the likelihood of credit market disruptions.

In 2018 the International Finance Corporation (IMF, 2018) shared a report that focuses on the importance of credit information sharing in improving access to finance for micro, small, and medium-sized enterprises (MSMEs). It highlights the benefits of credit information sharing for lenders, borrowers, and the overall financial ecosystem. The report showcases several success stories from different countries where the implementation of credit information sharing systems has led to increased lending to MSMEs. It demonstrates that credit information sharing enhances risk assessment and credit availability, leading to improved access to finance for MSMEs. Moreover, the report emphasizes that credit information sharing fosters financial inclusion by enabling lenders to reach previously underserved segments of the population.

Moreover, The World Bank's Doing Business report provides an annual assessment of business regulations and their enforcement across 190 economies. It includes an indicator on credit information sharing, measuring the extent to which credit bureaus or registries collect and distribute credit data. This report highlights the positive correlation between efficient credit information sharing systems and overall ease of doing business. In the case of Algeria, the country came in 157 out of 190 economies, with a doing business score of 48.6; although economies with well-established credit information sharing mechanisms tend to rank higher in the ease of getting credit indicator, as they facilitate access to finance for businesses. This demonstrates the role of credit information sharing in enhancing the business environment and fostering economic growth. (Doing Business report, 2020). However, in the doing business ranking and scores we note that there is a missing data of the Algerian case since a lot of measures that exist in reality are not shown in the algerian one, this needs to be well studies and well corrected by the local policy makers in order to show the reality of the country’s economic sector opportunities.

We can also summarize that credit information sharing measures have several benefits for enterprises as well as for the economy as a whole these benefits may be shown in bureaus or registries compile a comprehensive database of borrowers' credit histories, including their past borrowing behavior, repayment patterns, and creditworthiness. By having access to this rich pool of information, lenders can evaluate the credit risk associated with potential borrowers more accurately. This leads to better risk assessment and reduces the likelihood of lending to high-risk applicants; also for individuals with limited credit histories or those belonging to underserved segments of the population, accessing credit from traditional financial institutions can be challenging. Credit information sharing widens the scope for such individuals to obtain credit by offering lenders a broader view of their creditworthiness beyond traditional metrics. As a result, more individuals can access affordable credit, contributing to increased economic participation and prosperity.

While in the case of lenders, armed with reliable credit information, can determine the appropriate interest rates and terms for borrowers based on their credit risk profiles. As a result, borrowers with strong credit histories are likely to receive more favorable loan terms, while lenders can mitigate risks and offer competitive interest rates. This fosters a healthier credit market and reduces the overall cost of credit for consumers.

These measures may also detect and prevent fraudulent activities, such as identity theft and multiple loan applications with different lenders simultaneously. By identifying these red flags, lenders can safeguard their portfolios and protect consumers from falling victim to fraudulent practices.

A well-functioning credit information sharing infrastructure contributes to a stable financial sector. It minimizes the occurrence of non-performing loans and defaults, which can have adverse effects on financial institutions and the overall economy. Consequently, a more stable financial system promotes investor confidence and economic growth; and it fosters a culture of responsible borrowing among consumers. Knowing that their credit history is being recorded and shared encourages borrowers to be more disciplined in managing their finances and fulfilling their loan obligations on time.

2. Capacity Building for SMEs:

Enhancing financial literacy and management skills among SMEs can empower them to better navigate the financing process. Training programs and workshops can help SMEs understand the importance of financial documentation, creditworthiness, and negotiation skills.

Capacity building for SMEs through financial literacy and management skills enhancement plays a crucial role in empowering small and medium-sized enterprises (SMEs) to navigate the financing process more effectively. Various studies and reports emphasize the significance of providing training programs and workshops to SMEs, helping them understand the importance of financial documentation, creditworthiness, and negotiation skills.

Research conducted by the OECD highlights the positive impact of financial literacy on SMEs' access to financing options. SMEs equipped with financial knowledge are better prepared to present their financial documentation to lenders, thereby increasing their creditworthiness and negotiating better loan terms. This, in turn, helps SMEs secure the necessary funding for their business activities and stimulates business growth.

Similarly, studies by the International Labour Organization (ILO) and other researchers have shown that capacity-building initiatives in financial literacy improve SMEs' overall business performance and access to finance. Financially literate SMEs demonstrate better financial planning and management, reducing financial risks and attracting external financing from formal financial institutions. Consequently, these SMEs experience business expansion, increased productivity, and job creation. (ILO; 2019).

Research from various countries, including Nigeria and Pakistan, supports the positive relationship between training in financial literacy and SMEs' financial performance. SMEs that undergo training programs exhibit improved financial management practices, leading to better financial decision-making and enhanced creditworthiness. As a result, these SMEs are more likely to access finance from banks and investors on favorable terms, promoting business success.

Capacity building in financial literacy and management skills is a valuable tool in supporting SMEs' growth and success. By providing SMEs with the knowledge and skills necessary to manage their finances effectively, these initiatives enable SMEs to overcome financing challenges and thrive in competitive markets.

3. Relationship Building with Lenders:

Cultivating long-term relationships with lenders can lead to increased trust and understanding between SMEs and financial institutions. Open communication and consistent engagement can help bridge information gaps and facilitate smoother financing arrangements. (Asian Development Bank, 2021).

Studies and reports emphasize the significance of relationship building with lenders in SMEs' access to finance. Research by the Asian Development Bank highlights that SMEs that maintain long-term relationships with lenders are more likely to secure funding and receive favorable terms (Asian Development Bank, 2021). Developing trust-based relationships allows lenders to gain deeper insights into SMEs' financial standing, business operations, and growth potential, enabling them to make informed financing decisions.

A study conducted by the European Commission also underscores the importance of relationship building in SME financing. The report suggests that SMEs that actively engage with lenders and establish open lines of communication are better equipped to negotiate loan terms and secure additional financing when needed (European Commission, 2019). Building strong relationships helps SMEs demonstrate their creditworthiness and reliability as borrowers, leading to enhanced access to credit facilities and financial resources.

Furthermore, research from the Federal Reserve Bank of New York highlights that personal relationships with lenders significantly influence SMEs' financing outcomes. SMEs that establish rapport and maintain consistent communication with their lenders are more likely to receive faster responses to financing requests and experience greater flexibility in loan terms (Federal Reserve Bank of New York, 2022). This allows SMEs to address immediate financial needs and seize growth opportunities promptly.

In conclusion, fostering strong relationships with lenders is a strategic approach for SMEs seeking access to finance. By cultivating trust and open communication, SMEs can enhance their creditworthiness and build a positive reputation among lenders. As a result, SMEs are better positioned to secure financing and receive more favorable terms, ultimately contributing to their growth and success in the business landscape.

4. Alternative Financing Sources:

Exploring alternative financing options beyond traditional banks, such as venture capital, crowdfunding, or peer-to-peer lending platforms, can provide additional avenues for SMEs to access funding. Alternative financing sources offer SMEs additional avenues to access funding beyond traditional banks, encompassing various options like venture capital, crowdfunding, and peer-to-peer lending platforms. Exploring these alternatives can be advantageous for SMEs in their quest for financing (World Bank, 2021).

Research conducted by the World Bank highlights the significance of alternative financing sources for SMEs. The study suggests that SMEs that diversify their funding strategies and tap into alternative sources are more likely to secure the capital needed for business growth and expansion (World Bank, 2021). These alternatives can be particularly beneficial for startups and early-stage ventures that may face challenges in obtaining traditional bank loans due to limited operational history.

Venture capital, for instance, offers SMEs the opportunity to secure significant capital injections from investors seeking high-growth and innovative businesses. Startups and high-potential ventures can benefit from venture capital funding to accelerate their development and scale their operations

Crowdfunding platforms provide another viable option, allowing SMEs to raise funds from a large pool of individual investors who contribute smaller amounts collectively. This method

not only raises capital but also creates a community of engaged supporters for the SME's product or service (European Crowdfunding Network, 2021).

Peer-to-peer lending platforms, on the other hand, enable SMEs to borrow directly from individuals or groups without traditional financial intermediaries. These platforms provide a streamlined and efficient process for obtaining loans, making it an attractive option for SMEs seeking quick access to funding (Cambridge Centre for Alternative Finance, 2019).

Additionally, research from the Cambridge Centre for Alternative Finance indicates that the alternative finance market has experienced significant growth in recent years, showcasing the increasing popularity and viability of these funding sources for SMEs (Cambridge Centre for Alternative Finance, 2019).

We summarize that exploring alternative financing sources can be a strategic approach for SMEs to diversify their funding options and access capital beyond traditional banks. Venture capital, crowdfunding, and peer-to-peer lending platforms offer SMEs different avenues to secure financing based on their specific needs and growth stage. Integrating these alternatives into their funding strategies empowers SMEs to fuel their development, innovation, and overall success in the dynamic business landscape.

5. **Industry Associations and Networks:**

SMEs can benefit from joining industry associations and networks that provide access to valuable information, market intelligence, and potential funding opportunities.

6. **Risk Sharing Mechanisms:**

Implementing risk-sharing mechanisms, such as syndicated loans or loan guarantees by development finance institutions, can incentivize commercial banks to lend to SMEs with reduced risk exposure.

VI. Conclusion:

The challenges faced by small and medium-sized enterprises (SMEs) in accessing financing, particularly in Algeria. Despite their pivotal role in fostering economic growth and innovation, SMEs encounter significant obstacles in securing loans from financial institutions due to factors such as asymmetric information and limited credit history.

The introduction of various countermeasures to address these challenges was explored, including enhancing financial transparency, implementing credit scoring models, leveraging collateral and guarantees, and providing government support. Additionally, alternative strategies such as credit information sharing, capacity building for SMEs, relationship building with lenders, and exploring alternative financing sources were discussed.

Furthermore, the study highlighted the importance of understanding asymmetric information and its implications for credit risk assessment in the banking sector. By examining theoretical frameworks and empirical evidence, the research aimed to identify effective mechanisms used by Algerian bankers to evaluate credit risk for SMEs.

Through an empirical analysis, the study sought to provide insights into the practical strategies employed by Algerian bankers and their effectiveness in mitigating information-related challenges. The findings contribute to the existing knowledge on credit risk management in the Algerian banking sector and offer valuable recommendations for enhancing risk evaluation processes and supporting SME lending.

Overall, this research underscores the significance of addressing asymmetric information and implementing effective risk management practices to foster a more supportive environment for SMEs in Algeria. By enhancing access to financing and promoting sustainable growth opportunities for SMEs, policymakers and financial institutions can play a crucial role in driving economic development and prosperity in the region.

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