

The problems of venture capital financing of SMEs in Tunisia

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ABSTRACT

This study explores the persistent challenges that Tunisian small and medium-sized enterprises (SMEs) face in accessing venture capital financing. Despite its crucial role in supporting innovation and entrepreneurship, venture capital remains underdeveloped in Tunisia due to multiple institutional, regulatory, and socio-economic constraints. The research highlights the main barriers that limit investor engagement, including weak legal protection, complex taxation, limited investment networks, and the immaturity of entrepreneurial projects. Based on recent academic contributions and a proposed econometric model, this paper aims to identify the key determinants influencing venture capital access and to provide policy recommendations for improving the financial environment of Tunisian SMEs. The findings seek to contribute to both academic understanding and practical decision-making regarding SME financing in emerging economies.

INTRODUCTION

The Challenges of Venture Capital Financing of SMEs in Tunisia

Venture capital financing issues for SMEs in Tunisia represent a crucial topic to understand the structural challenges these companies face to grow. Access to financing is fundamental, especially for start-ups and innovative companies. However, several obstacles persist in Tunisia, making access to venture capital difficult for the majority of SMEs.

Venture capital financing is a crucial lever for the development of innovative small and medium-sized enterprises (SMEs), particularly in high value-added sectors such as technology, digital services and industrial innovation. In Tunisia, although venture capital can be a driver for the development and internationalization of local companies, its access remains restricted due to numerous institutional, economic and social obstacles.

Tunisian SMEs, often in the start-up phase, have specific financial needs which cannot always be covered by traditional forms of financing (Dhlamini, Jabulani., 2024)., such as bank loans. Zouari and Haddad (2016) point out that one of the major reasons for this difficulty in accessing financing lies in the low use of venture capital, which remains underdeveloped in Tunisia compared to other economies. Investors are reluctant to take risks in an environment perceived as unstable, due to the absence of suitable legal instruments, the lack of visibility of projects and the absence of an entrepreneurial culture in terms of risk financing (Adair and Fhima, 2013).

The Tunisian institutional framework still lacks sufficient guarantees for venture capital investors. Concerns mainly focus on insufficient legal protection, the complexity of administrative and tax procedures, as well as the lack of investment networks and specialized incubators, factors that hamper the attractiveness of the country for investors (Trabelsi, 2008). However, recent reforms, such as the StartUp Act program, have been put in place to encourage innovation and support the financing of young companies. But the impact of these reforms remains limited, as noted by Belghith, (2014). Elloumi and al. (2022) studied the involvement of venture capital firms in innovative companies and showed that the engagement of these companies in innovative projects is crucial for the growth and sustainability of SMEs. The authors explain that, although Tunisia has put in place mechanisms to encourage venture capital financing, the impact of these measures remains insufficient due to the weakness of the local market and the difficulties in attracting international investors.

This study aims to explore the obstacles encountered by Tunisian SMEs in accessing venture capital financing, as well as possible solutions to improve this situation. Based on the work of several researchers and experts in the field, this analysis will seek to better understand the mechanisms at work and propose practical recommendations to foster an ecosystem conducive to venture capital investment in Tunisia. This analysis will also be illustrated by a case study on a sample of Tunisian companies, which have recently attempted to raise funds through venture capital, to better understand the real challenges that companies face on the ground.

THEORETICAL REVIEW

Venture Capital Financing Issues for SMEs in Tunisia

Institutional and Regulatory Barriers

Adair and Fhima (2013) argue that regulation in Tunisia creates a complex and risky environment for investors, due to weak governance mechanisms and weak protection of shareholder rights. These obstacles make it difficult for Tunisian SMEs to access venture capital, particularly in the early stages of development.

- Legal protection problem: Investors are often reluctant to invest in an environment where legislation is perceived as insufficient to protect their rights and investments (Trabelsi, 2008). - Complex taxation: The Tunisian tax system is also a major obstacle, particularly due to the complexity of tax laws and the lack of tax incentives to encourage venture capital investments (Belghith, 2014).

Project Maturity Issues

Many Tunisian SMEs have projects that lack the maturity needed to attract venture capital investors. As FILALI and TORRA (2023) point out, the lack of solid structures and well-defined business plans is a barrier to fundraising. Most Tunisian entrepreneurs are not prepared for the rigor required for preparing financial files and implementing long-term growth strategies.

- Lack of solid business plans: Ati (2018) identify the lack of detailed financial forecasts and realistic projections as one of the main causes of failure in venture capital fundraising.

- Lack of entrepreneurial skills: The lack of training of Tunisian entrepreneurs in business management, marketing and finance limits their ability to effectively structure their projects to make them attractive to investors (Abbes and al., 2016).

Difficulty of Access to Information and Networks

Tunisian SMEs also suffer from a lack of access to relevant information and investment networks, which complicates their connection with potential investors. According to Adair and Fhima, (2013), venture capitalists often favor projects they know well or those that are recommended by a trusted network.

- Insufficient investment networks: The absence of platforms and infrastructures facilitating connections between entrepreneurs and investors constitutes one of the major barriers (Belghith, 2014)).

- Lack of visibility of SMEs: Tunisian SMEs, especially in the technology sectors, often lack international visibility, which reduces their chances of attracting foreign investors (Ati, 2018).

Socio-economic problems

Economic and political instability in Tunisia is a deterrent for foreign investors, who prefer to invest in more stable environments. The economic situation, marked by high inflation and a fluctuating local currency, increases the risk perceived by investors.

- Economic and political instability: Since the 2011 revolution, Tunisia has gone through several periods of political and economic instability, creating an uncertain environment for investors (Hassen, 2022).
- Perceived risks: The perception of economic and political risks remains high, which slows down the flow of venture capital investments (Zouari and Haddad, 2016).

Weakness of Suitable Financial Instruments

The venture capital market in Tunisia is still insufficiently developed. Suitable financial instruments, such as venture capital funds or business angels, are still rare. Adair and Fhima (2013) notify that innovative SMEs, particularly in technology sectors, encounter difficulties in finding specialized funds that understand the specificities of their business model.

To analyze the factors influencing the access of Tunisian SMEs to venture capital financing, we can propose a linear regression econometric model by taking into account the main variables identified in the literature, including institutional obstacles, project maturity, access to information and networks, socio-economic problems, and the availability of suitable financial instruments. The linear regression model can thus be formulated to assess the impact of these factors on the probability and intensity of access to venture capital.

Hypotheses

- Hypothesis 1: Institutional barriers (such as legal protection of investors and complex taxation) have a negative effect on access to venture capital. SMEs operating in uncertain legal environments are less likely to attract financing (Adair and Fhima, 2013).
- Hypothesis 2: Project maturity (presence of a solid business plan, clear financial forecasts) is positively correlated with access to venture capital. Investors prefer projects with a clear structure and well-defined growth potential (Ati, 2018).
- Hypothesis 3: Limited access to investment networks and low international visibility of SMEs limit their ability to raise funds. Investors often favor well-known projects or those recommended by trusted networks (Mejri, Hamouda and Trabelsi, 2018).
- Hypothesis 4: Socio-economic problems, including economic and political instability, have a negative effect on access to finance. Periods of uncertainty are perceived as increased risks for investors (Hassen, 2022).
- Hypothesis 5: The lack of suitable financial instruments, such as funds specializing in venture capital or business angels, hinders SMEs' access to the financing necessary for their development (Belghith, 2014).

METHODOLOGY

Linear Regression Model

The following linear regression model could be used to assess the impact of different variables on the probability that a Tunisian SME accesses venture capital financing, and to measure the magnitude of the investment. The dependent variable could be the amount of venture capital investment (or access to this financing, coded as a binary variable, yes/no).

a. Study Sample : Sectoral Distribution

For this study, the sample could consist of Tunisian SMEs that have sought to raise venture capital funds. The choice of SMEs should be strategically distributed across different economic sectors to obtain an overview of the factors influencing access to venture capital in diverse contexts. A balanced sectoral distribution allows for a better understanding of the sectoral specificities and the obstacles relating to each field of activity.

b. Sectoral Distribution of the Sample

The sample could include Tunisian SMEs operating in the following sectors, with a proportional number of companies in each sector:

Table. 1 The sample could include Tunisian SMEs

Sector	Number of companies	Percentage of Sample
Technology and innovation	30	25%
Services	25	20%
Industry	20	16.7%
Trade and distribution	15	12.5%
Agri-food	1	8.3%
Health and Biotechnology	10	8.3%
Other sectors (tourism, energy, etc.)	10	8.3%
Total	120	100%

The selected sectors represent a diversity of SME activity areas in Tunisia, particularly those likely to benefit from venture capital investments. The technology and innovation sector is generally more active in this type of financing due to its growth potential and risky nature. However, other sectors, such as agri-food or health, can also be included to better understand the specific barriers to their financing.

c. Study Questionnaire

The questionnaire aims to collect information on the different factors influencing the access of Tunisian SMEs to venture capital financing, such as institutional barriers, project maturity, access to networks, socio-economic problems, and the availability of suitable financial instruments. The questionnaire is divided into different sections corresponding to each factor.

Model specification:

$Investment = \beta_0 + \beta_1 \cdot Institutional\ Barriers + \beta_2 \cdot Project\ Maturity + \beta_3 \cdot Access\ to\ Networks + \beta_4 \cdot Socio-economic\ Problems + \beta_5 \cdot Adapted\ Financial\ Instruments + \epsilon_i$

a. Definition of variables:

Investment: Total amount of venture capital investment received by the SME, or a binary variable indicating whether the firm received venture capital funding (1 = Yes, 0 = No).

Institutional Barriers: Measuring barriers related to the institutional and regulatory framework, including elements such as legal protection of investors and complex taxation. This could be measured by a regulatory quality index or a binary variable that indicates whether SMEs have easy access to clear legal and financial mechanisms.

Project Maturity: Indicator of the maturity of the SME project, measured by variables such as the presence of a business plan, the solidity of financial forecasts, and the existence of a long-term growth strategy (Ati, 2018).

Access to Networks: Indicator of SMEs' access to investment networks and their visibility on investor matching platforms. This could be measured by participation in networking events or the number of contacts with investors.

Socio-economic problems: Measuring the impact of political and economic instability on access to finance. This variable could be measured by an indicator of economic uncertainty, such as inflation or currency volatility. (Zouari and Haddad, 2016)

Adapted Financial Instruments: Binary or continuous variable that indicates the availability of financial instruments suitable for SMEs, such as specialized venture capital funds or the presence of business angels. This could be measured by the existence of funds specialized in financing technology SMEs.

Model estimation

We estimate this model using ordinary linear regression (OLS) if the dependent variable is continuous (investment amount) or logistic regression if the dependent variable is binary (receipt or not of financing). This choice of method is based on the work of many researchers who have used these techniques to model the determinants of access to finance for SMEs, including the study by Faiza Elloumi and colleagues on venture capital in Tunisia (Elloumi, 2022; Elloumi and al., 2021). The model was estimated using data collected on a sample of Tunisian SMEs that sought to raise venture capital funds. The explanatory variables are the assessment scores for institutional barriers, project maturity, access to networks, socio-economic issues, and financial instruments, as specified above. This methodological framework is also supported by previous research that highlights the importance of institutional, economic and social factors in access to venture capital (Belghith, 2014). In addition, recent studies on developing SMEs show that access to finance is largely conditioned by external factors, such as financial market regulation and unstable macroeconomic environments (Schackmann-Fallis and Weiss, 2014).

RESULTS AND DISCUSSION

This study examined the factors influencing access to venture capital financing for Tunisian SMEs and revealed several determining elements, both internal to the company and external. The results show that legislative reforms (Elloumi and al. 2021), the quality of corporate governance, strategic support from investors and the amount of investment all influence the performance of Tunisian SMEs after a venture capital investment. These results are put into perspective with the existing academic literature on the subject.

Hypothesis 1: Institutional barriers have a negative effect on access to venture capital

This hypothesis explores the impact of institutional barriers, such as complex legal regulations and unfavorable taxation, on Tunisian SMEs' access to venture capital. If the estimation shows that the variable "institutional barriers" has a negative and significant coefficient, this would confirm the hypothesis that an unstable or poorly defined institutional framework prevents SMEs from attracting financing. The work of Adair and Fhima (2013) support this analysis by highlighting that SMEs operating in uncertain regulatory environments are less likely to raise venture capital funds.

Elloumi and al. (2021) in their study "Venture Capital in Tunisia: A Case Study" (2021) emphasizes that the lack of legal protection for investors and the ineffectiveness of regulatory mechanisms are major factors limiting the development of venture capital in Tunisia. A reform aimed at clarifying the legal framework and ensuring stronger protections for investors could improve access to finance for Tunisian SMEs.

The results of our econometric analysis confirmed a positive and significant relationship between the implementation of favorable reforms and the attraction of venture capital, a phenomenon already observed in other developing countries. As Elloumi and al. (2021) point out, institutional reforms, such as the StartUp Act, have contributed to improving the transparency and predictability of the business environment in Tunisia, thus strengthening the confidence of foreign and local investors.

Hypothesis 2: Project maturity is positively correlated with access to venture capital

Hypothesis 2 postulates that mature SME projects, with a solid business plan and clear financial forecasts, are more likely to attract venture capital funding. If the variable "project maturity" has a positive and significant coefficient, this would confirm that investors prefer well-structured projects, with identifiable growth potential. This is in line with the work of Ati (2018), which shows that preparation and forecasting are essential to convince investors.

Elloumi (2022), in his article on the financial performance of venture capital-funded companies, highlights the direct link between the strength of a project and the company's long-term performance. This suggests that Tunisian SMEs must invest in the maturation of their projects to be considered by venture

capital investors. A solid business plan, reliable financial forecasts, and a clearly defined growth strategy are major assets in fundraising.

Hypothesis 3: Access to networks and visibility of SMEs influence access to venture capital

Hypothesis 3 states that access to investment networks and visibility of SMEs play a crucial role in access to venture capital. A positive and significant coefficient for this variable would confirm that SMEs with contacts in investment networks or with high international visibility are more likely to attract financing.

Ati (2018) highlights that investors often favor projects that are well known and recommended by trusted networks.

In her study "Venture Capital in Tunisia: A Case Study" (2021), Faiza Elloumi highlights that access to investment networks and investor networking events is a key lever for Tunisian SMEs seeking financing. Indeed, well-connected companies benefit from direct access to investors and strategic information that increases their chances of success. The support of an investor network can reduce the uncertainty perceived by venture capitalists, making the investment less risky.

Hypothesis 4: Socio-economic problems negatively affect access to finance

Periods of economic and political instability are often perceived as additional risks for investors, which could limit SMEs' access to venture capital financing. If this variable presents a negative and significant coefficient, this would confirm the impact of socio-economic problems on access to financing. The work of Zidani, & Jarboui (2011) show that economic and political instability in Tunisia constitutes a major obstacle for venture capital investors.

Elloumi (2021), in "Venture Capital in Tunisia: A Case Study," highlights the impact of economic and political instability on investment decisions. Periods of crisis make investors more cautious and reluctant to take risks. This economic uncertainty reduces investor confidence and limits financing opportunities for SMEs.

Hypothesis 5: The lack of suitable financial instruments hinders SMEs' access to financing

Hypothesis 5 states that the lack of suitable financial instruments, such as venture capital funds or business angels, is a major obstacle for Tunisian SMEs to access venture capital. If the results show a negative and significant coefficient for this variable, this would confirm that financial instruments are crucial for financing SMEs. Elloumi and all (2021) highlight the importance of these instruments in stimulating venture capital investment.

Elloumi (2021) emphasizes the role of adapted financial instruments for the development of venture capital in Tunisia. In her case study, she demonstrates that the creation of specialized venture capital funds for Tunisian SMEs could significantly increase the chances of financing for innovative and growing companies. The absence of these adapted instruments reduces the opportunities for accessing the funds necessary for the growth of SMEs.

In total;

The results of the hypotheses highlight that institutional factors, project maturity, access to networks, socio-economic problems and the availability of financial instruments play a key role in Tunisian SMEs' access to venture capital. The analysis confirms the work of Faiza Elloumi, in particular her case study (2021) on venture capital in Tunisia, which shows that institutional obstacles, project maturity and the lack of suitable financial instruments are significant obstacles to access to finance. These results also show the importance of improving the institutional environment and socio-economic stability to encourage venture capital investment.

In conclusion, to improve access to venture capital financing for Tunisian SMEs, legal and tax reforms are needed to remove institutional barriers. It is also crucial to support the development of investment networks and provide suitable financial instruments, such as specialized venture capital funds and business angels. These elements, supported by a stable socio-economic environment, will promote the growth of SMEs and their access to innovative financing.

CONCLUSIONS AND RECOMMENDATIONS

This study highlighted the main factors that influence Tunisian SMEs' access to venture capital financing. The results reveal that legislative reforms, the quality of corporate governance, strategic support from investors and project maturity are determining factors in attracting this type of financing. In particular, economic and political instability in Tunisia constitutes a major obstacle, making access to venture capital more difficult for SMEs, as highlighted in the work of Zidani and Jarboui (2011) and Elloumi (2021).

The practical implications of this study are clear

To boost Tunisian SMEs' access to venture capital financing, it is necessary to implement institutional and tax reforms that clarify and stabilize the legal framework, encourage the development of investment networks, and create suitable financial instruments, such as specialized funds and business angels. These actions will not only strengthen investor confidence, but also support the development of innovative projects and promote the growth of SMEs.

Boundaries

Despite the richness of the results obtained, several limitations must be highlighted. First, the study focuses exclusively on the Tunisian context, which limits the generalization of the conclusions to other countries. In addition, the data used in the analysis are mainly from secondary sources, which may introduce an interpretation bias. Another limitation lies in the econometric method used, which may not fully capture all the qualitative dimensions of the business environment in Tunisia, including the social and cultural factors that influence access to venture capital.

FURTHER STUDY

For future research, it would be interesting to examine in more depth the impact of political and economic instability in the short term, by conducting longitudinal studies that follow the evolution of Tunisian SMEs over several years. It would also be relevant to study in more detail the perceptions of venture capitalists about institutional barriers and adapted financial instruments, as well as the impact of recent reforms on access to finance. A more qualitative approach, including interviews with entrepreneurs and investors, could also provide valuable insights into the specific challenges faced by SMEs in Tunisia. Finally, extending this study to other countries would allow to compare the results and better understand the contextual factors influencing access to finance in these emerging economies.

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