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Impact of Alternative Funding Instruments to Improve Access to Finance in SMEs: Evidence from Vietnam

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Access to finance in the digital era is innovative with the different alternative funding approaches. In emerging markets, digital innovation of the financial sources is not limited to the own capital or borrowing from bank or credit institutions but numerous paths of financing. The purpose of the research is to recognize the alternative and innovative funding tools including borrowed from bank/credit institution, borrowed against interest from other sources, and borrowed from other sources without interest, peer-to-peer (P2P) lending -borrowed from friends and relatives without interest-, and stocks issued. The data was obtained from the survey of 2647 enterprises conducted by the UNU WIDER 2015 in Vietnam. The probit model approach for the access to finance is used to analyze the impact of alternative funding tools for the enterprises. The results predict the use of alternative funding tools for startup capital and investment financing of the firms separately. The results revealed that sources of start-up capital from founders' own money, loans from friends and acquaintances, finance/investments from other enterprises, domestic bank loan, and Informal credit association (money lenders, informal bank, pawn shop) are positively and significantly affect the access to finance, while loans from family members, business associations, and international bank loans are not significant. Meanwhile, own funding, bank/credit institution, borrowed against interest from other sources, and borrowed from other sources without interest, borrowed from friends and relatives without interest are significantly affected the access to finance. In a summary, the alternative funding tools are important source for the financing SMEs in Vietnam.

Keywords: Alternative funding and P2P lending, SMEs, Access to Finance

JEL: L11, L22, L25, M13

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1. Introduction

Despite the funding mechanisms, technology has played a major role in digital financing the SMEs sector in many countries. However, funding mainly deals with the banks and related institutes when SME sector is considered as financing. But, recently with Fintech advancement of technologies create a comfortable financing for the SME sector. These innovations spread fast across many regions for SME finance. In the digital era, in addition to the own financing and bank and other institutional financing, many alternative financing tools are emerged.

Access to finance is a critical problem in many developing countries including Vietnam in which SME operation is a high risk. The other concern of the country's situation is inability of SME operations to fulfill the collateral requirement. The credit supply side is also blamed subsequently it is operating at the few geographical areas. The main source of external financing for SMEs is equity and debt in many developing countries with stable financial market. But, to access SME finance, operators and their businesses need to maintain some characteristics including attributes such as firm age, firm legal status, collateral and business information, experience, education, firm performance, memberships with business association, owning tangible assets, financial records, industry sector, age of business operator play a significant influence for credit access by SMEs from financial institutions.

1.1 The Statement of Problem

The researchers, policy makers and practitioners attract the studies on financing the SME sectors because the SMEs are contributed to the economic growth. Notwithstanding the potentials of SMEs on economic development and growth, the sector contains many challenges due to limited access to finance. This causes little growth or inability of SMEs to start or less creation to GDP growth. Policymakers are also in the view of credit access by the SMEs as a problem.

However, the availability of the information and statistics on SMEs operation in the developing countries are limited besides it is considered as a serious barrier. This condition is similar in Vietnam, where the SMEs use outdated technology in production. Research and development of production technologies are key for the firms to get access to the finance to increase productivity and maintaining competitiveness in local and global market.

The literature on access to credit by SMEs operator covers wide range of factors including experience, education, business operation, firm's location, firm's size, age of the firm, collateral and business information. The existing literature on access to finance by SMEs shows that the factors influence credit access by the banks and non-banks. Thus, the factors include internal fund, gender, marital status and age of the business operators, in this study support the policy and decision-making on access to finance.

1.2 Funding Sources

Numbers of financing instruments are practicing for the SMEs in the developing world. The paper addresses the most influential techniques.

- Crowdfunding is one of the instruments in financing the SMEs in developing countries. It implied that the pooling of small amounts of money from many investors through Internet platforms, is one of the best-known forms of alternative funding.
- Donations and rewards-based crowdfunding are also one form of financing approaches in SMEs. Donations are investors are given money for the SMEs without expecting financial compensation. While the case of rewards-based crowdfunding, SMEs receive

benefits such as early access to a new product.

- Peer to peer and peer-to-business lending: these tools are similar to the concept of microfinance platforms. Peer to peer lending is that the SMEs connect borrowers with multiple lenders who receive interest in return.
- Equity crowdfunding: This form of crowdfunding and in this model, investors receive an equity stake in the company, similar to purchasing stocks.
- Some sources distinguish between debt-based securities and peer-based lending. However, in some countries, lenders on peer-to-peer and peer-to-business platforms are technically buying debt-based securities, similar to bonds.

Under this study, factors that influence credit access by analyzing SMEs operators' characteristics and their business characteristics with the use of primary data. Further, it provides an extensive understanding on the factors that influence SMEs operators to access finance, challenges that lenders do face when issuing loans and reasons for bad loans among SMEs operators.

The paper is organized as follows. In the second section, review of literature is presented, and in third, a brief discussion of the specification for the data and empirical method is presented. The fourth section provides the estimated results with discussions. Subsequently, the concluding remarks followed the empirical results section.

2. Literature Review

The idea of access to finance has been studied in the literature. Globally SME sector has been reporting difficulties in access to finance (Bebczuk, 2004; Slotty, 2009; Balling et al., 2009; Irving & Scott, 2010; Yongqian et al., 2012). An important aspect for SME sector development is access to finance particularly from financial institutions. Le, Venkatesh and Nguyen (2006) pointed out that the achievement stage for any particular SME is to have adequate access to external sources of finance.

According to Romano, Tanewski, and Smyrnios (2001), the financial behaviour SMEs has not been explained well in the financial theories. The prevailing descriptions are equivocal for the use of equity finance by SMEs. Unrelated theories suggest different financial approaches to explain the factors that influence SMEs access to finance. Financial growth cycle suggests that financial needs and alternative financial models available for SMEs change in various phases (Berger and Udell, 1998). The model includes firms on a size, age, or information continuum and explained the optional financial arrangements for the growth. Thus, the firms adjust the capital structure gradually on the advancement of business lifecycle (La Rocca, La Rocca, & Cariola, 2011).

A research using firm level data gathered by the World Bank show that one main barrier to doing business as shortage on access to finance. Moreover, a number fo studies revealed that financing is a major constraint to grow than for larger firms, mainly in the developing world (Beck et al., 2005; Beck et al., 2006; Fatoki & Assah, 2011, Kira & He, 2012). The consequences of less access to financial resources showed in another study (Levy, 1993). In obtaining credit, SMEs face high transaction cost than large firms (Saito and Villanueva, 1981) and availability of finance working capital (Peel and Wilson, 1996).

Besides, borrowers have continued to restrict the financial flow to SMEs with information asymmetries associated with the small-scale lending. Notwithstanding SMEs are considered as a major driver of innovation, employment, and their potentiality to the economic development, many empirical studies refined this view (Beck et al, 2005; Aghion et al., 2007, Fatoki & Assah, 2011). Usually, SME sector is financially constrained and difficult in access

to external finance.

Many literatures revealed that existences of financial constraints are two main categories: asymmetric information and agency costs. Fazzari et. al., (1988) described that the existence of financial constraints is due to the presence of asymmetric information. SMEs are often apparent to be more informational impervious than large firms (Devereux & Schiantarelli, 1989; Gilchrist & Himmelberg, 1991; Berger & Udell, 1988; Beck *et al.*, 2005). Fatoki and Assah (2011) proposed that it is essential to own tangible assets, maintain proper business information and improve their management skills to accelerate access of debt financing from lenders for SMEs. Colluzi *et al.* (2009) found out that young and small firms are significantly facing financial constraints in their study on the significance of firm characteristics on access to external finance. Atanasova and Wilson (2004) proposed that firm's total asset collateral is an essential determinant to access credit. Beck *et al.* (2006) uncover that countries with higher levels of financial intermediary development, more efficient legal systems, higher GDP-per-capita and more liquid stock market report lower financing obstacles.

The study which was conducted UK manufacturing firm between 1989 and 1999 by Bougheas *et al.* (2006), noticed several firm characteristics including collateral, age, profitability, riskiness and size do influence accessibility of debt financing. Harrison and McMillan (2003) evidenced that listed firms and foreign owned firms encounter financial constraints compared to unlisted and locally firms. An industrial sector in which a firm conducts business does play an influential role in determining accessibility to external capital markets (Hall *et al.*, 2000). Sectors which require huge capital intensive to operate such as manufacturing and construction seems to attract investors/lenders to extend capital financing. Canton *et al.*, (2010) found out that firm's age, firm-bank relationship, and banking sector degree of competition are the determinants of firm's perceived financial constraints in banking industry at the European Union level. The survey study of determinants of finance access to SMEs in ECB and the European Commission resulted that firm's ownership structure and age are vital determinants of the perceived financial constraints regardless in which industry firm operate or the firm size Ferrando and Griesshaber (2011).

With the rapid development of the technologies, access to finance has been redesigned with latest technologies such as crowdfunding and P2P lending as alternative funding instruments. Crowdfunding is a technique to raise external finance from a large audience, rather than a small group of specialized investors (e.g. banks, business angels, venture capitalists), where each individual provides a small amount of the funding requested. The concept of "crowdfunding" is related to the one of "crowdsourcing", which refers to the outsourcing to the "crowd" of specific tasks, such as the development, evaluation or sale of a product, by way of an open call over the internet (Hallward-Driemeier & Aterido, 2007). Through online platforms, the task, traditionally performed by contractors or employees, can be undertaken by individuals for free or in exchange for some specified return, whose value is however generally lower than the one of the contribution made to the firm. Crowdsourceurs may in fact have intrinsic motivations, such as the pleasure of undertaking the task or participating to a community, as well as extrinsic motivations, related to monetary rewards, career benefits, learning or dissatisfaction with the current products (Kleeman *et al.* 2008).

Table 1: Alternative External Financing Techniques for SMEs

Low risk/return	Low risk/ return	Medium risk/return	High risk/return
Asset-based finance	Alternative Debt	Hybrid instruments	Equity instruments
• Asset based lending	• Corporate bonds	• Subordinated Loans/Bonds	• Private equity

• Factoring	• Securitized debt	• Silent participations	• Venture capital
• Purchase order finance	• Covered Bonds	• Participating Loans	• Business Angels
• Warehouse Receipts	• Private placements	• Profit participation rights	• Specialized platforms for public listing of SMEs
• Leasing	• Crowdfunding (Debt)	• Convertible Bonds • Bonds with warrants • Mezzanine Finance	• Crowdfunding (Equity)

Source: OECD (2013b)

3. Data and Empirical Method

3.1 Data

The Vietnam Small and Medium Enterprises data track over 2500 enterprises from nine provinces over time. The Vietnam SME survey, collected biennially since 2005, is a collaborative effort of the Central Institute for Economic Management (CIEM), the Institute of Labour Science and Social Affairs (ILSSA), the Development Economics Research Group (DERG) at the University of Copenhagen, and UNU-WIDER. The survey instrument consists of three modules: (i) a main enterprise questionnaire for owners or managers; (ii) an employee questionnaire administered to a random subset of employees in a quarter of randomly selected enterprises; and (iii) an economic accounts module. While the enterprise-level survey solicits information on firm performance, enterprise history, employment, business environment, and owner/manager background characteristics, the employee survey collects data on educational background, work experiences and training, union membership, and household characteristics of employees. The economic accounts module lists revenues, costs, assets, and liabilities. (CIEM, ILSSA, UCPH, and UNU-WIDER (2015). Viet Nam SME Survey).

The enterprises surveyed are distributed across approximately 18 sectors such as: food processing, fabricated metal products, and manufacturing of wood products. Enterprises are classified according to the current World Bank definition, with micro-enterprises having up to 10 employees, small-scale enterprises up to 50 employees, medium-sized enterprises up to 300 employees, and large enterprises having more than 300 employees.

3.2 Empirical Method

Probit analysis

In this study, a qualitative response model is appropriate given the dichotomous nature of the dependent variable. Qualitative response models relate with the probability of an event to various independent variables. In order to provide a detailed analysis of the behavioral access to credit, a discrete choice probit model is applied for binary choice (yes, no) responses to the access to credit question. The probit analysis is based on the cumulative normal probability distribution. The binary dependent variable, access to finance, takes on the values of zero and one. The probit analysis provides statistically significant findings of which alternative financial tools increase or decrease the probability of access to finance. In the binary probit model, access to finance was taken as 1, while no access to finance as 0. It is assumed that the firms

obtain maximum utility, it has access to finance rather than no access to finance.

The probability of choosing any alternative over not choosing it can be expressed as in (2), where represents the cumulative distribution of a standard normal random variable:

$$p_i = \text{prob}[Y_i = 1|X] = \int_{-\infty}^{x'_i \beta} (2\pi)^{-1/2} \exp\left(-\frac{t^2}{2}\right) dt \\ = \phi(x'_i \beta)$$

The relationship between a specific variable and the outcome of the probability is interpreted by means of the marginal effect, which accounts for the partial change in the probability. The marginal effect associated with continuous explanatory variables on the probability, holding the other variables constant, can be derived as follows:

$$\frac{\partial p_i}{\partial x_{ik}} = \phi(x'_i \beta) \beta_k$$

Where ϕ represents the probability density function of a standard normal variable.

The marginal effect on dummy variables should be estimated differently from continuous variables. Discrete changes in the predicted probabilities constitute an alternative to the marginal effect when evaluating the influence of a dummy variable. Such an effect can be derived from the following:

$$\Delta = \Phi(\bar{x}\beta, d = 1) - \Phi(\bar{x}\beta, d = 0)$$

The marginal effects provide insights into how the explanatory variables shift the probability of frequency of access to finance. The marginal effects were calculated for each variable while holding other variables constant at their sample mean values.

The survey questionnaire asks firm about the access to finance from institutional and non-institutional alternative ways. A firm is said to have access to finance (Access to finance=1) if it is positive. Access to finance assumes a value of 0 if the firm has no access to finance is 0. Thus, the dependent variable is categorical in nature. Given that the dependent variable is dichotomous, the study employs a probit regression model to analyze the determinants of firms' access to finance statuses in the Vietnam. Let P_j^* be benefits accruing to a given firm j ($j = 1, 2, 3 \dots n$) from access to finance. The benchmark equation can be specified as:

$$p_j^* = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \varepsilon_j$$

Where, X_j represents an array/vector of firm level factor or internal attributes, ε_j is the random error term. The dependent variable P_j^* is not observed since it is a latent variable; rather we observe the firm's decision to access to finance. Hence the following probit model is defined:

$$P_j = \begin{cases} 1 & \text{for } P_j^* > 0 \\ 0 & \text{for } P_j^* \leq 0 \end{cases}$$

Where P_j is a binary variable with values 1 if the firm is having access to finance and 0 otherwise. Let $\Phi(\cdot)$ depict the cumulative standard normal distribution function. Then the probit regression model can be represented as:

$$E(P_j|X_j Y_i) = \phi(\alpha_0 + \alpha_1 X_j + \alpha_2 Y_i)$$

The base probit model we estimate for access to finance is as follows:

$$\begin{aligned}
\text{Access to finance}_i &= \alpha_0 + \alpha_1 \text{Age}_i + \alpha_2 \text{Gender}_i \\
&+ \alpha_3 \text{Exporter}_i + \alpha_4 \text{Yr of establishment}_i + \alpha_5 \text{PrevExperience}_i \\
&+ \alpha_6 \text{ValueAdded}_i + \alpha_7 \text{DaysWork}_i + \alpha_8 \text{WorkForce} + \varepsilon_j
\end{aligned}$$

Where, financial access is the dichotomous variable to estimate the firm's access to finance from institutional and non-institutional ways.

4. Results and Discussion

Table 2: Summary statistics of the variables

Variable	Mean	Std. Dev.	Obs.	Min	Max
Access to finance	0.48	0.499	2,290	0	1
Gender	0.59	0.491	2,647	0	1
Age	46.42	11.12	2,647	21	89
Taken over (Merge)	0.006	0.075	2,647	0	1
Year of establishment	1998	10	2,645	1954	2013
Previous experience	0.66	0.471	370	0	1
Export	0.07	0.256	2,615	0	1
Total value added in 2014	1784927	8102072	2,647	-4810472	2.87e+08
Average number of days work	25.32	2.824	2,647	5	29.5
Total workforce	16.02	37.816	2,647	1	700

Source: Author calculation

The above Table 1 shows the summary statistics of the variables used in the probit model analysis.

In Vietnam, the SMEs have identified the constraints for the SMEs to grow. Among the variety of the limitations, capital finance is one such a constraint for the SMEs.

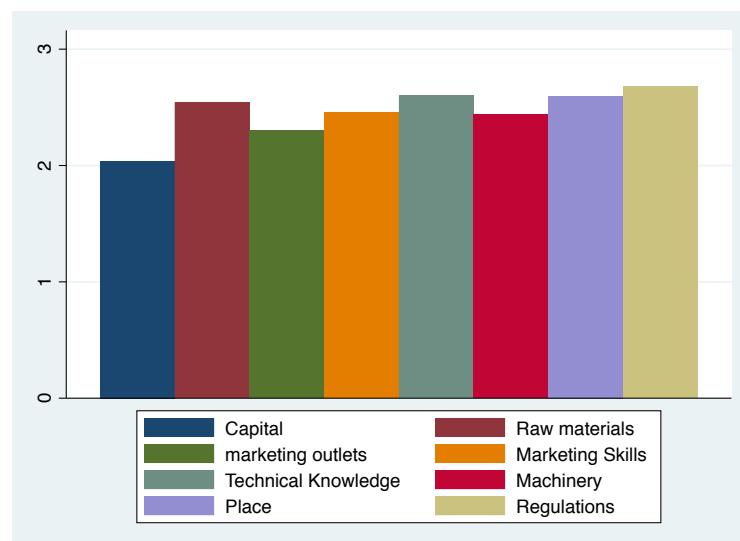


Figure 1: Constraints to grow

a) Lack of capital b) Lack of raw material c) Lack of marketing outlet / packaging & distribution

services d) Lack of marketing skills e) Lack of technical know-how f) Lack of suitable machinery/equipment g) Difficulty in finding suitable premises h) Complicated regulations/difficulties in obtaining licenses

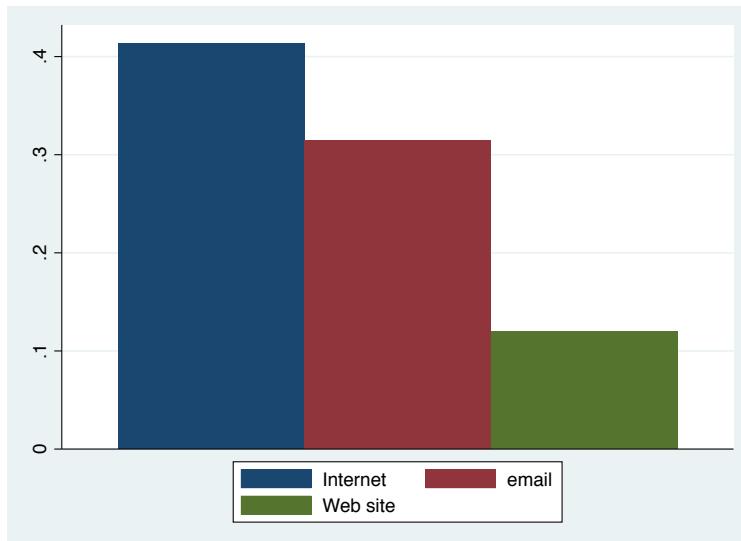


Figure 2: access to the technology

The following graph shows the sources of start-up capital for the firm. Proportionately, it shows the four key types of financing such as own funding, family loans, loans from friends and loan from domestic banks.

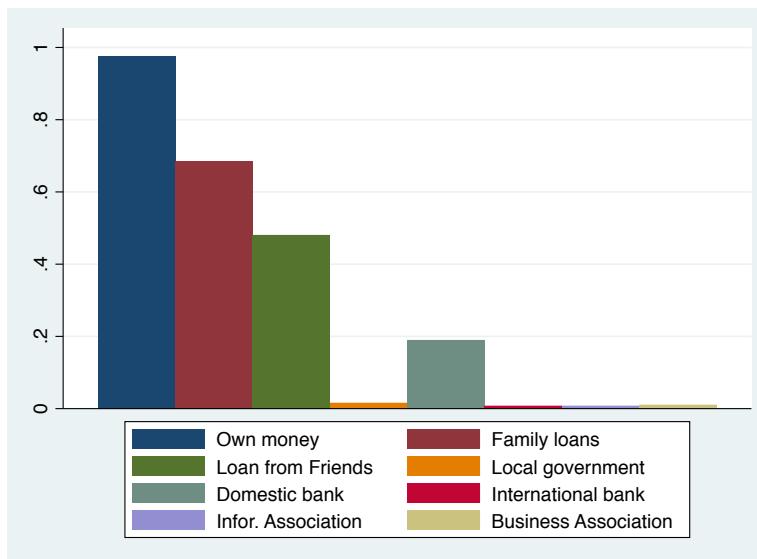


Figure 3: the sources of start-up capital

a) Founders' own money b) Loans from family members c) Loans from friends and acquaintances d) Finance/investments from other enterprises e) Domestic bank loan f) International bank loan g) Informal credit association (money lenders, informal bank, pawn shop) h) Business association

SMEs are also financing for the investment financing through number of financial tools. In addition to the own capital and bank financing, peer-to-peer lending, crowdfunding such as from other sources with and without interest can be observed.

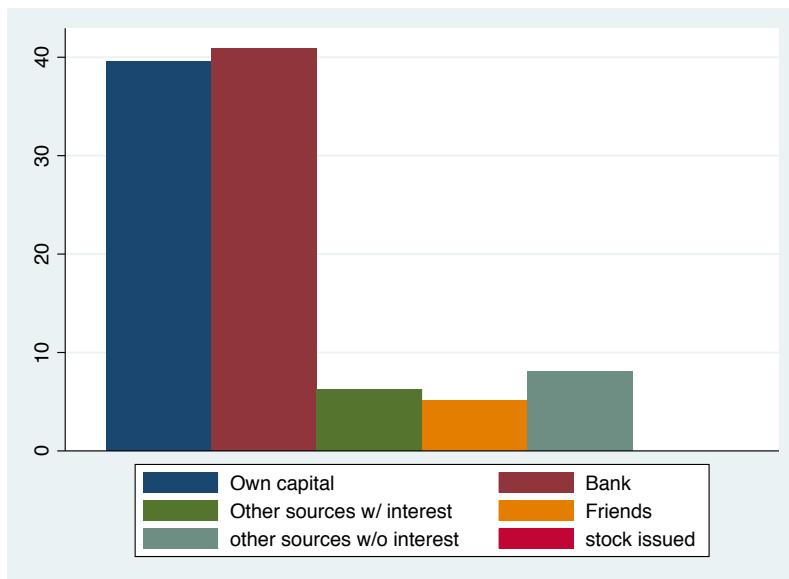


Figure 4: approaches of access to finance

The analysis starts with the understanding of factors affecting the access to finance. According to the survey data, key variables which determine the access to finance is identified in relation to the financial innovative instruments. The odds ratio for the study is performed to identify the probability of influence of the key variables. The study revealed that the year of establishment, exporting the products, total value added and total workforces are significant predictors of the access to finance in the binary model.

Table 3: Factors determining the access to finance

Variables	Odds Ratio	Std. Error	z	p>z
Gender	1.756	0.672	1.47	0.141
Age	1.024	0.020	1.22	0.224
Year of establishment	1.046**	0.022	2.08	0.037
Previous experience	1.180	0.403	0.48	0.628
Export	0.443**	0.437	-2.82	0.019
Total value added in 2014	1.020**	0.807	2.53	0.033
Avg number of days work	0.945	0.057	-0.92	0.357
Total workforce	1.024**	0.018	3.30	0.015

Startup capital financing

Table 4: Alternative funding tools on access to finance

Dependent variables: Access to finance	Prob (1) (dy/dx)	Prob (2) (dy/dx)	Prob (3) (dy/dx)	Prob (4) (dy/dx)	Prob (5) (dy/dx)	Prob (6) (dy/dx)	Prob (7) (dy/dx)	Prob (8) (dy/dx)
Gender	0.136* (1.67)	0.141* (1.72)	0.151** (1.85)	0.136* (1.65)	0.068 (0.79)	0.137** (2.68)	0.119 (1.45)	0.116** (1.41)
Age	0.008 (1.65)	0.006 (1.40)	0.007 (1.52)	0.007** (1.85)	0.041 (0.89)	0.005 (1.21)	0.006* (1.38)	0.006* (1.42)
Year of establishment	0.012** (2.34)	0.010** (2.22)	0.010** (2.21)	0.011*** (2.32)	0.807** (2.79)	0.009** (2.03)	0.017** (2.18)	0.010** (2.14)
Previous experience	0.063** (2.79)	0.046 (0.60)	-0.136 (-0.75)	0.052 (0.66)	0.062 (0.79)	0.039 (0.51)	0.036 (0.45)	0.046 (0.60)
Export	0.167** (1.95)	0.162 (0.92)	0.053** (2.68)	-0.126 (-0.61)	-0.068 (-0.33)	-0.167 (-0.97)	-0.168 (-0.96)	0.290** (2.25)
Total value added in 2014	0.790* (2.47)	0.230 (0.56)	-0.670 (-0.38)	0.090** (2.58)	0.136 (0.86)	0.085 (0.51)	0.658 (0.52)	0.098 (0.11)
Avg. number of days work	0.010 (0.48)	-0.112 (0.89)	0.421 (0.78)	-0.015 (-1.07)	0.014** (2.04)	-0.014 (-0.98)	-0.015 (-1.05)	0.012 (0.84)
Total workforce	0.005 (1.24)	0.005 (1.34)	0.005 (1.27)	0.005 (1.21)	0.004 (1.09)	0.005** (2.31)	0.006 (1.29)	0.046 (1.16)
Founders' own money	-0.538*** (-4.22)	-	-	-	-	-	-	-
Loans from family members	-	-0.113 (-1.20)	-	-	-	-	-	-
Loans from friends and acquaintances	-	-	-	0.220** * (-2.93)	-	-	-	-

Finance/investments from other enterprises	-	-	-	0.470*** (2.021)	-	-	-	-
Domestic bank loan	-	-	-	-	0.312*** (3.46)	-	-	-
International bank loan	-	-	-	-	-	0.024 (0.28)	-	-
Informal credit association (money lenders, informal bank, pawn shop)	-	-	-	-	-	-	0.370*** (2.42)	-
Business association	-	-	-	-	-	-	-	Omitted

Source: Author calculations

Investment Financing

Table 5: Alternative funding tools on access to finance

Dependent variables: Access to finance	Prob (1) (dy/dx)	Prob (2) (dy/dx)	Prob (3) (dy/dx)	Prob (4) (dy/dx)	Prob (5) (dy/dx)	Prob (6) (dy/dx)
Gender	0.088 (0.09)	0.129 (0.40)	0.138* (1.71)	0.131* (1.82)	0.159** (2.08)	0.131** (2.67)
Age	0.034 (0.68)	0.003 (0.68)	0.006 (1.38)	0.006 (1.30)	0.047 (0.29)	0.006 (1.29)
Year of establishment	0.002** (1.37)	0.035** (1.37)	0.011** (2.27)	0.011** (2.19)	0.012** (2.49)	0.10** (2.16)
Previous experience	-0.090 (-0.12)	-0.482 (-0.11)	0.044 (0.57)	0.040 (0.50)	0.067 (0.87)	0.043 (0.56)
Export	0.089	-0.081	0.161**	0.169	-0.184*	-0.171

	(0.43)	(-0.53)	(2.95)	(0.98)	(-1.21)	(-0.99)
Total value added in 2014	0.922* (1.59)	0.642 (0.59)	0.672 (0.95)	0.120 (0.72)	0.613** (2.39)	0.826 (-0.50)
Avg. number of days work	-0.006 (-0.36)	-0.035 (-0.39)	-0.017 (-1.24)	-0.017 (-1.20)	0.012 (0.78)	-0.014 (-1.03)
Total workforce	0.003 (0.76)	0.012 (0.65)	0.006 (1.38)	0.070* (1.44)	0.004 (1.07)	0.005 (1.28)
Own money	-0.007*** (-8.03)	-	-	-	-	-
Borrowed from bank/credit institution,	-	0.088*** (2.60)	-	-	-	-
Borrowed against interest from other sources	-	-	0.006** (2.23)	-	-	-
Borrowed from other sources without interest	-	-	-	0.050** (2.56)	-	-
Peer-to-peer (P2P) lending [borrowed from friends and relatives without interest],	-	-	-	-	0.006*** (3.34)	-
Stocks issued.	-	-	-	-	-	0.120 (0.44)

Source: Author calculations

Then, the two financial mechanisms startup finance, and investment financing is included into the basic Probit model, and the margins of the Probit model predictions are estimated. The margins of those Probit analyses are shown in the Table 4 and Table 5.

Table 4 shows the estimates for the eight ways of financial tools performed on access to finance. In the first equation1, year of establishment, export and previous experience in SMEs are significant predictors of the access to finance. Besides, funders own capital become negatively significant in the model implying that when owner use more own capital, they become less to have access to finance. Equation 2 shows that the only year of establishment is significant, but loans from family members are not significant. In Equation 3, gender, year of establishment and export are significant predictors of access to finance. Moreover, loans from friends and acquaintances are significant indicating that access to finance is influenced by the loans from peers. Equation 4 predicts that age, year of establishment, total value added in 2014 and Finance/investments from other enterprises are significant at 5% level. Equation 5 predicts that year of establishment, average number of days work and domestic bank loan are significant. Equation 6 shows that gender, year of establishment and total workforce and equation 7 shows that year of establishment and informal credit association (money lenders, informal bank, pawn shop) are significant. Equation 8 shows that gender, year of establishment and export are significant predictors of the access to finance.

Table 5 shows that the investment financing for the alternative funding tools on access to finance. Equation 1 shows that year of establishment and own money are significant, and equation 2 predicts year of establishment and borrowed from bank/credit institution are significant. Equation 3 shows that year of establishment, export and borrowed against interest from other sources are significant. In equation 4 and 5, it is evident that gender, year of establishment and borrowed from other sources without interest, and year of establishment, total value added in 2014 and Peer-to-peer (P2P) lending [borrowed from friends and relatives without interest] are significant predictors of the access to finance respectively.

5. Conclusion

The study investigated the alternative financing gap of SMEs or SMEs access to finance in Vietnam. The study applied Probit model in the analysis to examine the alternative financing sources that determine the financial gaps in SMEs through access to finance. The paper discusses the details of alternative financial sources in two-fold for startup finance and investment finance including founders' own money, loans from family members, loans from friends and acquaintances, finance/investments from other enterprises, domestic bank loan, international bank loan, informal credit association (money lenders, informal bank, pawn shop) and business association. The paper extensively discussed the financing issues and alternative funding approaches for SMEs against access to finance and concluded that it is constraint plays a crucial role in confusing the functioning of SMEs in Vietnam.

The paper investigates the financing alternatives through the basic constraints of the SMEs in terms of constraints to grow, access to the technology, the sources of start-up capital, approaches of access to finance. Then, the Probit model predicts the alternative funding tools on access to finance for the startup capital financing and investment financing. The rationale behind the access to finance is through the evidences of startup finance with the owner use more own capital, loans from peers, and finance/investments from other enterprises, domestic bank, informal credit

association (money lenders, informal bank, pawn shop) are significant tools for funding besides the influence of year of establishment, gender, export, and previous experiences.

In terms of investment financing, the variables such as year of establishment and gender and export are significant predictors while funding tools like own money, borrowed from bank/credit institution, interest from other sources, borrowed from other sources without interest, and Peer-to-peer (P2P) lending [borrowed from friends and relatives without interest] are significant. In summary, general variables such as year of establishment, gender, export, total value addition are significant predictors of the startup finance, and investment financing. Moreover, the alternative financial mechanisms are significant predictors of the access to finance in both start up and investment financing. Any support for SMEs by way of policy interventions is valuable because of their enormous contributions to the GDP growth of the economy.

6. References

- Aghion, P., Fally, T., & Scarpetta, S. (2007). Credit constraints as a barrier to the entry and post-entry growth of firms. *Economic Policy*, 22, 731-779. <http://dx.doi.org/10.1111/j.1468-0327.2007.00190.x>
- Atanasova, C., & Wilson, N. (2004). Disequilibrium in the UK corporate loan market. *Journal of Banking and Finance*, 28, 595-614. [http://dx.doi.org/10.1016/S0378-4266\(03\)00037-2](http://dx.doi.org/10.1016/S0378-4266(03)00037-2)
- Balling, M., Bernet, B., & Gnan, E. (2009). Financing SMEs in Europe. *Four papers by: Rym Ayadi; Beat Bernet and Simone Westerfeld; Tom Franck and Nancy Huyghebaert; Vitor Gaspar, Simona Bovha-Padilla and Reinhilde Veugelers*. SUERF-The European Money and Finance Forum; Vienna. Retrieved from <http://www.suerf.org/download/studies/study20093.pdf>
- Bebczuk, R. N. (2004). *What determines the Access to Credit by SMEs in Argentina?* Documento de Trabajo Nro 48. Retrieved from <http://www.depeco.econo.unlp.edu.ar/doctrab/doc48.pdf>
- Beck, T., Demirgüç-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to growth: does firm size matter? *Journal of Finance*, 60(1), 137-177. <http://dx.doi.org/10.1111/j.1540-6261.2005.00727.x>
- Beck, T., Demirgüç-Kunt, A., Laeven, L., & Maksimovic, V. (2006). The determinants of financing obstacles. *Journal of International Money and Finance*, 25, 932-952. <http://dx.doi.org/10.1016/j.jimonfin.2006.07.005>
- Berger, A., & Udell, G. (2006). A more conceptual framework for SME financing. *Journal of Banking and Finance*, 30(11), 2945-2966. <http://dx.doi.org/10.1016/j.jbankfin.2006.05.008>
- Bouheas, S., Mizen, P., & Yalcin, Y. (2006). Access to external financing: theory and evidence on the impact of monetary policy and firm-specific characteristics. *Journal of Banking and Finance*, 30, 199-227. <http://dx.doi.org/10.1016/j.jbankfin.2005.01.002>
- Canton, E., Grilo, I., Monteagudo, J., & Van Der Zwan, P. (2010). Investigating the perceptions of credit constraints in the European Union. *ERIM Report Series*, No ERS-2010-001-ORG. Retrieved from <http://hdl.handle.net/1765/17699>
- Coluzzi, C., Ferrando, A., & Martinez-Carrascal, C. (2009). Financing obstacles and growth: an analysis for euro area non-financial corporations. *ECB Working Paper No. 997*. Retrieved from www.ecb.int/pub/pdf/scpwps/ecbwp997.pdf
- Devereux, M., & Schiantarelli, F. (1989). Investment, Financial Factors and Cash Flow: Evidence from UK Panel Data. *NBER Working Papers No.3116*. Retrieved from <http://www.nber.org/papers/w3116.pdf>
- Fatoki, O., & Asah, F. (2011). The impact of firm and entrepreneurial characteristics

- on access to debt finance by SMEs in King Williams' Town, South Africa. *International Journal of Business and Management*, 6(8). <http://dx.doi.org/10.5539/ijbm.v6n8p170>
- Fazzari, S. G., Hubbard, G., & Petersen, B. (1988). Financing constraints and corporate investment. *Brookings Papers on Economic Activity*, 2, 141-195. <http://dx.doi.org/10.2307/2534426>
- Ferrando, A., & Griesshaber, N. (2011). Financing obstacles among euro area firms: who suffers most? *ECB Working Paper No. 1293*. Retrieved from <http://www.ecb.int/pub/pdf/scpwps/ecbwp997.pdf>
- Gilchrist, S., & Himmelberg, C. (1995). Evidence on the role of cash flow for investment. *Journal of Monetary Economics*, 36, 541-572. [http://dx.doi.org/10.1016/0304-3932\(95\)01223-0](http://dx.doi.org/10.1016/0304-3932(95)01223-0)
- Hall, G., Hutchinson, P., & Michealas, N. (2000). Industry effect on the determinants of Unquoted SMEs Capital Structure. *International Journal of the Economic of Business*, 7(3), 297-312. <http://dx.doi.org/10.1080/13571510050197203>
- Harrison, A., & McMillan, M. (2003). Does direct foreign investment affect domestic credit constraints? *Journal of International Economics*, 61(1), 73-100. [http://dx.doi.org/10.1016/S0022-1996\(02\)00078-8](http://dx.doi.org/10.1016/S0022-1996(02)00078-8)
- Hallward-Driemeier, M., & Aterido, R. (2007). Impact of access to finance, corruption, and infrastructure on employment growth: Putting Africa in a global context. In *Committee of Donor Agencies for Small Enterprise Development Conference on Business Environment Reform in Africa*, Accra.
- Irwin, D., & Scott, J. M. (2010). Barriers faced by SMEs in raising bank finance. *International Journal of Entrepreneurial Behaviour & Research*, 16(3), 245-259. <http://dx.doi.org/10.1108/13552551011042816>
- Kira, A. R., & He, Z. (2012). The impact of firm characteristics in access of financing by small and medium-sized enterprises in Tanzania. *International Journal of Business and Management*, 7(24), 108-119. <http://dx.doi.org/10.5539/ijbm.v7n24p108>
- La Rocca, M., La Rocca, T., & Cariola, A. (2011). Capital structure decisions during a firm's life cycle. *Small Business Economics*, 37(1), 107-130.
- Le, T. B. N., Venkatesh, S., & Nguyen, V. T. (2006). Getting bank financing: study of Vietnamese private firms. *Asia Pacific Journal of Management*, 23(2), 209-227. <http://dx.doi.org/10.1007/s10490-006-7167-8>
- Levy, B. (1993). Obstacles to Developing Indigenous Small and Medium Enterprises: An Empirical Assessment. *The World Bank Economic Review*, 7(1), 65-83. <http://dx.doi.org/10.1093/wber/7.1.65>
- Peel, M. J., & Wilson, N. (1996). Working capital and financial management practices in the small firm's sector. *International Small Business Journal*, 14(2), 52-68. <http://dx.doi.org/10.1177/0266242696142004>
- Romano, C. A., Tanewski, G. A., & Smyrnios, K. X. (2001). Capital structure decision making: A model for family business. *Journal of Business Venturing*, 16(3), 285-310.
- Saito, K., & Villaneuva, D. (1981). Transactions cost of credit to small scale sector in the Philippines. *Economic Development and Cultural Change*, 29, 631-40. <http://dx.doi.org/10.1086/451275>
- Slotty, C. F. (2009). *Financial constraints and the decision to lease – Evidence from German SMEs*. Goethe University Frankfurt, House of Finance, Germany. Retrieved from <http://www.econstor.eu/dspace/bitstream/10419/39049/1/609306316.pdf>
- Yongqiang, L. Armstrong, A., & Clarke, A. (2012). An instrument variable model of the impact of financing decisions on performance of small businesses in Australia's Pre-global Financial Crisis. *Journal of Modern Accounting and Auditing*, 8(7), 1052-1065. Victoria University, Melbourne, Australia.