# Credit Participation and Credit Source Selection of Vietnam Small and Medium Enterprise

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**Abstract**

*This study is an attempt to investigate the motivation behind the decision to participate in the credit market of SMEs from perspectives of behavioral finance and social capital theories. In addition, the study also examines the effect of behavioral finance and social capital factors on the credit source selection among SMEs. This study's design strategy involves conducting questionnaire surveys to SMEs owners and statistical techniques to analyze the determinants of credit participation and credit source selection of borrowers. The findings showed that personal traits of SMEs owners/ managers in terms of behavioral finance factors such as debt and risk attitudes, present biased and overconfidence and firms networking also have impacts on the firms' credit participation and credit source selection. The research is one of the few studies that consider the influence of behavioral finance factors on firms financing decision. Furthermore, our result also contributes to explain the common use of informal credit market in developing countries.*

*Keywords: behavioral finance, credit participation, credit source selection, formal credit, informal credit.*

Most SMEs in the world face challenge in finding financing resources. Multiple studies in developed countries indicated that SMEs are high-risk borrowers (Nguyen et al., 2006; Sogorb-Mira, 2005) and providing the financial resources for SMEs is considered a great obstacle compared with large firms. SMEs in emerging economies suffer more hindrances in finance access because of the underdevelopment of financial institutions and infrastructure, poor property rights protection and serious information asymmetry issues.

SME's debt financing is a classic theme gaining attention by numerous scholars. Whereas many empirical studies of SME financing decision have assumed implicitly that the ultimate goal of SMEs is to maximize profits, other researchers have argued that the goal of independence and control is much preferred by SME owners. With the objective of profit maximization, there is a common sense that SMEs also pursue growth and inquire about external finance sources (Sogorb-Mira, 2005). With this assumption, traditional theories of capital structure such as trade-

off theory and pecking order theory can help to explain some parts of SME financing decisions. However, the traditional approaches could not help to explain the circumstance of 'debt-adverse' among SMEs. In other words, these theories could not explain why many SMEs do not participate in the credit market even though they have a demand of growth and borrowing. Discouraged borrowers are often ignored from these traditional theories.

On the other hand, a small number of researchers investigated the relationship between non-financial motivations and corporate financing decisions. Several theories and assumptions were proposed to explain the debt aversion or borrowing discourage phenomenon among business, especially the SME sector (Cressy, 1995; Rice and Strahan, 2010). One of these theories is the theory of social capital or firm networks. According to this theory, networks could give SMEs an advantage in order to access a bank loan by increasing the firms' legitimacy (Le and Nguyen, 2009; Nguyen and Ramachandran, 2006; Ravina, 2012; Moro and Fink 2013) or help SMEs find other sources of funding easily by reducing the need for bank loans (Hussain et al., 2006).

In addition, the evolution of behavior finance theories is suggestive of the studies on determinants of consumer borrowing and corporate borrowing decisions. For instance, behavioral corporate finance literature suggested that optimism and overconfidence can considerably affect the investment and financing decisions made by managers (Baker et al., 2005; Fairchild, 2005); or managers that are more risk toler-

ant may initiate more merger and acquisition projects and, therefore, may pursue heightened leverage policies (Grable and Lytton, 2003). Especially, many studies on consumer borrowing and microfinance investigated the impact of behavioral finance factors such as present-biased preference or impatience, risk-attitude and debt-attitude on borrowing decisions of individuals (Bauer et al., 2012; Laibson et al., 2007; Brown et al., 2013).

Consumer finance and corporate finance are different fields but in the case of studying SME finance, we can 'borrow' the ideas and results from the studies on consumer finance to apply to the explanation of SME debt financing decisions. This is because the SME sector has some unique characteristics. First, it is extremely complicated to differentiate the financial situation of the firm from that of its owners. For instance, the entrepreneur can use the firm cars and home accommodations for both private and business purposes. Furthermore, different from large firms, the decision-making process, financing decision included, is mostly in the hands of SME owners or managers. With large enterprises, especially with joint-stock listed companies, the decision-making process is much more complicated and is often affected or ruled over by other members in the company's board of directors. In other words, business and financing decision with SMEs is often personally managed. Therefore, SME owners' knowledge, psychology and attitudes can have an effect on the company's financing decision. Second, the relationships between the small firm and its stakeholders tend to reflect the owner's personal relationships much

more than in larger firms where such relationships are formalized. It is expected that large firms carry out standard corporate governance practices that executives, board of directors and auditors are assumed to conform to transparent norms. Third, the interrelationship between SMEs and financial institutions is looser in comparison with large firms. In other words, SME owners often have strong ties with informal strands, which leads to the choice of informal credit sources. This particular feature of SME network or social capital obviously has an effect on their credit participation.

Vietnam signifies an exciting case. In fact, the country ranks 40th out of 183 countries in terms of getting credit in 2012 (World Bank, 2012). This is a relatively good outcome of the banking system. Commercial banks, including state-owned commercial banks (SOCBs) and private banks, compete with each other to increase the credit market share and are beginning to recognize the SME sector as a prospective market and sketch out strategies to approach this sector. However, capital shortage is still a big hindrance to the SME community. The large majority of SMEs in Vietnam are very small indeed, and are largely dependent on purely internal and/or informal sources of financing. This is true in many developing and transitional economies. As the more successful SMEs grow, they are likely to need – and get improved access to – more formal and external sources of financing.

In Vietnam, according to a recent research executed by Vietnam Chamber of Commerce and Industry (VCCI),

75% SMEs would like to access bank loans but only about 30% of them succeeded (VCCI, 2010). Another survey conducted by the Central Institutions of Economic Management (CIEM), only 30% of SMEs were able to obtain bank loans. The CIEM report in 2012 also confirmed that "constraints in credit markets have for a long time been cited (by firms) as the most serious obstacles for future growth of SMEs in Vietnam" (CIEM, 2012).

SMEs mainly contact commercial banks to obtain necessary funds. Additionally, twice as many firms obtain informal loans as compared to formal ones. Although informal loans only finance 8 to 9 percent of total investments for SMEs, almost 90% of the constrained group (in formal credit markets) has access to loans from informal sources. This shows that informal loans are small but a frequent part of the Vietnamese SMEs financing scheme. In addition, the CIEM survey also revealed that more than 57% of SMEs do not want to go into debt in the future, especially getting loan from banks.

This study proposes a new approach to investigate the latent factors affecting the credit participation among SMEs with respect to behavioral finance and social capital theories. In addition, the study also examines the effect of behavioral finance and social capital factors on the credit source selection among SMEs. Through new approaches on SMEs debt financing, the study aims to answer the questions: Why do many SMEs not want to participate in the credit market? And what motivates SMEs to select informal credit sources to finance their operations?
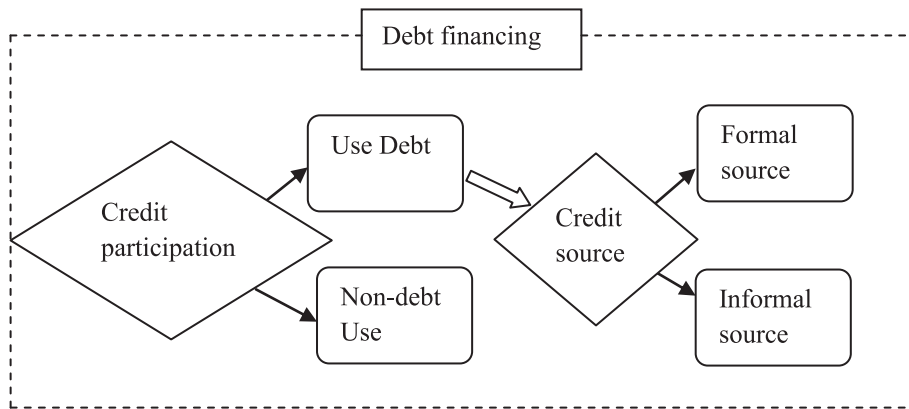
Figure 1. Debt Financing Decision Flow Chart

The study makes the distinction between credit participation and credit source selection. These terms contribute to a fully-constituted process of the debt financing decision (Figure 1). When making decisions regarding the firm's capital structure, at the first stage, the SME owner has to decide whether or not to use debt in the firm capital structure (credit participation). Then, if the owner decides to go with debt or participate in the credit markets, he or she must select the credit source (or the credit pattern), meaning that they will go with formal credit sources, semi-formal credit programs or informal credit sources (credit source selection).

The remainder of the paper is organized into three sections: The next section we provide a review of behavioral finance factors as well as social capital theory and their impact on borrowing issues. The following section describes the research methodology of the study. Findings and discussion are presented in the fourth section. Finally, section five concludes with a summary.

**LITERATURE REVIEW**

None of traditional capital structure theories and empirical researches could fully explain the motivations behind credit participation of the firms, especially in respect of "debt-averse" firms. Nonetheless, behavioral finance theories and social capital theory strongly argue that the degree of present-biased preference, risk attitude, debt attitude, overconfidence of business managers and social capital can significantly influence their debt/equity selection. Hence, as this study proposes, these factors should be considered as the potential determinant of credit participation decision by SMEs.

***Present Biased Preference or Hyperbolic Discounting***

There is an assumption among economists that people are "time-consistent", meaning that "a person's relative preference for well-being at an earlier date over a later date is the same no matter when she is asked" (O'Donoghue and Rabin, 2000). However, people are not always patient, conversely, they often prefer to enjoy rewards soon but suspend costs until later (Kinari et al., 2009). Such inclining is called present-biased preferences. The degree of time discounting is critical in making finance decisions such as saving, borrowing and investment decisions. Regarding the association be-

tween present-biased preference and credit behaviors, based on experimental evidences, several studies indicated that individuals with higher level of present-biased time preferences have propensities to use more debts (Meier and Sprenger, 2007; Laibson, 2007). The massive and increasingly use of credit card debt has been recently explained by present-biased preference literature. Meier and Sprenger (2007) explain that since credit cards can offer an instant borrowing, they enable present-biased individuals the opportunity to "easily and instantaneously move consumption from the future, where its value is relatively low, to the present, where its value is disproportionately high". Recently, Ikeda and Myong (2011) conducted a nationwide internet survey of Japanese adults to examine how debt behavior is related to personal time discounting. They came to an conclusion that "impatience are associated with high debt-to-income ratios, borrowing on credit cards, and the experiences of having borrowed unsecured consumer loans, of having engaged in debt-restructuring". Besides, present-biased preference has been also considered as an commitment device to interpret the success of microcredit programs and informal rotating savings and credit associations in developing countries (Bauer et al., 2012)

For small business owners, in such a similar way as credit card using of consumers, they can easily get loans from a line of credit or a business revolving account offered by banks or instantaneously obtain debts from moneylenders who do not have strict requirement of collaterals and complicated application process. They can move business

or investment opportunities from the future to the present, where their value is considered higher than in the future, according to the time preference perspective. Therefore, in this study, we expect credit participation and credit choice of SMEs will be influenced by the owners' time preference.

### Risk Aversion

There is a considerable difference among individuals about how they deal with risks and incertitude. Some studies showed that attitude toward risk was accompanied with individually imperative decisions and features (Dohmen et al., 2005; Brown et al., 2013). Debt financing is always associated with risks such as risks of bankruptcy, risk of losing collateral, risk of fluctuating interest rate. Therefore, attitude toward risk is expected to have an impact on debt holdings of individuals. Fore example, Brown et al. (2013) in their empirical study explored that risk aversion and household debt in the U.S varied in opposing directions, meaning that people with higher level of risk aversion have a tendency to employ less debt. Daly et al. (2010) also used "Risk attitudes as an independent predictor of debt". They concluded that "Risk willingness is a robust predictor of debt holdings even controlling for demographics, personality, consideration of future consequences and other covariate". Hence, in our study, the risk attitude is expected to have effect on credit choice and credit participation of SMEs.

### Debt Attitudes

In the financial psychology literature, attitude toward debt or debt aversion is concerned as one of the determinants

of credit behaviors. For instance, Livingstone and Lunt (1992) argued that the debt attitude was strongly associated with the extent of debt that people carry. Lea et al. (1995) reported that personally psychological attitude affect credit use, money management and economic socialization. Davies and Lea (1995), in their empirical studies on student debts, explored that "Students were found to be a relatively low-income, high-debt group with relatively tolerant attitudes toward debt". Consequently, previously empirical studies suggested that debt attitudes could be used as a potential factor influencing the credit participation of SMEs.

### Overconfidence

In corporate behavioral finance literature, among cognitive biases which are predicted to influence financing and management decisions, overconfidence appears to be the most highly cited factor determining financing decisions of the company. Overconfidence generally denotes an exaggeratedly optimistic estimation of one's capability over a circumstance. It is widely believed that entrepreneurs are susceptibly overconfident (Hackbarth 2008). With respect to the relationship between overconfidence and company debt/equity selection, a numerous studies have come to a similar conclusion that managerial overconfidence will lead to the higher use of leverage (Hackbarth, 2008; Oliver, 2005; Na Dai, 2010; Yu et al., 2006). There are some reasons contributing to the overconfidence-high debt use correlation. First, the over-optimistic manager often underestimates the probability of the company going through financial distress in the future. Therefore, he will

make light of the expected bankruptcy cost and use more debt to receive benefits from tax shield (Hackbarth, 2008). Second, overconfident managers often overvalue the upcoming projects, thus prefer to employ debt rather than issue new equity in order to avoid sharing the profits of the projects (Yu et al., 2006).

According to Na Dai (2010), overconfidence could have a critical influence on financing decisions of small businesses much more than on big companies because "mechanisms that might constrain less-than-fully-rational managers of a big corporation into making rational decisions might not be available in small firms". For instance, big corporations are often committed to sound corporate governance systems such as boards of directors with independence and separation of duties, proxy fights, and transparent compensation; meanwhile small enterprises almost do not have such monitoring mechanisms. Therefore, measuring overconfident bias and putting it as expected variable in our model to predict the credit participation and credit source selection of Vietnam SMEs is necessary.

### Social capital

The literature on social capital suggested that borrowers, especially small businesses who hardly meet the lenders' requirement of collaterals and have poor information record, could resort to use social capital to improve their credit accessibility. Social capital factors also help to explain the widespread existence of informal finance in developing countries like Vietnam. First, because there is no legal contract enforcement mechanisms in informal

credit market, informal financial institutions have no choice but depend more on the quantity and quality of their social connections than formal providers. Hence, social capital capacitates access to concealed information unavailable to credit markets, supervise members' behavior and penalize individual members who stand against the social standards or rules (Boot 2000). Second, Southeast Asian developing countries hold a collectivist instead of an individualist culture (McGrath et al. 1992). Consequently, individuals are basically social or relational beings than they are in Western society. This characteristic of the culture is also included in business contexts, meaning that managers always make effort to "invest" in building and maintaining business relationship to get success in business transactions, credit transactions included. Biggs and Shah (2006) argued that the operating environments in developing countries are plagued by corruption, lack of human and material resources, poor management, and inefficient judicial systems. As a result, entrepreneurs must lean on social capital and incorporate themselves in multi-level social networks.

In discussions of the relationship between social capital and credit access, scholars often considered and measured networks between a firm and its stakeholders to concretize its social capital (Le and Nguyen, 2009). In this research, as suggested in the previous literature we conceive social capital as the intangible assets intrinsic in business networks which may consist of directors at other enterprises, bank officers, and government officials (Peng and Luo, 2000). Research-

ers asserted that networks enable to improve a firms' legitimacy and then enhance the access to external finance (Le and Nguyen, 2009; Talavera et al., 2012). Concretely, as found in a number of previous researches, networking with government officials assists procedures with authorities and banks smoothly and quickly. Influential networks with government officials might have a substantial influence on the enterprise performance and help increase the creditworthiness when working with banks (Peng and Luo, 2000). Similarly, good relationships with managers at other companies might improve the inter-firm loans accessibility, trade credit and help to ease the business contract writing procedures. Well-established relationships with bank loan officers increase the firm opportunities to access bank loans and good relationships with informal lenders may enhance the likelihood to get loans from informal financial institutions (Duy, 2012). Further researches on the role of networking on the access to debt finance by SMEs can be found in the researches by Zhang et al. (2006), Biggs and Sha (2006), Atieno (2009), Turvey and Kong (2010) and Khwaja et al. (2011). In sum, the authors found a significant positive association between networking and access to debt.

Correspondingly, we delineated five groups of business cooperation: (a) network with business communities, (b) network with governmental institutes, (c) network with formal loan officers, (d) network with informal lenders, and (e) network with credit information bureaus. Though the two last networks have not been supported strongly by previous researches, we

still include in the analysis as potential factors because of some reasons. First, because of the widely use of informal credit as a supplementary and/or substitutional credit source which was shown in surveys on Vietnam SMEs (CIEM, 2012), we believe that it is a potential factor to explain the credit participation of SMEs. Second, credit information bureaus today play an increasingly important role in credit market in developing countries (Jappelli and Pagano, 2002). A credit bureau's main activity is to collect data from a variety of sources on enterprises or individuals, process and consolidate data into credit profiles, and disseminate credit information reports to lending grantors and supervisory authorities. Credit information bureaus are intermediary institutions that help to enhance the transparency of the credit market and create special collateral called "reputation collateral," which is particularly important to consumer, microfinance and small business lending (Luoto et al., 2007). However, the roles of credit bureau follow from the assumption that borrowers know that a credit information bureau records their borrowing and payment activities. Additionally, borrowers have rights and are advised to request credit bureaus to check credit information about themselves regularly to assure there is no error in their credit records. Therefore, if borrowers do not recognize the existence of the credit information bureau, its role as a discipline device will not work and will weaken other functions of credit bureaus in the credit market. Moreover, the unawareness may hinder borrowers from accessing formal credit sources. To the best of our knowledge, there is no study considering the role of borrower

perceptions and attitude on credit information sharing activities, especially in developing countries. Although network with credit information bureaus is not a direct relationship, it may be a hidden variable affecting the credit accessibility and credit source choice of the SME community. Instead of measuring direct network with credit bureaus, in our study, we will measure the SME perceptions and attitudes toward credit information bureaus.

### Other potential determinants

There have been a number of other firm-specific determinants of capital structure in the literature such as firm age, ownership, industry, firm size, tangible assets, audited financial statement (Beck et al., 2005; Le and Nguyen, 2009; Le, 2012). Those variables which mainly related to demographics of owners or managers characteristics and firm characteristics will be used in this research as control variables.

Based on the literature on SME financing from both the demand side and supply side, the study's conceptual model is described in Figure 2.

### RESEARCH METHOD

### Research Strategy

Quantitative method with survey data and econometric analysis is mainly used in our study. For the purpose of survey design, at the first stage, we conducted interviews with five Vietnamese small business owners. The purpose of these interviews was to help us to better apprehend the Vietnam SME sector background as well as debt financing issues. This stage also supports us to investigate the face validity of the surveys and serve as a
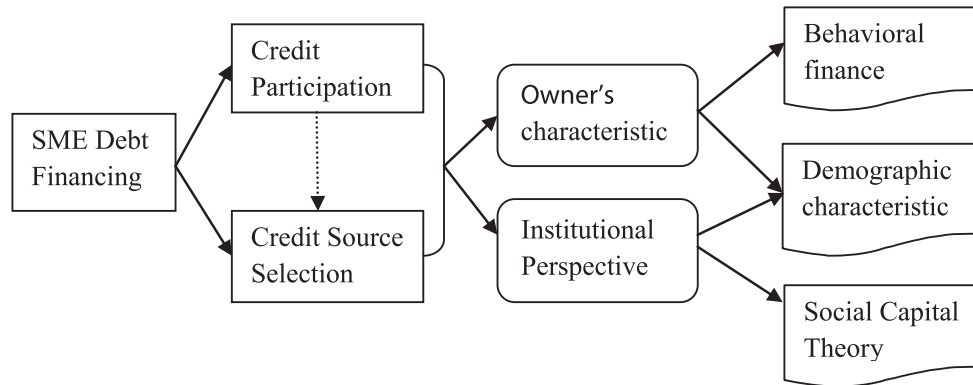
Figure 2. Conceptual Model of the Study

foundation for the subsequent survey design. Regarding the respondent selection, we decided to choose Ho Chi Minh City (HCMC) to conduct the survey. The survey was carried out during June–August 2013. Urban-based SMEs are selected mainly because they are located in the most dynamic cities where formal and informal financial institutions gather with high density level; therefore, they have a variety of ways to choose the source for financing their operations. HCMC is always the leading city in terms of the number of business start-ups. In Southeast region particularly, there were 39.08% of the total of enterprises located (CIEM 2012). Moreover, HCMC, the "economic capital" and the biggest finance centre in Viet Nam, is the highest populous city where not only informal and formal firms but also informal and formal household businesses and traders converge on. Banking system revenue of the city accounts for approximately one-third of the total national banking system's revenue. There are over 50 banks with hundreds of branches and lots of insurance, leasing and financial companies in this city.

After obtaining a list of registered SMEs from The Assistance Center for Small and Medium Sized Enterprises in the South of Vietnam, we use simple random sampling method to select 1,500 firms to deliver the survey. The target respondents are owners or key managers of the companies. With the support of Small and Medium Business Association of HCMC, on one hand, we sent the survey through post-mail; on the other hand, we apply personal approach to obtain high response rate. Out of 1,500 surveys distributed, 293 questionnaires are collected. After discarding inappropriate and missing value, 263 completed questionnaires are used to analyze.

*Questionnaire instrumentation*

After conducting a quantitative pilot study for checking the instrument validity, some minor editorial adaptation was done to fit the context. The final instrument for the demand side consisted of three main sections. Section 1 refers to question 1 to 17, asking about demographic background of firms and owners such as firm size, firm age, location, firm ownership type, export activities involvement, auditing practice, industry, fixed asset ratio, the owner's gender, age, education and experience years in the field. Section 2 includes 11 questions, which are sets of experi-

mental choice questions to identify behavior finance traits of the firm owners. Section 3 comprises one question, asking about the firm networks. This section is structured using the five-point Likert scale, ranging from "very little" (1) to "very extensive" (5) (see Appendix B)

### *Analytical methods*

A number of methods were used to analyze the collected data. Description methods, crosstabulations and association tests were applied to analyze the survey data. In addition, we use the multiple binary logistic regression with two steps: In the first step, the data was divided into two groups: firms that borrowed from either formal credit institutions or informal credit channels or both and those that completely did not use debt in their capital structure. Then stepwise binary logistic regression was used to investigate if the potential determinants affect the probability of participating in a certain credit source. In step 2, we selected enterprises that have debt in their capital structure, we then examined if the variables of interest affect credit source selection among SMEs to interpret motivations of SMEs when they choose bank loan or informal loans as the main financing source.

Some empirical studies suggested that binary logit model was superior to multinominal logit model in predicting the probability of a considered event. Binary logistic regression model has some advantages over multinominal one: first, smaller misclassification errors helps to improve the accuracy of forecasting (Bi-Huei, 2012); second, binary logistic model helps to detect outliners easily and require the smaller

sample size than the one of multinominal model (Menard, 2001). Thus, in our study, multiple binary logistic regression is preferred instead of a single multinominal logistic model.

### *The Econometric Model*

Explanatory variables computed from the survey are primarily in the categorical form, particularly the information relating to SME credit behaviors, thus logistic regression is appropriate to do quantitative analysis in our study. Furthermore, since dependent variables have dichotomous values, binary logistic regression is used. The model is expressed as:

$$p_i = P(y_i = 1) = F(z_i) = \frac{1}{1 + e^2} \qquad 1)$$

Where:

$$z_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_k x_k \qquad 2)$$

In which:

$p_i$ is the probability that a considered event occurs

$x_1 : x_k$ are the observation of the $k^{th}$ independent variable

$\beta_0 : \beta_k$ are the regression coefficients that will be estimated

### *Measures of variables*

To examine determinants of SMEs credit participation, the two following dependent variables are defined:

CREDITPART: Participation of SMEs in a credit program, regardless of informal or formal credit source. This is a dichotomous variable that takes the value 1 if the SME use debt in their capital structure or have access to credit and 0 otherwise

CRESOURCE: A binary variable that takes the value 1 if the SME choose formal credit source (bank loans) as their main financing source and 0 otherwise.

Explaining variables include the variables measuring behavioral finance factors, the variables represent social capital factors and control variables.

PRESENTBIAS: It is a categorical variable measuring the present biased preference of respondents. This variable is measured through a set of experimental choice questions modified from the study of Bauer et al. (2012). Respondents were asked to select between receiving either a smaller amount earlier in time or larger amounts with three months delay. We proposed two set of questions with each set included five questions that each increased the future amount while keeping the instant amount unchanged. The first set was offered at a present time frame and the second set was aimed at a future time frame. Based on the selection of respondents, we divided the population of respondents into four groups: time consistency (current and future discount rate are equal), weakly present biased (Slightly more patient over future tradeoffs than current tradeoffs), strongly present biased (Strongly more patient over future tradeoffs than current tradeoffs), and patient now-impatient later (Less patient over future tradeoffs than current tradeoffs)

RISKATTI: This is an ordinal variable measuring risk attitude or risk aversion of SME owners/managers. Following previous empirical studies on the relationship between debt (household debt, credit card usage, microfinance) and attitude toward risk, we designed a set of six hypothetical questions to quantify risk aversion (Daly et al. 2010, Dohmen et al. 2009). The responses to this question set are then used to create a six point risk attitudes index for the SME owners/managers

DEBTATTI: is a ratio scale variable measuring the attitude toward debt of the SME owners/managers. Construction of debt attitude scale questions was adapted from the studies by Davies and Lea (1995). In our study, debt attitude was estimated through a series of five Likert-scale questions regarding two facets: general perception of debt aversion and benefit/cost tradeoff of debt financing (Cronbach's alpha = .82). Principle component analysis was used to calculate the debt attitude index. Factor score was used as a Non-standardized Index (NSI) to measure overall attitude to credit information sharing activities. The value of the index can be positive or negative and therefore, making it difficult to explain. Thus, a standard index (SI) was developed by Min-Max method:

$$ SI = \frac{(NSI\ of\ each\ case - Min\ NSI)}{(Max\ NSI - Min\ NSI)} \times 100 \qquad 3) $$

OVERCONFI: There is no consistency in measure managerial overconfidence in previous empirical studies. Park and Kim (2009) used the average of twelve months Business Survey Index as proxy measure of overconfidence. Oliver (2005) utilized Consumer Sentiment Index by University of Michigan to measure overconfidence of the U.S. firm managers. In this study, we followed Na Dai and Ivanow (2010) to measure overconfidence in financing

Table 1. Dependent and Independent Variables

| Code | Description of Variables | Type of Variables |
|---|---|---|
| **Dependent Variables** | | |
| CREDITPART | Credit participation of SMEs | 1-Use debt, 0-otherwise |
| CRESOURCE | Selection of the main credit source | 1-formal credit source, 0-otherwise |
| **Independent Variables** | | |
| PRESENTBIAS | Present biased preference of respondents | Categorical variable |
| RISKATTI | Risk attitude or risk aversion of respondents | Ordinal variable |
| DEBTATTI | Attitude toward debt of the SME owners/managers | Ratio scale variable |
| OVERCONFI | Overconfidence of SME owners/managers | 1-Overconfidence, 0-otherwise |
| NETOFFICIAL | Networking with officials | Ratio scale variable |
| NETBUSINESS | Networking with business community | Ratio scale variable |
| NETFORMAL | Networking with formal credit sources | Ratio scale variable |
| NETINFORM | Networking with informal credit grantors | Ratio scale variable |
| CICAWARE | General perceptions of respondents about credit information bureau | 1-Aware, 0-otherwise |
| CISATTI | Attitude of SMEs toward general credit information sharing activities | Ratio scale variable |
| GENDER | Gender of respondents | 1-Male, 0-otherwise |
| EDUCAT | Education levels of respondents | Categorical variable |
| EXPERI | Experience of respondents | Ratio scale variable |
| AGEOWNER | Age of the respondents, measured in years | Ratio scale variable |
| FIRMAGE | Age of the firm, measured in number of years | Ratio scale variable |
| AUDIT | Whether the firm has audited financial statements | 1-has audited reports, 0-otherwise |
| EXPORT | Involving in export activities | 1-export, 0-otherwise |
| FIRMSIZE | Size of firm | Categorical variable |
| FIXASSET | Fixed Asset Ratio of the firm | Ordinal variable |
| INDUSTRY | Industry the firm operating in | Categorical variable |
| OWNSHIP | Ownership of the firm | Categorical variable |

decisions. They measured the overconfidence as the difference between the feasible probability that the firm application for loans will be refused given the firm characteristics as well as credit conditions and the firm owners/managers' subjective evaluation of this likelihood.

NETWORK Measurement: We followed Peng and Luo (2000) to measure firm networks. Networking factors are mainly measured through 5-point scale questions, of which six questions were adapted from Peng and Luo (2000), three questions were applied from Le and Nguyen (2009) and three were newly designed (Cronbach's alpha = .72). We also followed Peng and Luo (2000) in using average method to create a composite measure of the networks of SMEs with officials, business communities, formal credit grantors and informal credit grantors.

CICAWARE: General perceptions of respondents about credit information bureau, specifically the role and functions of Vietnam credit information center. The True/False questions used to estimate the perception of SMEs are modified from Dunkelberg et al. (1998).

CIATTITUDE: Five-point Likert scale questions were newly developed to measure attitude of SMEs toward general credit information sharing activities (Cronbach's alpha = .82). Similar to debt attitude calculation, explora-

Table 2. Credit Participation and Explanatory Variables

|  | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| PresentBiased[b] |  |  | 12.073 | 3 | 0.007 |  |
| PresentBiased(1) | 1.821 | 0.704 | 6.684 | 1 | 0.010 | 6.176 |
| PresentBiased(2) | 4.291 | 1.380 | 9.661 | 1 | 0.002 | 73.014 |
| PresentBiased(3) | 1.140 | 0.737 | 2.395 | 1 | 0.122 | 3.128 |
| RiskAttitude | -0.526 | 0.251 | 4.375 | 1 | 0.036 | 0.591 |
| DAIndex | 0.094 | 0.019 | 24.562 | 1 | 0.000 | 1.098 |
| Network_formlend | 1.482 | 0.407 | 13.275 | 1 | 0.000 | 4.401 |
| Network_inform | -1.316 | 0.594 | 4.902 | 1 | 0.027 | 0.268 |
| Network_business | 1.887 | 0.637 | 8.779 | 1 | 0.003 | 6.602 |
| CISAttitude | 0.056 | 0.018 | 9.313 | 1 | 0.002 | 1.058 |
| OverConf | 2.072 | 0.772 | 7.202 | 1 | 0.007 | 7.944 |
| Constant | -13.180 | 2.827 | 21.73 | 1 | 0.000 | 0.000 |
| Observations |  | 263 |  |  |  |  |
| -2 Log Likelihood |  | 95.838 |  |  |  |  |
| R-Squared[c] | 0.586 (Cox & Snell) |  |  | 0.803 (Nagelkerke) |  |  |

Note:
a. Variables tested to enter: PRESENTBIAS, RISKATTI, DEBTATTI, OVERCONFI, NETOFFICIAL, NETBUSINESS, NETFORMAL, NETINFORM, CICAWARE, CISATTI, AUDIT
b. Categorical Variable Codings: Reference Category - Time consistency; Present biased (1) - Weakly present biased; Present biased (2) - Strongly present-biased; Present biased (3) - Patient now, impatient later
c. R-square estimated at Step 8 (the final step)

tory factor analysis was used to compute factor scores on these items and create and standardize one variable by Min-Max Method that reflected credit information sharing attitude.

The summarized descriptions of dependent and independent variables are given in the Table 1.

## RESULT AND DISCUSSION

### Model for Credit Participation

In the step 1, we used forward stepwise logistic regression to explore if the explanatory variables affect the probability of SMEs credit participation. The independent variables included in the model comprise those were shown to have associations with the credit participation according to parametric and/or non-parametric tests results. Table 2 summarizes the logistic regression results at the last step.

In the model for credit participation, the dependent variable is dichotomous, taking the value of 1 if the firm uses debt in their capital structure, (comprising any type of borrowing, regardless of whether the debt come from formal or informal sources) and 0 otherwise.

From the estimation results, present biased preference, risk aversion, debt attitude, overconfidence, network with formal lenders, network with informal lenders, network with business communities and attitude toward credit information sharing have impacts on the credit participation of surveyed SMEs at a statistically significant level. More specifically, enterprises with impatient (weakly or strongly-present-biased) owners/managers are more likely to employ debt to run business rather than patient firm owners (other things being equal). Of time preference types, the strongly-present-biased group show a significantly different need of borrowing from "time-consistent" group. The respective probabilities of firms deciding to use leverage are 6 and 73 times higher than that of "patient" firms.

With respect to risk aversion, for each unit increase in "risk aversion", firms were 46% less likely to employ debt in their capital structure. It could be said that higher risk-tolerant firms (also meaning lower risk aversion) are often motivated to involve in risky investment or business expanding opportunities and therefore, they have higher need of borrowing.

In the case of debt attitude index, the estimated results indicate that firms with positive attitude toward debt are more likely to participate in the credit market with the probability larger by 1.16 times per additional unit of debt attitude index. From the cross-sectional analysis, the proportion of enterprises using leverage has higher score of debt attitude than that of non-debt using enterprises.

The positively estimated coefficient for overconfidence factor depict that overconfident respondents are more likely to use debt in the capital structure. In other words, the likelihood of a company with an overconfident owner/manager is 25 times higher than that of a company with a non-confident owner/manager.

Regarding social capital factors or in this case, firm networks, estimation results show that efforts to build and maintain good relationships or networking with business communities (sellers, buyers, competitors, business association members) and formal lenders motivate and help firms to access credit, no matter what source of credit comes from. The respective probabilities of enterprises with highly intense degree of networking with business communities and formal lenders par-

ticipating in the credit market are 7 and 8 times higher than that of enterprise with looser degree of similar networks. Interestingly, the negative estimated coefficients for network with informal lenders suggest that firms are less likely to employ debt if they have more intense relationship with informal lenders (which include moneylenders, friends and relatives, members at social clubs). This could be explained by the argument that intense networks with potential informal lenders could motivate firms be out of formal credit market and make use of their relationships to have non-interest debt from relatives and friends.

Last, estimated coefficient of CISATTI show that attitude toward credit information sharing activities has a small impact on the decision of credit participation. Firms with higher positive attitude are more likely to participate in the credit market than firms with lower attitude, with the probability higher by only 1.07 times per additional unit of attitude score. The result also show that network with officials, audited financial reports, CIC Awareness and other control variables are insignificant determinants of SMEs credit participation.

### Model for Credit Source Selection

In step 2, we selected only enterprises that had debt in their capital structure. We then performed binary logistic regression with forward stepwise selection of variables to investigate the impact of potential factors on credit source selection decision among SMEs. The table 3 reports the result of the regression analysis with dependent variable selection of credit source at the last step. The variable takes the

Table 3. Credit Source Selection and Explanatory Variables

|  | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| PresentBiased[b] |  |  | 9.323 | 3 | 0.025 |  |
| PresentBiased(1) | 0.169 | 0.693 | 0.059 | 1 | 0.807 | 1.184 |
| PresentBiased(2) | -2.161 | 0.912 | 5.614 | 1 | 0.018 | 0.115 |
| PresentBiased(3) | 0.267 | 0.879 | 0.092 | 1 | 0.761 | 1.306 |
| RiskAttitude | 0.924 | 0.266 | 12.088 | 1 | 0.001 | 2.520 |
| Network_Officials | 1.184 | 0.481 | 6.069 | 1 | 0.014 | 3.269 |
| Network_formlend | 1.234 | 0.442 | 7.803 | 1 | 0.005 | 3.434 |
| Network_inform | -4.012 | 0.766 | 27.415 | 1 | 0.002 | 0.018 |
| FirmSize[c] |  |  | 10.155 | 2 | 0.006 |  |
| FirmSize(1) | 2.367 | 0.763 | 9.637 | 1 | 0.002 | 10.667 |
| FirmSize(2) | 2.365 | 0.909 | 6.768 | 1 | 0.009 | 10.643 |
| Constant | 1.86 | 1.841 | 1.020 | 1 | 0.312 | 6.422 |
| Observations |  |  | 180 |  |  |  |
| -2 Log Likelihood |  |  | 97.089 |  |  |  |
| R-Squared[d] |  | 0.5635 (Cox & Snell) |  |  | 0.7559 (Nagelkerke) |  |

Note:
a. Variable(s) tested to enter: GENDER, AGEOWNER, FIRMAGE, INDUSTRY, FIRMSIZE, EXPORT, AUDIT, PRESENTBIAS, RISKATTI, OVERCONFI, NETOFFICIAL, NETFORMAL, NETINFORM, CICAWARE
b. Categorical Variable Codings: Reference Category - Time consistency; Present biased (1) - Weakly present biased; Present biased (2) - Strongly present-biased; Present biased (3) - Patient now, impatient later.
c. Categorical Variable Codings: Reference Category – Micro enterprises; Firmsize (1) – Small Enterprises; Firmsize (2) – Medium enterprises
d. R-square estimated at Step 6 (the final step)

value of 1 if the firm choose formal credit source such as bank loan as their main external financing source and 0 otherwise. Independent variables which showed a relationship with dependent variables in association tests were included in the model.

The results indicate that Present biased preference, Risk attitude, network with officials, network with formal lenders, network with informal lenders, and firm size are statistically significant determinants of the credit source selection.

Among present-biased preference subcategories, only strongly-present biased group demonstrates the inverse relationship with credit source selection at the 5% level of significant. The value of Exp(B) for strongly-present biased was .115 which implies a decrease in the odds of 88.5%. That is to say, strongly-present biased firm owners/managers are 88.5% less likely to

carry large debt from formal credit suppliers than the rest (if other factors are equal). Instead, they have a tendency to employ more debt from informal sources.

Strong evidence of the impact of risk aversion factor on credit source selection was also found. At the 99% confidence interval, the higher risk aversion level the firms have, the more likely they are to go with formal credit source as their main financing source. For each unit increase in "risk aversion", the probability of selecting formal credit sources is 2.5 times higher. The most likely explanation of this result is the difference in risk between credit formal and informal sources. Informal credit sources have their own advantages such as flexible arrangements, not strict requirement of collaterals, low transaction costs but they are also expensive and unreliable sources. This contrasts with the formal lender providers, who offer

relatively low interest rates, but often enforce complicated and time-consuming procedures on borrowers that boost their transaction costs. Informal credit sources are believed that their inherent risks are always higher than that of formal credit sources like bank loans. Borrowing from informal credit sources, especially from moneylenders is able to increase the risk of bankruptcy for enterprises. Therefore, it is reasonable that if an entrepreneur has a high tolerant level of risk he/she is more willing to choose informal credit to finance their business.

With regards to firm networking, estimation results illustrate that intense networks with officials and formal lenders could enhance the probability of formal credit access; consequently, firms with high score of such networks have trends to go with formal credit source as their important financing source. In detail, for each unit increase in network score with officials and formal lenders, survey SMEs were approximately 3.2 and 3.4 times more likely to select formal credit source, respectively. On the contrary, for each unit increase in "network with informal lenders", respondents were about 98% less likely to go with formal credit source. To put it another way, highly intense network with informal credit providers increase the probability of firms to select informal sources.

Finally, positive coefficients of firm size sub-categories show that the firm size factor play a role in explaining the firm credit source selection. Specifically, the firms that belongs to the small-size group and medium-size group were approximately 2.4 and 1.8 times respectively more likely to se-

lect formal credit sources compared to micro-size enterprises.

The regression analysis also show that at the 5% significant level, independent variables such as Owner Gender, Age, Firm Age, Industry, Export, Audited Financial reports, overconfidence and CIC awareness did not play a role in predicting the credit source selection. The reason may be due to the correlation among independent variables and numeric problems when estimating the model.

### *Discussion*

Our results generally support the hypothesis that firms financing decisions are significantly affected by behavior finance factors and firm social capital. We found that personal traits of firms owners/managers such as present-biased preference, debt attitude, risk aversion and overconfidence could play important roles in explaining the decision of debt using as well as credit source selection for small enterprises. In addition, the results also suggested that social capital, which was represented and measured through firms networking, have effects on SMEs credit participation and credit source selection. Besides, firm attitude toward credit information sharing, a factor more or less reflect the firm creditworthiness and efforts to be transparent in the eyes of credit grantors, and firm size also contributed in explaining the SMEs financing decisions.

There are several imperative contributions which our research made to the literature of business management. At the first place, the research is one of the few studies that consider the influence of behavioral finance factors on

firms financing decision. Especially, from the perspective of behavioral finance and social capital, our study helps to investigate the latent motivations to explain the reason why there is a significant proportion of firms with completely non-debt using and why informal loans still play important role in the financing of SMEs. Second, while the role of social capital is mentioned as an important determinant in enhancing firm performance and finance accessibility worldwide, the study highlight its role in constructing legitimacy for small enterprises in developing markets. In Vietnam, informal data seems to be the basis of the bank loan officers' estimation of enterprise creditworthiness. Public information, if it is available, helps to provide supplementary data that can support the application packages legally acceptable (Nguyen, 2005). The study proved the importance of informal networks, which is consistent with this argument. Our study indicated that network with informal/ formal lenders even affect the SMEs decision of credit source selection.

Though we did not find strong evidences of the role of awareness and attitude toward credit information sharing practices on SMEs financing decisions, it is undeniable about the role of credit information bureaus in enhancing credit accessibility for firms, which have been confirmed by many empirical studies. The role of credit information bureaus and "reputation collateral" is only promoted in an information-based lending system. Yet, there is still a long way for a transition market like Vietnam to transform from a collateral-based and relationship-based lending system to

an information-based one. In the context of lending transactions conducted based on relationship and/or collateral, small businesses and individuals may not pay a serious attention to credit information bureau and may not try the best to keep good records on their credit history profile. In addition, the database of Vietnam credit information center is still limited with credit information data collected from financial institutions in the market. As a consequent, Vietnam CIC does not have sufficient information to give a well-founded estimation about potential borrowers' creditworthiness. It also means that the only public credit bureau in Vietnam is not powerful enough to make borrowers cautious in their payment practices as well as help credit institutions to make precise lending decisions based on CIC credit reports.

### Managerial Implications

Our data suggest that social capital is critical to SMEs credit participation and credit source selection. Once market institutions and infrastructures in developing country like Vietnam is incomplete with high level of information asymmetry problems, social and business networks will play important roles in helping SMEs to ease business procedures and transactions, borrowing included. This suggests that it is necessary to provide education and training programs for SMEs owners to develop their networks effectively, in addition to conventional practices such as well-prepared business plans and financial statements, audit execution and reporting. Moreover, bank loan officers should be prepared to work with private businesses under uncertainty and trained to collect and

verify valuable information through formal and informal networks.

Besides, building network with credit information bureau through keeping good credit records, updating credit reports with the bureau annually is also important for enterprises to access formal credit sources easily. The system cannot be fully work-out, non-performing loans cannot be reduced if borrowers do not pay attention to the existence and role of credit information system. Credit information bureaus and credit institutions should coordinate to diffuse knowledge about the role of credit information practices to borrowers and potential customers. This can be done by carrying out financial education for customers through media channels or directly improving customers' awareness when they come to banks.

The finding on the impact of behavioral finance factors has implications for banks to consider creating lending products which is suitable for personal traits of SMEs owners. Formal credit institutions can learn about lending policies and practices from informal credit providers. Micro-finance studies indicated that group lending services or lending forms of rotating savings and credit association attract individuals with present-biased preference. Formal credit institutions could learn and create more creative credit line products like that case of informal finance.

## CONCLUSION

The large proportion of SMEs badly needs external financial resources for growth but there are still many enterprises who "avoid" debt in their capital structure. This study is an attempt to investigate the motivation behind the decision to participate in the credit market of SMEs from perspectives of behavioral finance and social capital theory. Furthermore, we found that personal traits of SMEs owners/managers in terms of behavioral finance factors and firms networking also have impacts on the firms' credit source selection. Our results contribute to explain the common use of informal credit market in developing countries.

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**Research Questionnaire for SME owners/managers**

<u>**Section A**</u>:

**1. Position**:    □a. Owner     □b. Manager    □c. Other

**2. Sex**:         □a. Male       □b. Female

**3. Age**: ……….

**4. The entrepreneur's Name**: ……………………………………….

**5. The year of establishment**: ………………………………………...

**6. Ownership:**

□a Household Business       □e Joint-stock company with partly state ownership
□b Private enterprise           □f Joint-stock company with no state ownership
□c Cooperative               □g Joint-venture company with foreign capital
□d Limited liability company □h State-owned enterprise

**7. Industry/Business Field:**

□a. Industrials & Construction (Industrials, Basic materials, construction, Real estate)
□b. Consumer Goods (Food &Beverage, Personal & Household Goods)
□c. Consumer Services (Retail, Healthcare included)
□d. Telecommunication & Technology

**8. The number of experience years you have been working in this industry/ field (even before establishing this entrepreneur):** ………….. years

**9. Educational level:**

□a. Primary/Secondary       □c. College/University
□b. High school             □d. Master or higher

**10. Owner's average income per month:**

□a. < 20 million VND      □c. 51-100m VND        □e.> 151m VND
□b.21-50m VND          □d.101- 150m VND

**11. Does the entrepreneur participate in export activities?** ☐Yes ☐No

**12. Total assets of your business:**
☐a.<1billion Vnd     ☐b.1-10b Vnd          ☐c.11-50b Vnd          ☐d.50-100b Vnd

**13. Fixed assets as a percentage of total assets in your business:**
☐a.0%-10%             ☐b.11%-30%             ☐c.31%-50%             ☐d.51-70%

**14. Bank loans as a percentage of total assets in your business:**
☐a. No bank loan     ☐b. <10%     ☐c.11%-30%     ☐d.31%-50%     ☐e.>50%

**15. Informal loans** (borrowing from relatives, friends, moneylenders) **as a percentage of total assets:**
☐a. No informal loans     ☐b.<10%     ☐c.11%-30%     ☐d.31%-50%     ☐e.>50%

**16. In the past two years, has your firm ever been turn downed by banks?**
☐a. No borrowing from banks
☐b. Banks accepted short-term (or long-term) loans but declined long-term loans (or short-term)
☐c. Banks declined both short-term and long-term loans
☐d. Banks always accepted

**17. (For firms which use debt in capital structure) In your opinion, which credit source is more important to your business?**
☐a. Formal credit sources such as banks
☐b. Informal credit sources such as relatives, friends, partners, moneylenders

**Section B:**

**Q1.** Given your present circumstances, suppose you won a tax-free prize at a local bank and were offered a choice  between two prizes. Please choose **one among each pair of prizes** as follows:

| Option A | Or | Option B |
|---|---|---|
| Getting money today | | Getting money three months later |
| (1) ☐A. Getting 1000$ today | Or | ☐B. Getting 1050$ three months later |
| (2) ☐A. Getting 1000$ today | Or | ☐B. Getting 1100$ three months later |
| (3) ☐A. Getting 1000$ today | Or | ☐B. Getting 1200$ three months later |
| (4) ☐A. Getting 1000$ today | Or | ☐B. Getting 1300$ three months later |
| (5) ☐A. Getting 1000$ today | Or | ☐B. Getting 1400$ three months later |

**Q2.** By the same token, among each pair choices of prize, please choose one you prefer.

| Option A | Or | Option B |
|---|---|---|
| Getting money a year later | | Getting money a year and three months later |
| (1) ☐A. Getting 1000$ a year later | Or | ☐B. Getting 1050$ a year and three months later |
| (2) ☐A. Getting 1000$ a year later | Or | ☐B. Getting 1100$ a year and three months later |
| (3) ☐A. Getting 1000$ a year later | Or | ☐B. Getting 1200$ a year and three months later |
| (4) ☐A. Getting 1000$ a year later | Or | ☐B. Getting 1300$ a year and three months later |
| (5) ☐A. Getting 1000$ a year later | Or | ☐B. Getting 1400$ a year and three months later |

**Q3.** Suppose your business had been running very well and have an ability to guarantee your income for your family. And this current business was your/ your family's only source of income. Then you are given the opportunity to

take a new and quite good investment with 50-50 chance that it will double your income. But there is a 50-50 chance that it will cut your income and spending power by a third. Would you accept this new investment?
☐ **Yes**     ☐ **No**

For those who answer "**yes" for Q3, please answer Q4; "no" for Q3, please answer Q5**

**Q.4** Now, suppose the chances were 50-50 that the new investment would double your income, and 50-50 chance that it would cut it in half. Would you accept?
☐ **Yes**     ☐ **No**

If you answer **"yes" to Q4, please answer Q7, "no" for Q4, please answer Q8**

**Q.5** Now, suppose the chances were 50-50 that the new investment would double your income (profit), and 50-50 that it would cut it by 20%. Then would you accept?     ☐ **Yes**     ☐ **No**

For those who answer **"yes" to Q5, please answer Q8; "no" to Q5, please answer Q6**

**Q.6** Now, suppose that the chances were 50-50 that the new investment would double your profit and 50-50 that it could it by 10%. Then would you accept?
☐ **Yes**     ☐ **No**

**Q.7** Now, suppose that the chances were 50-50 that the new investment would double your income, and 50-50 that it would cut it by 75%. Would you still accept?     ☐ **Yes**     ☐ **No**

**Q8.** Please indicate by ticking in the appropriate box to what extent you agree/ disagree to the statement about borrowing:

◄─────────────────────────────────────────────►
*(1)Strongly disagree; (2) Disagree; (3) Not sure; (4) Agree; (5) Strongly Agree*

| | |
|---|---|
| 1. Debt is an integral part of doing business because it help firm to extend investment chances and have tax shield. | 1  2  3  4  5 |
| 2. The entrepreneur should be discouraged from using debts since interest expense can become a burden causing bankruptcy and the control of the firm will be lost. | 1  2  3  4  5 |
| 3. The entrepreneur should satisfy with your current situation rather than borrow money to expand your business. | 1  2  3  4  5 |
| 4. It is OK to have a loan if you know you can pay if off. | 1  2  3  4  5 |
| 5. Once you are in debt it is very difficult to get out. | 1  2  3  4  5 |
| 6. Owing money is basically wrong. | 1  2  3  4  5 |

**Q9.** During the last three years, were there times when you needed credit for your business, but did not apply because you thought the application would be turned down?     ☐ **Yes**     ☐ **No**

**Q10.** Please indicate by ticking in the box whether statements about **Vietnam Credit Information Center (CIC)** is Right or Wrong:

| | Right | Wrong |
|---|---|---|
| 1. CIC is a government agency that collects and maintains credit records of firms and individuals. | ☐ | ☐ |

| | | |
|---|---|---|
| 2. CIC is a private corporation that collects unpaid bills of firms and consumers. | ☐ | ☐ |
| 3. The main role of CIC is to rate firms and consumers and determine whether or not they can receive credit | ☐ | ☐ |
| 4. Credit history report issued by CIC could affect the accessibility to credit of the entrepreneur | ☐ | ☐ |

**Q11.** Please indicate by ticking in the appropriate box to what extent you agree/ disagree to the statement about CIC:

*(1)Strongly disagree; (2) Disagree; (3) Not sure; (4) Agree; (5) Strongly Agree*

| | |
|---|---|
| 1. The lender to whom I apply for loan can check my previous borrowing information at other financial institutions, especially regarding collateral and late or non-repayment activities | 1  2  3  4  5 |
| 2. Late repayment or default in the past does not affect the decision of the lender to whom I apply for a loan. | 1  2  3  4  5 |
| 3. I have always been trying to keep my credit record good to get loans easily by repaying principle and interest amounts of my personal and firm's loans on time. | 1  2  3  4  5 |
| 4. When I apply for credit, I am willing to let the loan officer check the information about me and the firm on file with CIC Vietnam | 1  2  3  4  5 |
| 5. The credit information about me and my firm provided by CIC makes the bank trust my creditworthiness | 1  2  3  4  5 |

**Q12.** Please indicate by ticking in the appropriate box to describe the extent to which top managers at your firm have utilized personal ties, networks, and connections during the past three years with

| | |
|---|---|
| *(1)very little    (5)very extensive* | |
| 1. Network with Top managers at buyer firms | 1  2  3  4  5 |
| 2. Network with Top managers at supplier firms | 1  2  3  4  5 |
| 3. Network with Top managers at competitor firms | 1  2  3  4  5 |
| 4. Network with Political leaders in various levels of the government | 1  2  3  4  5 |
| 5. Network with Officials in industrial bureaus | 1  2  3  4  5 |
| 6. Network with Officials in regulatory and supporting organizations such as tax bureaus, the state bank, commercial administration bureaus, etc. | 1  2  3  4  5 |
| 7. Network with Members of business associations | 1  2  3  4  5 |
| 8. Network with Members of social clubs or associations | 1  2  3  4  5 |
| 9. Network with Relatives and friends who do not belong to any of above categories | 1  2  3  4  5 |
| 10. Network with Moneylenders (informal) | 1  2  3  4  5 |
| 11. Network with Loan officers at some commercial banks | 1  2  3  4  5 |
| 12. Network with Loan officers at People Credit Fund/ Microcredit Financial Institutions | 1  2  3  4  5 |