Factors Affecting the Effectiveness of Risk Management in Small and Medium Enterprises in Forest Product Processing Industry Northern Midland of Vietnam

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Abstract:
Micro, small and medium sized enterprises are considered significantly important to the growth of any economy. However, these businesses are vulnerable to risks, such as business risk, finding, budgeting, etc. The scheme to prevent risks of small businesses, nevertheless, is not systematically developed and performed. This paper studies the risk management processes in micro, small and medium sized companies based on a case small and medium enterprises processing forest products in Midland of Northern Vietnam. This paper reviews risks, the process of risk management, the role of risk management in corporations, project risks, the management processes. Quantitative research is based on questionnaires used

Keywords: Risk management, SMEs, enterprises processing forest products, midland of Northern Vietnam

1. Introduction

The risk is ubiquitous and spreads through every issue of life. To business sectors, unforeseen situations create severe loss exposures. Furthermore, to small-medium enterprises (hereinafter SMEs) and micro companies, where the capital background is not sufficiently strong, a catastrophe could likely lead to an interruption in operational activities, financial loss, and bankruptcy.

According to Small Business (2006), there were more than ten thousands of self-employed workers who went bankrupt. On the other hand, in 2010, 99.4% of all firms in Finland were SMEs while more than 83% were micro enterprises (OECD 2012 p.66). Given that the number of small businesses is increasing, the statistics number for financial loss or business failure will grow accordingly.

Therefore, managing risks to reduce and minimize the loss exposure is essential for every small business. Despite the necessity, many SMEs and micro companies rarely carry out a detailed risk assessment and management strategies. It is due to the fact that engaging in risk assessment and management require a certain budget and human resource, which are limited in small enterprises — these companies’ decision on how and what to invest in depends on the ongoing activities and on their financial status. Small scale businesses generally shift the process of risk management into project-based. It is questionable that whether a traditional risk management plan or a customized project risk management would help SMEs and micro companies to reduce the losses, or would negatively weigh on their budgets.

This paper focuses on the risk management processes in small businesses, investigates main risk management terms and theoretical risk management models. The research is based on a case small and medium enterprises processing forest products in Midland of Northern Vietnam. By examining the influence of the company’s risk management strategies to its operational activities, and to the cash flow, the author expects to conclude a suitable and effective risk management scheme to the business scale of the case company.

2. LITERATURE REVIEW

It is necessary to understand that “uncertainty” is a much broader term, while “risk” is just a part of “uncertainty.” According to Frank Knight (2006), “risk” is the term used to describe cases of known probability; for example, a store can calculate the probabilities that the cashier might mistakenly check an order
per every certain number of customers and hence the store account might lose some balance. Uncertainty is when you cannot calculate the probabilities or make any forecasted assumption. An example of uncertainty is to predict stock market price, for instance, fifty years in advance. Risks and uncertainties are often distinguished in the language of “statistical probability” (B. Ritholtz, 2012). Regardless of the different scope of these two terms, both risk and uncertainty might result in a positive or negative impact on the business operation and require proper management.

Generally, the risk is the possibility for danger, negatively unexpected circumstance to occur (Oxford English Dictionary, 2013). In most economic publications, risk refers to the negative deviation from the plan (Maylor 2010). In finance, the risk is related to the hazard towards an investment, or loan (Encyclopedia Britannica, 2013). In terms of corporate and business, the risk is the possibility that an event, either expect or unexpected, may create an unfavorable effect on the organizations.

Hazard risks are risk related to the working environment, property, and natural catastrophe. Originally hazards refer to potential harms that can affect the health and safety of personnel of property (The University of Newcastle, Australia). Besides common hazard groups such as physical, chemical biological, mechanical and psychological which arise from workplace premises and environment or work practices, risk can grow from uncontrollable factor like natural disasters.

Financial risk is a broad term covering many negative risks related to financing, for instance, liquidity risk, funding risk, interest rate risk, investment risk, pricing risk, credit risk, and so on. Financial uncertainties can return as a favor for one business but loss for another. For example, increasing in fuel price can plus the financial statement for a company that produces or supplies fuels, but this price change can create huge extra costs for a transportation agency. The consequences and the exposure’s extent an organization may suffer from financial risks depend on the scale of the company’s financial transactions: how much of the borrowings in compare to its business scope (CPA Australia, 2006).

Operational risks frequently are summarized as human risks, due to the discussion that human error leads to business operations failure. Nevertheless, operational risks include all risks that incur from organizations’ internal activities involving people, products or services offered, operational systems, and external factors (Global Association of Risk Professionals, 2011).

Strategic risks imply the probabilities of a loss arising from a poor strategic business plan, decision, or from the inconsistent and inappropriate implementation according to the plan. Strategic risks pose a threat to earnings, capital availability and the corporation’s viability. Because strategic plans indicate the operation direction, as well as the framework, vision, and objectives of an organization, the lower the probability of strategic risk, stays, the stronger the organization is. Thus, boards of directors are focusing on how organizations identify, assess and manage their risks.

Risk management is vital in securing the business’s capitals and other properties. However, as discussed, risk accompanies with the business’s opportunities to grow. Therefore, it is often emphasized in business strategies that risk management is not to prohibit taking risks entirely, but to understand the levels of risks, and to properly engage risks into development and growth.

On applying to operations, risk management contains a set of continuous actions: awareness, identification, evaluation, and development of risk management methods, decision making of suitable methods, implementation, and post management. While the workload increases, it is not necessary for the outcome to be excelled. The essence of risk management lies in the systematic flow of one step to another. Whilst the risk-taking behavior incorporates encouraged, mistakenly identifying the manageable level of risks leads to the inappropriate method, and finally to the loss in operation.
A traditional process of risk management following the guidelines of the International Organization for Standardizations (ISO 31000:2009) involves 3 main steps:

- Establishing the context: this step involves identifying the entire possible field of risks and analyzing the relevant possible effects, and from there planning or mapping out the entire management strategy.

- Identification: after getting the context of possible business risks, the risk management will process to identify sources of the problems, threats, or risks. Choosing the right method to identify and analyze risks will help the preparation and prevention steps work better. However, the methods chosen are biased by cultural, organizational, politic and many other factors. Control solutions identification goes after the risk identification.

- Assessment: The final step consists of some sub-steps: establishing the likelihood and consequence descriptions, the risk rating index. Defining which consequences would lead to an extreme risk or just a generally low level risk would generate an appropriate method of control. It is advisable to develop the risk management methods along with defining the level and consequences of the risks. The assessment process might involve decision making process, especially in the case of high or extreme level of risk.

Research has shown the level of ERM implementation affects performance in a positive way (Hoyt & Liebenberg, 2011; Baxter et al., 2013). A higher level of ERM implementation could help firms to identify and address risks in an earlier stage. Early identification of risks allows time for the organisation to respond to the risks before real damage has been caused to the finances of the firm. To answer the research question, the performance of firms with a higher ERM implementation level needs to be compared to the performance of firms with a lower ERM implementation level.

**H: Effective risk management has a positive impact on financial performance.**

3. Methodology

For the testing of the impact the ERM implementation level has on performance, the sample will be divided into 168 small and medium enterprises processing forest products in midland of Northern Vietnam.

To further analyse the impact ERM implementation has on performance, a regression analysis will be performed (Baxter et al., 2013).

Research model:
Figure 1: a Research model

Capabilities and Decisions of the Executive (NLQDNQT)

Most of the previous studies focused on leadership style, behavior, and strategy. Positive dynamic leadership is one of the most important independent variables proposed in the theoretical framework. Therefore, any organization without active leadership will inevitably affect the effectiveness of risk management. Empirical studies by Simpkins (2009) and Greenberg & Baron (2008) concluded that positive leadership positively influences risk-management effectiveness.

An internal control system (HTKSNB)

In most cases, an effective internal control system can be considered as a factor for the success of every business. In this study, the team considered the internal control system as an aspect of the internal factors affecting the effectiveness of risk management. An effective internal control system is critical to the success of the business and is less risky.

Qualifications and skills of the team (KNLVN)

Team competence and skills are an important variable to consider because it provides the technical and managerial resources needed for the manager (Greenberg & Baron, 2008). Team capacity and skills can be seen in terms of skills, knowledge, and attitudes. Group dynamics are also connected to group capacity; It is the type of group and features that are essential for the implementation of the forest product processing project (wood processing). Therefore, any organization that lacks the capacity and skills of the team is definitely will affect the effectiveness of risk management for wood processing enterprises, especially wood processing. Teamwork skills are important to be able to accomplish high-quality handmade wood products, and the combination of team members is very important.

Financial Policy (CSTC)

Corporate financial policies, especially long-term strategic financial policies such as investment policies, capital mobilization policies or profit distribution policies, may be encountered. In addition, Hartog and Verburg (2004) point out that rational financial policy is a powerful tool related to the behavior and attitudes of suppliers and customers to the business. From the benefits that good financial policies of the organization bring the business will reduce the risk and increase the efficiency of risk management.

The economic factor (YTKT)

Socio-economic context affects all activities of enterprises, including risk management. If the economic context is stable and less volatile, enterprises will also be more likely to attract investment and business risks.

Political Factor (YTCT)

Jaafari (2001), says that the impact of environmental variables such as safety, community awareness, and legal acceptance, political and social impact on businesses is high. It is further explained by the authors that political factors include, discriminatory practices, including taxation, riots, strikes, civil unrest, war, terrorism, invasion, and the Religious crisis will affect the effectiveness of risk management in an organization. The research by Abu Hassan et al., (2012) confirms the positive influence of political factors on the effectiveness of risk management.

Technological factor (YTCN)

According to Akanni, Oke & Akpomiemie (2014), Technology supports a lot for risk management. Good technology will assist the business in producing business as well as supporting business risk control activities.
In the forest product processing industry, advanced technology can model 3D products before making products on the rare and precious woods, thereby reducing the risk of production and improve efficiency work.

Effective risk management (HQQTRR)

While (Porter, 1981; Healy, 1982; Perry & Hayes, 1985) realized the risk of economic loss when engaging in production. In this study, the risk is defined as the probability of uncertainty, which obstructs the achievement of the objectives of forest product processing enterprises in the Northern Midlands. Risk can be from management, materials, design, finance and labor risk and equipment. According to Sambasivan and Soon (2007), the 28 factors that influence ineffective construction risk management with their impact on construction projects in Malaysia are lack of financing; lack of material; labor supply; lack of equipment available; poor communication between the parties; And misunderstanding in the construction phase is the leading factor. In line with the study of Aibinu and Odeyinka (2006) identified forty-four factors leading to delays due to lack of effective risk management in construction projects in Nigeria, the study found that the main factors as; risk factors in management, materials, finance, and design. Frimpong, Oluwoye and Crawford (2003) and Sweis et al., (2008) affirmed the positive relationship between internal and external organizational factors and risk management effectiveness, in accordance with Ahmed's et al. (2002) in the United States. There is a positive relationship between internal and external factors and the effectiveness of risk management. Effective risk management in the management aspect is the way to manage effectively and reduce the risk. In terms of materials is the ability to provide raw materials (wood) to ensure the order is not risked raw material. Design aspect: Since the processing of forest products (mainly wood processing enterprises), designing is very important because the value of the material is very high (especially rare and precious wood) if the design is wrong or the customer's requirements lead to very big business risk. Financial aspects show the ability of enterprises to pay and transfer money and ultimately labor and equipment aspects. At current forest products processing enterprises, the products are still handmade, so labor is a very important factor if not good management is easy to lead to risk for enterprises.

4. Results and Discussion

Cronbach's Alpha coefficient assay was used to remove the rubbish before conducting factor analysis. Verification of variables in the scale is based on the Cronbach's Alpha test coefficient of the scale components and the Cronbach's Alpha coefficient of each measurement variable. Variables with a total correlation coefficient of less than 0.3 will be rejected. A good reliability scale as it varies between [0.7 - 0.8]. If Cronbach's Alpha > or = 0.6 is an acceptable scale of reliability (Nunnally and Berndstein, 1994).

After verifying the SPSS reliability scale through the Cronbach Alpha assessment and the total variable correlation. Some observations have been removed from the research model. The study model for the analysis of official data is shown in Figure 2.2. Observation of the KNV1N1, KNDLVN 4 of the group workgroup discontinuation variable, observation of the CSTC3 financial policy, economic analysis of YTK1, YTKT 2; Effective management risk management HQQTRR_QL1, MG2, MG4, MG6; material risk management factor HQQTRR_VL3, design risk management efficiency factor HQQTRR_TK2, HQQTRR_TK3; Rules and Principles of IHL1; Risk management efficiency Labor and equipment HQQTRR_LD1; HQQTRR_LD 4 has the cronbach Alpha coefficient and the total variable correlation <0.3 was excluded from the study.

In order to measure the suitability of the model with the realities of the study, the SRMR index (standardized root mean square residual) should be considered. According to Hu and Bentler (1999), the SRMR must be less than 0.08 or 0.1. In addition, Henseler et al. (2014) also found that the SRMR index is the goodness of fit index of the PLS-SEM model that can be used to avoid bias in the model.
Table 2.21 Results of model fit with research data

<table>
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<tr>
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<th>Saturated Model</th>
<th>Estimated Model</th>
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<tbody>
<tr>
<td>SRMR</td>
<td>0.041</td>
<td>0.065</td>
</tr>
<tr>
<td>d_ULS</td>
<td>2.931</td>
<td>7.129</td>
</tr>
<tr>
<td>d_G1</td>
<td>3.069</td>
<td>3.174</td>
</tr>
<tr>
<td>d_G2</td>
<td>2.43</td>
<td>2.538</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>4,454.73</td>
<td>4,611.90</td>
</tr>
<tr>
<td>NFI</td>
<td>0.815</td>
<td>0.809</td>
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</table>

Figure 2: Bootstrap results for each factor affecting the risk management performance

The above results show that the internal factors are affecting the effectiveness of risk management of forest product processing enterprises in the midland of the North. In particular, the manager's ability and decision-making power has the greatest impact on the risk-adjusted effect with an impact of 0.615 at a 1% significance level. Secondly, the internal control system also had a strong impact on risk management efficiency with an impact of 0.369 at 1% significance level. The external factor is usually 0.252 with a significance level of 1%. Political factors have no impact on the effectiveness of risk management, the economic factors, and technology factors that affect the efficiency of risk management are 0.060 and 0.175 respectively with a significance level of 1%.

5. Conclusion

For data analysis of the research model, SPSS 22 and SmartPLS version 3.0 was used with PLS-SEM model equations. The results show that the internal factor strongly influences the effectiveness of risk management of CBDRs in the TDBB area with the impact level of 0.543 at 1% significance level. The external factor acts at a normal level of 0.252 on the effective risk management and at 1% significance level. When considering internal and external factors separately, the leadership and internal control systems had a strong impact on the risk
management efficiency with the respective impacts of 0.615 and 0.369 at the same level of significance — first%
. At the same time, when assessing the regulating role of legal factors to the effectiveness of risk
management, the legal factor will play a role in supporting CBSS CB CBs to regulate the effect of outside
factors on efficiency. QTRR on two aspects is economics and technology, while the political factor is not
statistically significant.

The topic has been surveyed and assessed the situation of risk management based on survey 168 SMEs in CBSS
area on the content of the risk management and content of DM. At the same time, the study has proposed a
model to study the effect of factors on risk management with the dependent variable is the effectiveness of risk
management. Independence is the internal factor, also known as the organization's resources, such as
managerial capabilities and decisions, internal control systems, teamwork skills and financial policies of
enterprises. External factors are considered factors that go beyond organizational control such as politics,
technology, economic factors. Legal elements with rules and regulations such as regulatory variables on the
relationship between internal and external factors and the effectiveness of risk management.

SPSS 22 and SmartPLS version 3.0 with the PLS-SEM structural equation model were used to conduct
the data analysis. The results showed that the internal factor significantly affected the effectiveness of risk
management of TDB CBSS companies with an impact level of 0.543 at 1% significance level in which the
leadership skill and internal control system Impacts are quite strong on effective risk management with a
corresponding impact of 0.615 and 0.369 at the same level of 1%. The external factor impacts on average 0.252
to the effective risk management and at 1% significance level. At the same time, when assessing the regulating
role of legal factors on the effectiveness of risk management, the legal factors will play a role in regulating the
effect of external factors on the effectiveness of forest management by forest enterprises. TDBB area.

Based on the development orientation of the CBLS industry and the results of research on the situation of DM
in the CBSS sector in CBSS area, the topic has proposed solutions to improve the effectiveness of risk
management in these companies including: raising High role and capacity of business managers and staff in risk
management, building a good internal control system for effective management, establishing and improving
information database for risk identification. in enterprises and enhance the use of derivatives in risk
management in enterprises. Specifically, the project has proposed 02 models and procedures for risk
management for SMEs in CBLS industry as well as recommendations to relevant government agencies and
authorities to implement these solutions.

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