
Investigating Challenges and Assessing Managers' Capabilities for Risk Management in Small and Medium-Sized Enterprises at the Time of Financial Crisis in Developing Economies

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Abstract

The occurrence of financial crises in today's world has become a probable issue and no business can ever predict that it will always go on in a quiet sea without storms. This makes it binding for business managers to manage risk, especially in developing economies that are naturally more vulnerable than the advanced economies of the world. Meantime, the role of small and medium-sized enterprises (SME) as stabilizing the economy is highlighted. These enterprises, on the one hand, are more vulnerable to these storms compared to large and well-established enterprises and on the other hand can play a more important role than larger firms in creating employment and stabilizing the economy. This article aims to investigate financing challenges during the downturn for small and medium-sized enterprises and then evaluate the performance of managers in small and medium-sized enterprises with a focus on risk management.

Keywords: Risk management, small and medium-sized enterprises, financial crisis, economic downturn, finance, developing economies

Investigando Desafios e Avaliando as Capacidades dos Gerentes para Gestão de Risco em Pequenas e Médias Empresas no Momento da Crise Financeira em Economias em Desenvolvimento

Resumo

A ocorrência de crises financeiras no mundo de hoje tornou-se uma questão provável e nenhuma empresa pode prever que sempre continuará em um mar tranquilo, sem tempestades. Isso torna obrigatório para os gerentes de negócios gerenciar riscos, especialmente em economias em desenvolvimento que são naturalmente mais vulneráveis do que as economias avançadas do mundo. Entretanto, o papel das pequenas e médias empresas (PME) como estabilização da economia é destacado. Estas empresas, por um lado, são mais vulneráveis a estas tempestades em comparação com empresas grandes e bem estabelecidas e, por outro lado, podem desempenhar um papel mais importante do que as grandes empresas na criação de emprego e na estabilização da economia. Este artigo tem como objetivo investigar os desafios de financiamento durante a desaceleração para pequenas e médias empresas e, em seguida, avaliar o desempenho dos gestores em pequenas e médias empresas, com foco no gerenciamento de riscos.

Palavras-chave: Gestão de risco, pequenas e médias empresas, crise financeira, retração econômica, finanças, economias em desenvolvimento.

Investigar los desafíos y evaluar las capacidades de los gerentes para la gestión de riesgos en las pequeñas y medianas empresas en el momento de la crisis financiera en las economías en desarrollo

Resumen

La aparición de crisis financieras en el mundo de hoy se ha convertido en un problema probable y ninguna empresa puede predecir que siempre continuará en un mar tranquilo sin tormentas. Esto obliga a los gerentes de negocios a gestionar el riesgo, especialmente en economías en desarrollo que son naturalmente más vulnerables que las economías avanzadas del mundo. Mientras tanto, se destaca el papel de las pequeñas y medianas empresas (PYME) como estabilizador de la economía. Estas empresas, por una parte, son más vulnerables a estas

tormentas en comparación con empresas grandes y bien establecidas y, por otra parte, pueden desempeñar un papel más importante que las grandes empresas para crear empleo y estabilizar la economía. El objetivo de este artículo es investigar los desafíos de financiamiento durante la desaceleración de las pequeñas y medianas empresas y luego evaluar el desempeño de los gerentes en las pequeñas y medianas empresas con un enfoque en la gestión de riesgos.

Palabras clave: gestión de riesgos, pequeñas y medianas empresas, crisis financiera, recesión económica, finanzas, economías en desarrollo.

Introduction

Financial and economic crises sometimes affect the world of business and economics for various reasons and cause many problems for economic enterprises and households. Given that the occurrence of these problems is almost unpredictable or even if predicted, both their prevention and management are difficult at least in the short term, especially in the Third World countries, economic enterprises should always be prepared to deal with economic downturn and crisis. Also, managers should always have at their fingertips the necessary tools to take action in the storms undermining the economy and predict these circumstances. Further, the role of small and medium-sized enterprises is of crucial importance due to their great contribution to employment and production and the possibility of setting up personal businesses with relatively small capital and appropriate financing. Small and medium-sized enterprises play a stabilizing role in the market and in case of the failure to play a proper role on the part of these firms, escalation of crises will be definitive due to lack of financial and economic infrastructure. Just as in the 2008 crisis, the role of economic enterprises in most of the developing countries, such as China and India, and even the developed and rich countries, such as England, was quite obvious. Iran is also no exception to this rule because of having similar economic coordinates with developing countries. For many years, the Iranian economy has been grappling with serious economic problems, such as lack of financing, sanctions and currency and monetary crises. These crises peaked in 2018 as a result of the accumulation of economic problems and this has doubled the necessity of devising an expedient and appropriate solution on the part of authorities and directors of economic enterprises.

Despite the fact that small and medium-sized enterprises are affected by the existing crisis, they must work for their survival and try to maintain economic stability and prevent increased unemployment, which make their critical duty doubly important. But the essential point is that despite all these vulnerabilities, how can small and medium-sized enterprises survive this crisis and help the economy? In other words, what tools should be used by small

and medium-sized enterprises to manage the risk of the existing situation and how do they make risk management practice approach the optimal conditions in the current situation? This article seeks to answer the following questions: What are the challenges facing small and medium-sized enterprises at the time of economic crisis in developing countries like Iran? And to what extent do the managers of such firms have the ability to deal with crises and risk management? In this study, we examine these challenges in terms of financing problems for small and medium-sized enterprises during the downturn and crisis and then try to assess managers' performance in risk management.

Literature Review

Many studies have been conducted in the field of risk management during the downturn with a focus on small and medium-sized enterprises both inside and outside the country, some of which are mentioned below.

In their article, Baqaei et al. (2009) define financial strategies. This study focuses on how to manage companies and adopt appropriate strategies at the time of economic downturn and companies' entry into the phase of financial emergency and increased overall risk. In the end, real and financial strategies to avoid corporate entry into the financial emergency phase are provided.

The research by Shinozaki (2012) discusses new financing governance of small and medium-sized enterprises in the era of global disturbances and presents empirical analyses about bank financing for small and medium-sized enterprises in selected Asian countries. The author believes that insufficient access to financial resources is one of the main causes of disruption in the development of small and medium-sized enterprises and in Asia, these firms have poor access to financial resources.

In his treatise, Soininen (2013) explores the main factors and concepts related to the performance of entrepreneurial operations for small and medium-sized enterprises in times of economic crisis. The first goal of this research is to investigate the concepts associated with the performance of entrepreneurial operations and test the role of entrepreneurial operations in how to deal with enterprises at the operational level. The second goal is to develop a dominant understanding of the determinants of entrepreneurial operations by exploring the relationship

between values associated with owner's work, attitudes, demographic characteristics, firm's financial resources and entrepreneurial operations.

Belás et al. (2015) performed a study in which important determinants of financial risk in the sector of small and medium-sized enterprises were defined and compared. A survey on the ideas of entrepreneurs was conducted in 2015 in the Czech Republic, which was focused on the impact of factors such as gender and education level of entrepreneurs on the approach to financial risk management. We found that three-fourths of entrepreneurs in the small and medium-sized enterprises sector in the Czech Republic strongly perceived financial risk. However, their ability to properly manage financial risks in the sector of small and medium-sized enterprises was not at an appropriate level. The authors concluded that only a relatively small number of entrepreneurs created financial reserves in their companies and thus, this approach did not have significant weight in the SME sector. No significant differences were identified in the approach of entrepreneurs of small and medium-sized enterprises for risk management in relation to gender and education.

Kozubíková et al. (2015) investigated the relationship between personality traits and the approach to understanding and managing business risks. Based on personality traits and knowledge, entrepreneurs in this research were divided into two categories, including artist entrepreneurs and businessmen. Both groups of entrepreneurs considered market risk as the most important risk, as shown by the drop in corporate performance during the crisis. The results demonstrated no significant difference in the attitude of these two groups of entrepreneurs in the approach to credit risk. Here, it was proved that defined business categories have different approaches to knowledge about commercial banks credit conditions. Findings of the research by Kozubíková et al. (2015) indicated a high level of confidence in the groups of entrepreneurs when evaluating the capability of financial risks management in companies and also the great intensity of entrepreneurial optimization in relation to personal characteristics of entrepreneurs.

Marino et al. (2008) carried out a study regarding managers' reaction to environmental shocks by assessing the effectiveness of shock type, firm's strategic orientation and its resources in the intention to form a strategic alliance during the Asian financial crisis and thereafter in mature economies. The results of two samples of small and medium-sized enterprises in Indonesia revealed that these factors affected alliance intention although this result was not consistent with previous findings in more mature markets. Overall, results of this study provide critical insights about strategic actions of enterprises in the emerging markets, especially in

connection with key management motivations for establishing a strategic alliance between small and medium-sized enterprises.

In their article, Altman et al. (2008) used event and non-financial data to complete the limited accounting data, which are often available for unlisted enterprises. The authors used a sample consisting of more than 5.8 million account sets of unlisted enterprises, of which over 66,000 accounts had failed during the period 2000-2007. The authors found that qualitative data related to variables such as legal action by creditors for the revival of unpaid debts make an enormous contribution to increased risk power models for small and medium-sized enterprises.

The article by Smith and Watkins (2012) addresses the obstacles to the success of small and medium-sized enterprises in the field of risk management and unawareness of risk management techniques on the part of the managers of these enterprises in South Africa. With a structured approach to enterprise risk management within small and medium-sized enterprises, they believe that potential benefits such as reduced excessive risk management and organizational alignment towards the attitude of small and medium-sized enterprises are perceivable.

Brustbauer (2014) conducted a study and analyzed enterprise risk management in small and medium-sized enterprises by developing a structural model based on field questionnaire. Here, the prerequisites for implementing enterprise risk management and practical approaches for enterprise risk management and their effects on strategic orientation are obtained. The results suggest that small and medium-sized enterprises follow a passive or active enterprise risk management approach which influences their strategic orientation. A passive approach leads to a defensive strategy and an active approach results in an aggressive strategy. The enterprise size and the ownership structure affect the implementation of enterprise risk management. The applied concept of enterprise risk management helps small and medium-sized enterprises adapt to the changing environment so that they can achieve the strategic advantage and increase their competitiveness and business success.

The study by Proença et al. (2014) aims to investigate the determinants of the capital structure of small and medium-sized enterprises in Portugal and assess the effects of the 2008 financial crisis on the capital structure of small and medium-sized enterprises in this country. This sample is relevant to the 2007-2010 period, resulting in 12857 small and medium-sized enterprises in Portugal. According to the results, liquidity, asset structure and profitability are

the most important determinants in explaining the capital structure of small and medium-sized enterprises in Portugal.

Skoufias (2003) reviewed 12 research papers presented at the conference. This conference examines two issues: 1) the interaction between household tolerance strategies and the impact of crisis and natural disasters on various dimensions of welfare; 2) some of the strategies adopted by government centers to protect households and their members against undesirable effects of accumulated shocks.

Conceptual Model

The conceptual model of this study comprises two main components. Initially, challenges of small and medium-sized enterprises for financing during the economic downturn are examined with regard to three indicators of enterprise life, enterprise performance and enterprise size, based on the research model of Cowling et al. (2012). In their model, it has been stated that with shorter enterprise life, poorer enterprise performance and smaller enterprise size, financing during the downturn is more difficult and even becomes impossible. We test this model in Iran's business environment while we believe that in a developing economy like Iran, financing for small and medium-sized enterprises decreases dramatically at the time of downturn. However, there may be firms with more working experience, better financial performance and bigger size that can achieve greater financing. But this issue will certainly be complicated for enterprises that lack these three features.

In another section, we take advantage of the combination of the chaos theory model and the research by Huu Le Nguyen and Soren Kock (2011), which embraces 8 components as follows:

- 1- Chaos expectation
- 2- Readiness for change
- 3- Quick change of business
- 4- Enterprise structure reorganization
- 5- Transferring focused strategies from production to marketing
- 6- Flexibility in pricing, delivery and payment
- 7- Cost reduction
- 8- Strategic alliances

By combining four components of the research by Watt and eight components of the study by Huu Le Nguyen and Soren Kock (2011) and the chaos theory model, the following research model will be obtained:

Research hypotheses

In the section of challenges, we have three hypotheses based on the above model, which are stated below:

Hypothesis 1: The shorter the life of small and medium-sized enterprises, the more difficult their financing during the downturn will be.

Hypothesis 2: The smaller the size of small and medium-sized enterprises, the more difficult their financing during the downturn will be.

Hypothesis 3: The poorer the financial performance of small and medium-sized enterprises, the more difficult their financing during the downturn will be.

In the section of risk management performance assessment among managers of small and medium-sized enterprises, we raise the following hypothesis:

Hypothesis 4: Managers of small and medium-sized enterprises do not have risk management readiness at the time of economic downturn in the country.

Material and Methods

In this study, we benefit from a combination of library and field methods to do the research. In the library method, we extracted the research model by studying different articles, which is a combination of the chaos theory model and Huu Le Nguyen and Soren Kock (2011) model and also, financing challenges of small and medium-sized enterprises based on the research by Cowling et al. (2013). In the field section, we prepared a questionnaire based on the Likert scale to investigate the relationship between the variables of enterprise size, life and performance with financing problems during the downturn. Further, to examine the amount of managers' readiness for enterprise risk management, we applied another questionnaire based the Likert scale and managers' opinion. The research population encompasses all small and medium-sized enterprises in Tehran as the capital of Iran, of which 100 enterprises were selected as the sample. We sent a questionnaire to managers or acting managers in these 100 enterprises. 87 enterprises responded fully to our questionnaire. For the first to third hypotheses, we used an independent variable as the financing state. This variable included 5 other variables and from the average scores of these five ranked variables, the scale variable score called "financing state" was obtained. The dependent variables in the first stage consisted of life,

number and financial performance and to determine the relationship between the two variables of the number of employees and enterprise life and the research independent variable, i.e. financing state, Pearson correlation coefficient was employed and to assess the relationship between financial performance and financing state, Spearman correlation coefficient was used since financial performance is a ranked variable and number and life are scale variables.

For the second stage of the research, i.e. risk management performance assessment of directors in small and medium-sized enterprises at the time of financial downturn, we applied descriptive statistics. Accordingly, the eight variables existing in the model provided by Huu Le Nguyen and Soren Kock (2013) were raised in the form of eight questions based on the Likert scale in the questionnaire and then, the scores were evaluated on the basis of cumulative frequency. Statistical analysis was performed in SPSS-12 software.

Results

First of all, a summary of the research descriptive statistics including age, gender and also the life of enterprises under study and the number of employees and the average financial performance evaluated by the directors of these companies is provided in the following table.

Table 1

A summary of the research descriptive statistics

Average age of respondents	Gender	Average life of enterprises	Average number of employees per enterprise	Enterprise financial performance from one to ten
39.4	20.7% female 79.3% male	7.94 years	8.49 people	4.74

In the next step, the first three hypotheses concerning the relationship between enterprise life with the number of employees and financial performance were examined. For the first and second hypotheses, Pearson correlation coefficient was employed and for the third hypothesis, Spearman correlation coefficient was applied. The statistical results in SPSS software are as follows.

Table 2

Study of the correlation between financing state and enterprise life

	Enterprise life	
	Pearson correlation coefficient	Significance level
Financing state	0.309	0.002

Considering that the correlation coefficient is positive and the significance level is lower than 0.05, the first hypothesis indicating the relationship between enterprise life and financing state or better financing is confirmed.

Next, the second hypothesis was investigated and the relationship between enterprise size with the number of employees and financing state was explored, whose results are as follows.

Table 3

Study of the correlation between financing state and enterprise size

	Enterprise size	
	Pearson correlation coefficient	Significance level
Financing state	0.345	0.001

As can be observed, Pearson correlation coefficient is positive and the significance level is equal to 0.001, which shows the significance of the relationship between these two variables.

Table 4

Study of the correlation between financing state and enterprise financial performance

	Enterprise financial performance	
	Spearman correlation coefficient	Significance level
Financing state	0.308	0.002

Here, the correlation coefficient is positive and this relationship is significant since the significance level is less than 0.05.

Accordingly, in the first stage, all three hypotheses are approved and in short, we can say that with longer enterprise life, higher number of employees and better financial performance, an enterprise will be in better conditions in the financing process at the time of economic crisis and downturn.

But in the next step, eight variables of the model by Huu Le Neguyen and Soren Kock (2011) were investigated. In the table below, average positive scores of managers responding to each variable in the questionnaire have been presented.

Table 5

Study of positive scores of managers for each variable of the questionnaire based on the calculation of the percentage of cumulative frequency

Chaos expectation	Readiness for change	Quick change of business	Enterprise structure reorganization	Transferring focused strategies from production to marketing	Flexibility in pricing, delivery and payment	Cost reduction	Strategic alliance
55.2	50.6	49.4	50.7	47.1	49.6	52.9	53.8

According to the above table which is based on descriptive statistics and the percentage of cumulative frequency of responses to eight questions associated with the eight variables in the above table, it can be mentioned that managers' readiness for risk management is not so high because only between 45 and 55 percent of managers have stated that they have implemented the above eight measures at the time of financial crisis for risk management of their firms and this percentage is not very acceptable. The highest score is related to the first variable, i.e. chaos expectation, and after that, the variable of strategic alliances has obtained the highest score. The lowest scores are respectively related to the variable of transferring focused strategies from production to marketing and then change of business and flexibility in pricing, delivery and payment. All of these three variables are considered as rejected variables.

Discussion and Conclusion

Certainly, small and medium-sized enterprises financing is one of the most important challenges in times of crisis while in a relatively favorable economic situation in developing countries, we still witness that small and medium-sized enterprises face a lack of financial resources and are always striving to keep their business steady, but this situation and lack of financial resources are extremely tangible in times of crisis and downturn. What has been achieved in this study is that managers of small and medium-sized enterprises are not prepared to manage their enterprise risk during economic crisis and downturn in Iran and are not much familiar with many of the business components during the downturn and theories such as the chaos theory. Given the critical conditions and problems in the Iranian economy, business managers certainly need to understand the principles and learn risk management techniques in order to maintain their business and pass through the turbulent period that has always been temporary and transient. Another important point emphasized in this study is that the necessity of financing by banks, financial institutions and investors for small and medium-sized enterprises is very serious and small and medium-sized enterprises managers should also face and understand the financing issue at the time of downturn, which is itself a component of risk management. Certainly, the biggest problem during the downturn for these enterprises is lack of proper financing or lack of attention on the part of financial institutions and suppliers, and what exacerbates this situation includes small enterprises, lack of much experience, and inappropriate financial performance during the downturn. Resolving this problem is entirely beyond managers' ability and the role of government and financial and banking institutions

along with them is crucial for managing the downturn and crisis. What can be done in future studies regarding risk management is to determine other variables affecting financing along with the variables of enterprise life, size and financial performance and test the rate of their importance in the business climate of Iran. We hope that this research can take a step towards introducing managers to the issue of risk management and also solving the problem of liquidity shortage for these strategic enterprises in the country's economy.

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