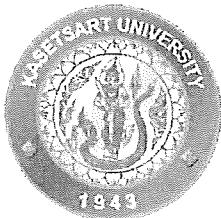




**24th EBES CONFERENCE - BANGKOK
PROCEEDINGS**

**JANUARY 10-12, 2018
BANGKOK, THAILAND**

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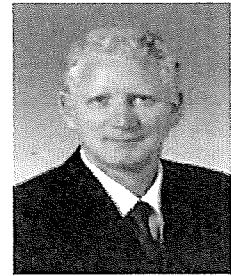


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EBES - Eurasia Business and Economics Society

EBES is a scholarly association for scholars involved in the practice and study of economics, finance, and business worldwide. EBES was founded in 2008 with the purpose of not only promoting academic research in the field of business and economics, but also encouraging the intellectual development of scholars. In spite of the term "Eurasia", the scope should be understood in its broadest term as having a global emphasis.



EBES aims to bring worldwide researchers and professionals together through organizing conferences and publishing academic journals and increase economics, finance, and business knowledge through academic discussions. Any scholar or professional interested in economics, finance, and business is welcome to attend EBES conferences. Since our first conference in 2009, around 9,650 colleagues from 95 countries have joined our conferences and 5,541 academic papers have been presented. Also, in a short period of time, EBES has reached 1,794 members from 84 countries.

Since 2011, EBES has been publishing two academic journals which are both indexed in *Scopus* and *Emerging Sources Citation Index*. One of those journals, *Eurasian Business Review - EABR*, is in the fields of industrial organization, innovation and management science, and the other one, *Eurasian Economic Review - EAER*, is in the fields of applied macroeconomics and finance. *Eurasian Economic Review* is published thrice a year and *Eurasian Business Review* is published quarterly and they have been published by *Springer* since 2014.

Furthermore, since 2014 Springer has started to publish a new conference proceedings series (*Eurasian Studies in Business and Economics*) which includes selected papers from the EBES conferences. The 10th, 11th, 12th, 13th, 14th, 15th, 16th, and 17th EBES Conference Proceedings have already been accepted for inclusion in the Thomson Reuters' *Conference Proceedings Citation Index*. The 18th and subsequent conference proceedings are in progress.

On behalf of the EBES officers, I sincerely thank you for your participation and look forward to seeing you at our future conferences. In order to improve our future conferences, we welcome your comments and suggestions. Our success is only possible with your valuable feedback and support.

I hope you enjoy the conference and Bangkok.

With my very best wishes,

Jonathan Batten, PhD
President

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Welcome to the 24th EBES Conference - Bangkok

We are excited to organize our 24th conference on January 10th, 11th, and 12th, 2018 with the *Faculty of Business Administration, Kasetsart University* at the Novotel Bangkok on Siam Square in Bangkok, Thailand with the support of the *Istanbul Economic Research Association*. We are honored to have received top-tier papers from distinguished scholars from all over the world. We regret that we were unable to accept more papers. In the conference, 178 papers will be presented and 334 colleagues from 47 countries will attend the conference.



We are pleased to announce that distinguished colleagues **Jonathan Batten** from *Monash University, Australia*, **Euston Quah** from *the Nanyang Technological University, Singapore*, **Naoyuki Yoshino** from *the Asian Development Bank Institute, Tokyo, Japan* and **Partha Sen** from *Delhi School of Economics, India* will join the conference as keynote speakers.

Throughout the years, EBES conferences have been an intellectual hub for academic discussion. Participants have found an excellent opportunity for presenting new research, exchanging information and discussing current issues. We believe that our future conferences will improve further the development of knowledge in our fields. In addition, based on the contribution of the paper to the field, the *EBES Award Committee* has selected one of the papers for the *Best Paper Award*. The *Best Paper Award* winner will be announced during the conference.

On behalf of EBES, I would like to thank to *the Faculty of Business Administration, Kasetsart University* for their hospitality and our sponsor *Istanbul Economic Research Association*, all presenters, participants, board members, and keynote speakers.

I am looking forward to meeting you in person in Bangkok and seeing you all again at the upcoming EBES conferences.

Best regards,

Ender Demir, PhD
Conference Coordinator

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Bankruptcy risk Analysis using Financial Ratios for Small and Medium Enterprises (SMEs) Performance in Prachuap Khiri Khan, Thailand

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Abstract

The objectives of this paper were 1) to analyze the level of risk (financial distress) for SMEs performance in Prachuap Khiri Khan, 2) to study causes and problems of SMEs performance in Prachuap Khiri Khan and 3) to suggest the approach of business adjustment for these firms. The samples were 100 companies from manufacturing, service and trading groups. The research presented Altman's Z-Score Model as a research instrument, and interview for explaining a research questions.

The results found that 1) the performance of these firms stayed near distress zone except trading group that had slightly recovery, 2) SMEs firms confronted with poor status like unsystematic accounting forms, inefficiency management and inaccessibility of financial institution together with economic downtrend. 3) The SMEs entrepreneurs had to develop knowledge and skills according with business change and try to enhance the new market either domestic or international for enlarging market opportunity.

Keywords: Altman's Z-score model, Bankruptcy, SMEs

Introduction

Prachuap Khiri Khan is one of the western provinces of Thailand. The province contains the narrowest part of Thailand. At its narrowest, it is just 13 km. (8.1 miles) from the coast of the Gulf of Thailand to the border with Myanmar in the Tenasserim Hills. The province is best known for its many beautiful sandy beaches and lovely bays in the Eastern part.

Economic structure of Prachuap Khiri Khan depend on commercial, agriculture and fishery. Most of industries are household firms from the community for example agricultural products, fishery products and earthenware. (Ministry of Industry, 2016) Not only Prachuap Khiri Khan have tourist attractions, but also having Small and Medium Enterprises (SMEs) distributed to many areas in this province.

SMEs in Prachuap Khiri Khan totaled 21,863 firms and the proportion was about 19.53% of SMEs in the western of Thailand. (Office of Small and Medium Enterprises Promotion, 2015) The economic situation of SMEs exports in August 2016 grew 1.6% from the same period of previous year, and the proportion was about 29.7% of total exports. The major market concentrated in ASEAN countries at 46,794 Million Baht, followed by China and USA at 17,798 and 16,965 Million Baht in consecutively. (Office of Small and Medium Enterprises Promotion, 2016)

According to the annual report of the Office of Small and Medium Enterprises Promotion, the new businesses at the national level has increased 8.9%, while the abolition of business has increased 42.1% in 3 quarters of 2016 comparing with the year before. This

phenomenon was consistent with the findings of the Bank of Thailand study (2014), that inferred to the SMEs problem in Thailand. SMEs in Prachuap Khiri Khan also confront.

As mentioned it above, the researcher would study the SMEs performance in Prachuap Khiri Khan by using Altman Z – Score. This model was suitable for small and medium enterprises because it modified variable for the non - listed company in the stock exchange that could apply to Cases of SMEs. (Altman, 1993). The benefits of consequence study will lead to understand their actual statue, what cause problems and how to survive from that situation.

Research Objectives

1. To analyze the level of risk (financial distress) for SMEs performance in Prachuap Khiri Khan.
2. To study causes and problems of SMEs performance in Prachuap Khiri Khan.
3. To suggest the approach of business adjustment for SMEs performance in Prachuap Khiri Khan.

Scope of the study

Information scope:

The financial ratios were calculated from financial statement of SMEs in Prachuap Khiri Khan, Thailand. The samples consisted of 100 companies from manufacturing, service and trading groups.

This sample size calculated by Yamane approach from 21,869 firms and selected with the criteria of listed company at the ministry of commerce that required the systematic financial statement.

Variable scope:

Dependent Variables are risk (Probability of bankruptcy) that calculated by Altman's Z-Score Model.

Independent Variables are four financial ratios in Altman's Z-Score Model. The ratios are listed below:

- the firm's working capital divided by its total assets,
- the firm's retained earnings divided by its total assets,
- the firm's earnings before interest and taxes (EBIT) divided by its total assets and
- the book value of the firm divided by its total assets

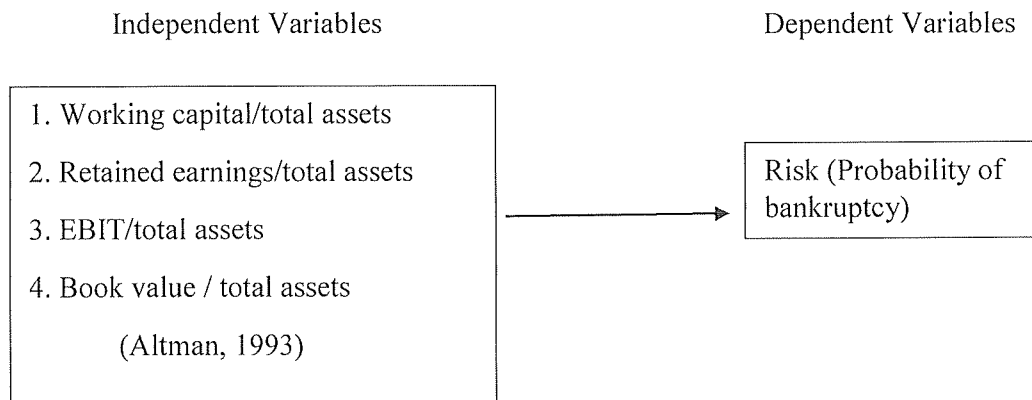
Time scope:

The study period are 5 years in 2012 – 2016 whilst Thailand economic situation stayed on downtrend.

Conceptual framework of the study

Learning from the related Literature review, it can conclude and determine the Conceptual framework like the following figures.

Figure 1: The conceptual framework



Literature Review

Rattapongpinyo Taninrat., (2017) studied Determinants of Survival and Thriving of SMEs in the Western Provinces of Thailand. His research presented about what factors related to the survival and thriving situation of SMEs and suggested that involved persons should take participation in resolving a problem.

Siraprapa Sriwiroj and Lukhana Lusawat (2016) studied Thai SMEs and Risk of Cost in the ASEAN Free Trade Area (AFTA). This research presented the importance of risk of cost and the concept of Enterprise Risk Management related with organization survival.

Sascha Kraus, et.al. (2012) studied Entrepreneurial orientation and the business performance of SMEs: a quantitative study from the Netherlands showed that proactive firm behavior positivity contributes to SMEs performance during the economic crisis.

Chuthamas Chittithaworn, et.al. (2011) studied Factors Affecting Business Success of Small and Medium Enterprises (SMEs) in Thailand. The result shown that the most significant factors affecting business success of SMEs were SMEs characteristics, customer and market, the way of doing business, resources and finance, and external environment.

Edward I. Altman and Gabriele Sabato (2007) studied Modelling Credit Risk for SMEs: Evidence from the U.S. Market. They developed a distress prediction model specifically for SME sector and to analysis its effectiveness compared to a generic corporate model.

Machek, O. (2014) studied Long – term Predictive Ability of Bankruptcy Models in the Czech Republic: Evidence from 2007 – 2012. This article determined the percentage of case when these models correctly predicted failures of companies up to 5 years in advance, and

found that the INO5 and IN99 credibility indexes provided the best results, as well as the Altman model.

Research Methodology

Source of information

Secondary data used in financial ratios calculating come from balance sheet and income statement of SMEs in Prachuap Khiri Khan in 2012 – 2016. These data was collected from the Department of Business Development.

According to, the researcher interviewed entrepreneur of SMEs that studied causes and problems of SMEs performance and suggested the approach of business adjustment for SMEs.

Data analysis

- To analyze the level of risk (financial distress) this study used Altman's Z-Score Model. The model assigns a firm a Z score derived from 4 weighted variables:

$$Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$$

where

- Z = the discriminant score,
- X_1 = Working capital/total assets
- X_2 = Retained earnings/total assets
- X_3 = EBIT/total assets
- X_4 = Book value / total assets.

The final number-the Z-score- will yield a number between -4 and +8. Scores that add to Z-score<1.1 have a high probability of bankruptcy or distress zone, while Z-scores>2.6 represent financial soundness or safe zone. The gray zone of ignorance exists when firms have Z-score between 1.1 and 2.6.

- To study causes and problems of SMEs performance in Prachuap Khiri Khan, This research explained by referenced interview from related people and checking with secondary data on surveying and observation.

- To suggest the approach of business adjustment for these firms. The study concluded inference from stakeholders' verification by entrepreneurs, tourists and domestic customers.

Results

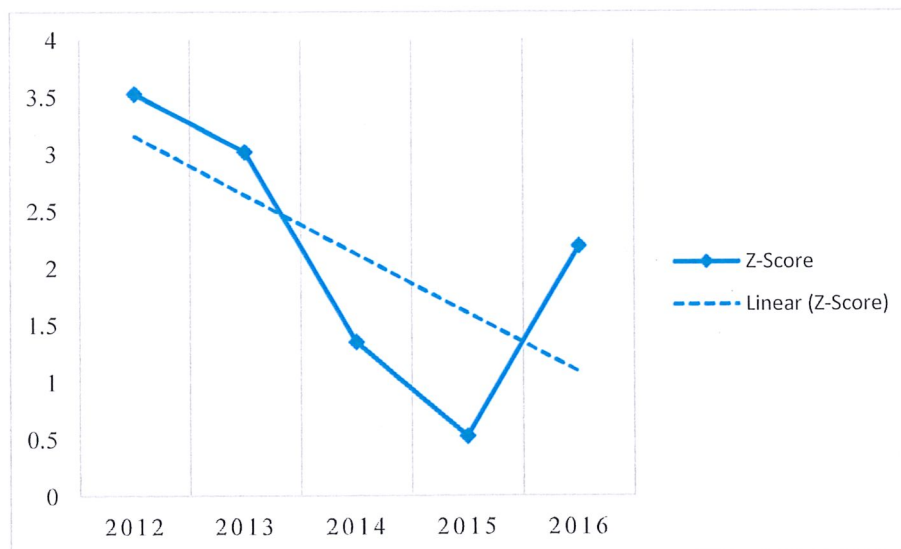
1. To analyze the level of risk (financial distress) for SMEs performance in Prachuap Khiri Khan, Thailand.

Figure 2: Level of risk (financial distress) in service group.



The result of SMEs service group showed that the Z-score decreased slightly during 2012 – 2016 particularly, the 2015 and 2017 decreases markedly. This group had Z – score between 1.4 and 1.1 in 2012 – 2014 or within Gray zone except 2 year later, it came to the Distress zone (score <1.1) at -0.91 and -3.85 respectively. Even if service sector would show recovery sigh but the SMEs firm did not take the benefit absolutely. Thus, the risk in this group was very high to bankruptcy.

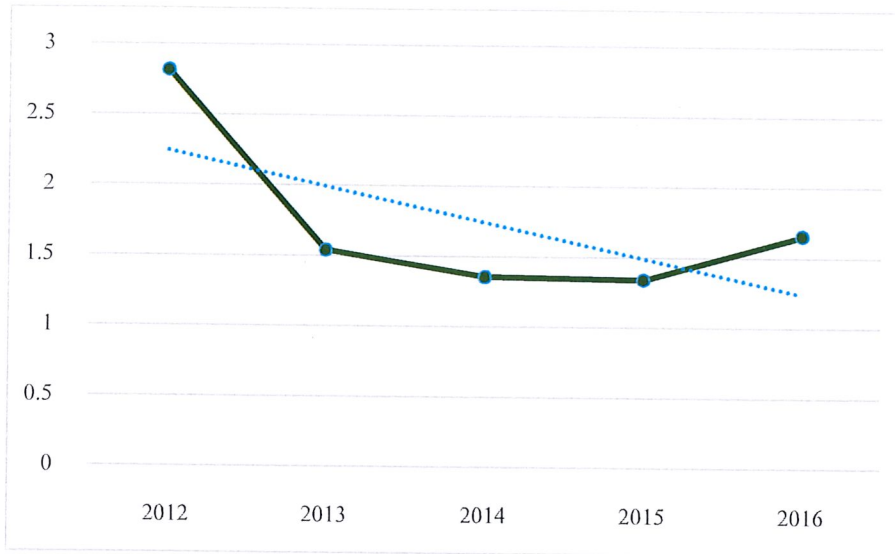
Figure 3: Level of risk (financial distress) in manufacturing group.



The result showed that the Z – score in manufacturing group went down dramatically and then lowest point to 0.52 in 2015, it went through the Distress zone. Next year later Z – score increased to 2.2 or within Gray zone. In overall, most of them stayed above 1.1 except 2015 falling in the Distress zone because export goods became worse from the decreasing in

oil price and the impact of the slowdown in the economy of partner country especially China and ASEAN. As a result, this group was a probability of bankruptcy.

Figure 4: Level of risk (financial distress) in trading group.



This figure presented the Z – score from 2012 – 2016 that it had a downward trend. The Z – score was in Safe zone in 2012 after that it stayed on Gray zone until now. This situation demonstrated uncertain direction for trading group because sales have been sluggish over the past several years, although slightly improved in the last year due to government stimulus measures.

2. To study causes and problems of SMEs performance in Prachuap Khiri Khan.

From interviewing the entrepreneur of SMEs in Prachuap Khiri Khan, The researcher could conclude issue results as shown in table below.

Table 1: Causes and problems of SMEs performance.

	Service	Manufacturing	Trading
Status	Depress	Downtrend	Slightly recovery
Causes and problems	-Earnings from tourist decrease because of less expenses and time reserve -Unsystematic Management -Capital adequacy - lack of new knowledge	-Low demand -Disadvantage competition from economy of scale and product design - lack of new knowledge	-Effect from Tourist demand -Declining demand especially from illegal foreign labor - lack of new knowledge
Solution	-Target to domestic specific groups - Know – how development	-Cost controlling -Quality management - Know – how development	-Turn to domestic demand -Diversify Selling goods - Know – how development

Learning from interview data the researcher could conclude that the causes and problems of all group were low demand and lack of new knowledge. For solution, these groups should focus on new domestic customers to replace foreign tourists, diversified their products or services and applied new knowledge to improve management systems for credit accessibility.

3. To suggest the approach of business adjustment for SMEs performance in Prachuap Khiri Khan.

Learning from the research survey and data analysis, under the gloomy situation the SMEs entrepreneurs had to develop knowledge and skills according with business change such as accounting standard improvement and product design management. And try to enhance the new market either domestic or international for enlarging market opportunity for example, directing to niche market or designing for specific groups.

Discussion

1. To analyze the level of risk (financial distress) for SMEs performance in Prachuap Khiri Khan, Thailand.

From the research result showed that there was high risk to bankruptcy in SMEs especially service group. This issue conformed to the annual report of the Office of Small and Medium Enterprises Promotion (2016), the abolition of business has increased 42.1% in 3 quarters of 2016 comparing with the year before.

2. To study causes and problems of SMEs performance in Prachuap Khiri Khan.

The finding about causes and problems of all group were low demand and lack of new knowledge accorded with the research of Factors Affecting Business Success of Small and Medium Enterprises (SMEs) in Thailand. (Chittithaworn C. et.al., 2010) that explained by SMEs characteristics, customer and market, the way of doing business, resources and finance, and external environment.

3. To suggest the approach of business adjustment for SMEs performance in Prachuap Khiri Khan.

The SMEs entrepreneurs had to develop knowledge and skills according with business change and try to enhance the new market either domestic or international for enlarging market opportunity consisted with Determinants of Survival and Thriving of SMEs in the Western Provinces of Thailand. (Ratanapongpinyo, 2017)

Conclusion

The research results displayed, firstly the performance of these firms stayed near distress zone except trading group that had slightly recovery, then SMEs firms confronted with poor status like unsystematic accounting forms, inefficiency management and inaccessibility of financial institution together with economic downtrend. Finally, The SMEs entrepreneurs in Prachuap Khiri Khan had to adapt their organization management conforming to business change and try to enhance the new market for business adjustment approach.

Recommendation

The government should play a leading role in knowledge transferring the adjustment approach for current business to the traditional SMEs, and support them in enhancing a new market. Moreover, the local SMEs should not totally depend on government sector, they might try to improve their own path of progress by determining on strategies which let them to increase efficacy management, access new market, increase their revenue and expand their customer base.

As regards the next research, the interested researcher is advised to keep studying on how to determine suitable government policy for SMEs growth to match up the country development. Another useful research is the study about how to create and keep identity for the SMEs products to maintain his local product style until tomorrow without deteriorating. And the last interested research is the study about how to promote outstanding SMEs to the start up SMEs or upgrade them to the bigger size firms in appropriate time.

Acknowledgement

Thanks for impression and cooperation from all of the informants. This research is worth to the society, the researcher would dedicate this worthiness to all grateful and respectful related people. However, any mistakes happened in this research, the researcher would like to accept humbly and apologize for any inconvenience.

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