UNIVERSITI PUTRA MALAYSIA

IMPACT OF INFORMATION TECHNOLOGY ON SMEs SURVIVAL RATE IN THE MALAYSIAN MANUFACTURING INDUSTRY

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IMPACT OF INFORMATION TECHNOLOGY ON SMEs SURVIVAL RATE
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By

MOHAMMAD ALI JAMALI

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DEDICATION

To my dear Wife, Hatra Voghouei, I wish to thank her for the constant support and encouragement that she has so patiently given throughout the course of the research. Moreover, to my dear Artina who get along with situations which difficult for a kid and to my parents, who have endlessly loved and supported me.
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September 2010

Chairman: Professor Zakariah Abdul Rashid, PhD

Faculty: Faculty of Economics and management

This study focuses on the impact of information technology on the survival rate of small and medium enterprises (SMEs) in the manufacturing sector in Malaysia. It analyses the effects of information technology on survival of SMEs in 2000 and 2005, based on two separate groups of closed firms. The study attempts to present a rational relationship between theories of firm survival and information technology. It sets out to show that while factors such as minimum efficient size, market and firms attributes, transaction cost, uncertainty, opportunism, information asymmetry and atmosphere, profitability and learning have an impact on the survival of SMEs, the effect of information technology is also significant.
The Cox Proportional Hazard Regression Model is used for estimation of coefficients and survival functions. Evidence suggests that factors such as minimum economies of scale, productivity, technology usage, profits, R&D, location and capital-labor ratio affect the survival of SMEs. Of equal importance is the expenditure on information technology, which is said to have an impact on the viability of firms. By employing the model this study presents that information technology expenditure has positive effect on survival of SMEs in Malaysian manufacturing sector in this period. The model further shows that information technology plays a bigger role among the larger SMEs than the smaller ones. Thus, policy maker with regard to main finding of this study should consider some policy for promoting the IT among SMEs, especially larger ones in Malaysian manufacturing sector. Moreover, for increasing survival of SMEs, policy maker should encourage R&D among SMEs and concentrate on some sector, which have high entry rate.
Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

IMPAK TECHNOLOGY MAKLUMAT KE ATAS TAHAP KELANGSUNGAN HIDUP INDUSTRI KECIL DAN SEDERHANA DALAM INDUSTRI PERKILANGAN DI MALAYSIA

Oleh

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September 2010

Pengerusi: Zakariah Abdul Rashid, PhD
Fakulti: Fakulti Ekonomi dan Pengurusan

Kajian ini tertumpu pada kesan teknologi maklumat pada tahap kelangsungan hidup Industri Kecil Sederhana (IKS) dalam sektor perkilangan di Malaysia. Jusre, analisis ini melihat kesan teknologi maklumat terhadap kelangsungan hidup (IKS) dari tahun 2000 hingga 2005 berdasarkan kepada dua kumpulan yang berasingan daripada syarikat yang berdekatan. Oleh itu, kajian ini cuba untuk mewujudkan hubungan yang rasional antara teori kelangsungan hidup syarikat dan teknologi maklumat. Hal ini bertujuan untuk menunjukkan faktor-faktor sementara seperti kadar kecekapan minimum, sifat syarikat, kos transaksi, ketidakpastian, peluang, maklumat asymmetry dan suasana, keuntungan dan pembelajaran yang mempunyai
kesan terhadap kelangsungan hidup IKS. Selain itu, kesan terhadap teknologi maklumat juga diambil kira.

Cox Proportional Hazard Regression Model digunakan untuk penafsiran angkali dan fungsi kelangsungan hidup. Bukti menunjukkan bahawa faktor-faktor seperti skala ekonomi minimum, produktiviti, penggunaan teknologi, keuntungan, R&D, kawasan dan nisbah modal-tenaga kerja mempengaruhi kelangsungan hidup IKS. Hal yang sama pentingnya adalah pengeluaran teknologi maklumat yang dikatakan mempunyai kesan kepada kelangsungan hidup syarikat. Justeru, dengan menggunakan model kajian ini maklumat teknologi pengeluaran sebagai kesan positif terhadap kelangsungan hidup IKS dalam faktor pembuatan Malaysia pada tempoh yang dikaji dapat dikesan. Model ini seterusnya akan memperlihatkan teknologi maklumat memainkan peranan lebih besar di antara IKS yang besar daripada IKS yang mempunyai pasaran yang kecil. Oleh yang demikian, pembuat dasar mengenai penemuan utama kajian ini haruslah mempertimbangkan beberapa dasar untuk mempromosikan teknologi dalam kalangan IKS, terutamanya yang lebih besar dalam sektor perkilangan Malaysia. Selain itu, untuk meningkatkan kelangsungan hidup IKS, pembuat dasar harus menggalakkan R&D dalam kalangan IKS dan menumpukan pada beberapa sektor yang mempunyai kadar pulangan yang tinggi.
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My thanks are due also to the all staff of the faculty of Economics and Management whose warm hospitality, understanding and support enabled me to do my thesis.
I certify that a Thesis Examination Committee has met on 6 September 2010 to conduct the final examination of Mohammad Ali Jamali on his PhD thesis entitled “Impact of information technology on SMEs survival rate in Malaysian manufacturing industry” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the degree of Doctor of Philosophy.

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Date: 25 November 2010
DECLARATION

I declare that the thesis is my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

________________________________________

MOHAMMAD ALI JAMALI

Date: 6 September 2010
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEDICATION</td>
<td>ii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>iii</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>v</td>
</tr>
<tr>
<td>ACKNOLEDGEMENT</td>
<td>vi</td>
</tr>
<tr>
<td>APPROVAL</td>
<td>viii</td>
</tr>
<tr>
<td>DECLARATION</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF TABLE</td>
<td>xiv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xv</td>
</tr>
<tr>
<td>ABBREVIATIONS</td>
<td>xvii</td>
</tr>
</tbody>
</table>

## CHAPTER

### 1 INTRODUCTION

1.1 Manufacturing sector in Malaysia
1.2 Small and Medium size Enterprises (SME’s) in Malaysia
   1.2.1 The Importance of SMEs
   1.2.2 Definition of SMEs in Malaysia
   1.2.3 Profile and Performance of SMEs in Malaysia
   1.2.4 SMEs in Manufacturing Sector in Malaysia
1.3 Information Technology and Small and Medium size Enterprises in the Manufacturing Sector
   1.3.1 What is Information Technology?
   1.3.2 Importance of IT for SMEs
   1.3.3 Information Technology and the Manufacturing Sector in Malaysia
   1.3.4 The Usage of Information Technology by SMEs
1.4 Summary
1.5 Problem statement
1.6 Objectives of study
1.7 Organization of study

### 2 LITERATURE REVIEW

2.1 Theoretical Framework of Survival of Firms
   2.1.1 Product life cycle (PLC) theory
   2.1.2 Transaction Cost Theory
   2.1.3 Traditional Economic Theory
2.2 Information technology theories
   2.2.1 Information Economics
   2.2.1 Information technology in neoclassical model
   2.2.2 General Purpose Technology (GPT) and Information Technology
   2.2.3 Information technology and resource based view
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3 Survival of Firms and Information Technology Theories Nexus</td>
<td>63</td>
</tr>
<tr>
<td>2.4 Summary</td>
<td>67</td>
</tr>
<tr>
<td>2.5 Empirical framework of survival rate of firms</td>
<td>67</td>
</tr>
<tr>
<td>2.5.1 Firm Level Variables</td>
<td>72</td>
</tr>
<tr>
<td>2.5.2 Industry Level Variables</td>
<td>76</td>
</tr>
<tr>
<td>2.5.3 Other Levels Variables</td>
<td>78</td>
</tr>
<tr>
<td>2.5.4 Models in Empirical Studies</td>
<td>79</td>
</tr>
<tr>
<td>2.6 Summary</td>
<td>81</td>
</tr>
<tr>
<td>3 METHODOLOGY AND RESEARCH DESIGN</td>
<td>85</td>
</tr>
<tr>
<td>3.1 Discrete Choice Models</td>
<td>86</td>
</tr>
<tr>
<td>3.1.1 The Logit Model</td>
<td>87</td>
</tr>
<tr>
<td>3.2 Survival analysis models:</td>
<td>88</td>
</tr>
<tr>
<td>3.2.1 Survival and Hazard function</td>
<td>89</td>
</tr>
<tr>
<td>3.2.2 The Life Table Analysis</td>
<td>92</td>
</tr>
<tr>
<td>3.2.3 Kaplan–Meier method</td>
<td>93</td>
</tr>
<tr>
<td>3.2.4 The Exponential Model</td>
<td>95</td>
</tr>
<tr>
<td>3.2.5 The Weibull Model</td>
<td>97</td>
</tr>
<tr>
<td>3.2.6 Cox Proportional Hazard Regression Model (CPHRM)</td>
<td>99</td>
</tr>
<tr>
<td>3.3 Justification for the Model Chosen</td>
<td>100</td>
</tr>
<tr>
<td>3.4 Characteristics of the Cox Proportional Hazard Regression Model</td>
<td>102</td>
</tr>
<tr>
<td>3.4.1 Estimation</td>
<td>103</td>
</tr>
<tr>
<td>3.4.2 Goodness of fit</td>
<td>116</td>
</tr>
<tr>
<td>3.4.3 Hypothesis testing</td>
<td>116</td>
</tr>
<tr>
<td>3.4.4 Comparison testing</td>
<td>120</td>
</tr>
<tr>
<td>3.4.4 Censoring and Truncation</td>
<td>123</td>
</tr>
<tr>
<td>3.5 Variables</td>
<td>124</td>
</tr>
<tr>
<td>3.5.1 Firm level</td>
<td>125</td>
</tr>
<tr>
<td>3.5.2 Industry level</td>
<td>133</td>
</tr>
<tr>
<td>3.5.3 Other levels</td>
<td>138</td>
</tr>
<tr>
<td>3.6 Data</td>
<td>140</td>
</tr>
<tr>
<td>3.7 Summary</td>
<td>150</td>
</tr>
<tr>
<td>4 FINDINGS AND RESULTS</td>
<td>151</td>
</tr>
<tr>
<td>4.1 Descriptive Analysis</td>
<td>151</td>
</tr>
<tr>
<td>4.2 Results of Regressions</td>
<td>157</td>
</tr>
<tr>
<td>4.2.1 Group 2000</td>
<td>158</td>
</tr>
<tr>
<td>4.2.2 Group 2005</td>
<td>169</td>
</tr>
<tr>
<td>4.2.3 Comparison between Results of Regressions</td>
<td>180</td>
</tr>
<tr>
<td>4.3 Estimation of Related Function</td>
<td>183</td>
</tr>
<tr>
<td>4.3.1 Estimation of Baseline Functions</td>
<td>183</td>
</tr>
<tr>
<td>4.3.2 Estimation of Hazard Functions</td>
<td>187</td>
</tr>
<tr>
<td>4.3.3 Estimation of survival function</td>
<td>193</td>
</tr>
<tr>
<td>4-4 Summary</td>
<td>199</td>
</tr>
</tbody>
</table>
5 CONCLUSION

5.1 Overall review of study 201
5.2 Summary of findings 204
5.3 Contributions of the Study 206
5.4 Policy implications 207
5.5 Limitation and recommendation for future research 210

REFERENCES 211
APPENDICES 221
Appendix A: Questionnaire of Census of Manufacturing Sector 221