

UNIVERSITY-INDUSTRY
COLLABORATIONS
AND ITS IMPACT ON FIRM PERFORMANCE

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DOCTOR OF PHILOSOPHY

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Doctor of Philosophy

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.



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ABSTRAK

Perusahaan Kecil dan Sederhana (PKS) di Malaysia sedang menghadapi situasi yang amat membimbangkan. Pelan Induk Perancangan PKS 2012 hingga 2020 mengeluarkan statistik yang menunjukkan bahawa 42% PKS yg memulakan perniagaan pada tahun 2000 gagal untuk meneruskan perniagaan mereka pada tahun 2005. Salah satu jalan penyelesaian bagi masalah ini telah dikenalpasti iaitu kolaborasi antara PKS dan universiti. Tujuan utama penyelidikan ini dilakukan adalah untuk mendapatkan kefahaman bagaimana kolaborasi antara universiti-industri diukur dan bagaimana ia memberi impak kepada isu-isu seperti kompetensi graduan, pemindahan pengetahuan, pemindahan teknologi dan pemindahan inovasi terhadap kelebihan persaingan dan prestasi firma. Penyelidikan ini akan membincangkan Pandangan Berasaskan Sumber sebagai teori utama. Ia juga merupakan kajian kuantitatif yang terdiri daripada analisis deskriptif dan Analisis Faktor Pengesahan diikuti dengan kaedah Kuasa Dua Terkecil Separa untuk prosedur Pemodelan Persamaan Struktur bagi menjawab soalan kajian. Sebanyak 151 syarikat telah bekerjasama menjawab soalan kajiselidik yang telah diedarkan. Berdasarkan respon daripada responden, didapati 2 dimensi kolaborasi antara universiti-industri iaitu kompetensi graduan dan inovasi menyokong kelebihan persaingan firma manakala 2 dimensi lagi tidak menyokong iaitu pemindahan pengetahuan dan pemindahan teknologi. Model struktur kajian ini menunjukkan bahawa terdapat pembolehubah lain yang dapat membantu menerangkan peranan kolaborasi antara universiti-industri dalam prestasi PKS. Selain itu, unit yang dianalisa di dalam kajian ini iaitu PKS juga disarankan untuk ditukarkan kepada syarikat-syarikat besar pada masa akan datang. Dengan ini adalah diharapkan model konseptual kajian akan berubah. Model ini juga sesuai digunakan untuk melihat impak kolaborasi antara universiti-industri terhadap pencapaian akademik, bukan sahaja terhadap firma. Selanjutnya, impak terhadap firma berkemungkinan boleh dimoderasikan oleh mana-mana pembolehubah lain seperti klasifikasi universiti, tahap pembangunan sesebuah negara dan juga saiz syarikat.

ABSTRACT

SMEs in Malaysia share a very worrying situation. The SME Master Plan 2012 to 2020 states that 42% of SMEs that started business in 2000 failed to continue their business in 2005. It is believed that one of the solutions to this problem is collaboration between SMEs and universities. The purpose of this research is to provide an improved understanding of how university-industry collaborations (UIC) are measured and how they can give impact to the issues of graduate competency, knowledge transfer, technology transfer, and innovation on firms' competitive advantage and performance. This research will discuss Resource-Based View (RBV) as a main theory. This research is mainly a quantitative study that consists of descriptive analysis and Confirmatory Factor Analysis (CFA) followed by Partial Least Square approach to Structural Equation Modelling (SEM) procedure to answer the research questions. 151 firms had responded to the survey. Overall, two (2) UIC dimensions which are graduate competency, and innovation are supporting firm competitive advantage as well as firm performance whereas another two (2) dimensions are not supporting which are knowledge transfer, and technology transfer. The structure model of this study gives an understanding that there are still variables out there that can help explain the role of UIC to SME firm performance. In addition, considering the unit of analysis of this study that puts SMEs, researchers also are recommended to take large companies as a unit of analysis in future studies and it is expected that the conceptual model will change. This model can also be used to view UIC's impact on universities or academics instead of impact on firms. Additionally, impact towards firm may be moderated by any other variables that are possible such as university classification, level of development of a country and company size.

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CA	Cronbach Alpha
CB-SEM	Co Variance Based- Structural Equation Modelling
CMB	Common Method Bias
CR	Composite Reliability
GC	Graduate Competency
HRM	Human Resource Management
HTMT	Heterotraits – Monotraits
JV	Joint Venture
KT	Knowledge Transfer
LV	Latent Variable
MEF	Malaysia Employers Federation
ML	Maximum Likelihood
PLS-SEM	Partial Least Square-Structural Equation Modelling
Q ²	Coefficient of Determination
R&D	Research and Development
R ²	Predictive Relevant
RBV	Resource-Based View
RDT	Resource Dependent Theory
SME	Small Medium Enterprise
SSM	Suruhanjaya Syarikat Malaysia
TT	Technology Transfer
UIC	University-Industry Collaboration
VRIN	Value, Rare, Inimitable, Non-substitutable

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