



**Faculty of Technology Management and Technopreneurship**

**INFLUENCE OF SUSTAINABILITY DRIVERS AND PERCEPTION  
ON INTENTION TOWARDS SUSTAINABLE ENTREPRENEURSHIP  
AMONG SMALL AND MEDIUM ENTERPRISES (SMES)**



**Koe Wei Loon**

**Doctor of Philosophy**

**2015**

**INFLUENCE OF SUSTAINABILITY DRIVERS AND PERCEPTION ON  
INTENTION TOWARDS SUSTAINABLE ENTREPRENEURSHIP AMONG  
SMALL AND MEDIUM ENTERPRISES (SMES)**

**KOE WEI LOON**

**A thesis submitted  
in fulfilment of the requirements for the degree of Doctor of Philosophy**



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**Faculty of Technology Management and Technopreneurship**

**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

**2015**

## DECLARATION

I declare that this thesis entitled “Influence of Sustainability Drivers and Perception on Intention towards Sustainable Entrepreneurship among Small and Medium Enterprises (SMEs)” is the result of my own research except as cited in the references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.



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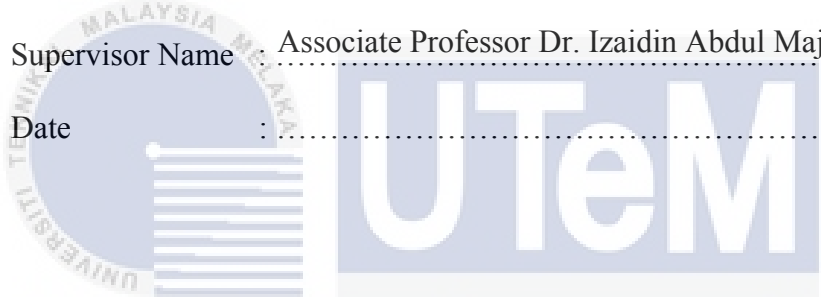
## APPROVAL

I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality for the award of Doctor of Philosophy.

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Supervisor Name : Associate Professor Dr. Izaidin Abdul Majid

Date : .....



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## **DEDICATION**

To my Papa, Mama, Yen, Li Ping and Li Ming

with greatest love and appreciation



## ABSTRACT

Entrepreneurial activities have contributed to both economic development and environmental degradation. Nowadays, business firms are urged to play a proactive role in rectifying environmental issues through sustainable entrepreneurship. In Malaysia, sustainable entrepreneurship is at its infancy stage; most of the small and medium enterprises (SMEs) regard sustainable entrepreneurship as something new and are not eagerly participated in it. Thus, as an initial step in developing sustainable entrepreneurs, this study was geared towards investigating the SMEs owner-managers' intentions towards sustainable entrepreneurship and the antecedents of such intention. By integrating two popular intention-based models, i.e.: Entrepreneurial Event Model (EEM) and Theory of Planned Behavior (TPB), this study attempted to explain the formation of intention towards sustainable entrepreneurship through sustainability drivers and perceptions. A research framework and 32 hypotheses were constructed to guide this study. This research employed a quantitative research method. The data were collected from 404 SMEs in Malaysia through self-administered questionnaires. Subsequently, the data were analyzed using regressions models and Baron-Kenny approach. The results indicated that owner-managers of SMEs in Malaysia showed a rather high level of intention towards sustainable entrepreneurship. It was because many of them have heard about sustainability management and they have planned to practice it. As for the antecedents of intention, sustainability drivers and all the six components (i.e.: sustainability value, sustainability attitude, social norm, government legislation, time orientation and sustainability orientation) were proven significantly and positively related to intention. Therefore, the results supported TPB that both exogenous and endogenous factors influenced an individual's intention. Meanwhile, this study also confirmed the partially mediating role of perception. The results verified that sustainability drivers indirectly influenced intention towards sustainable entrepreneurship through perception. Therefore, perception was confirmed as one of the factors that explained the process of how sustainability drivers led to intention towards sustainable entrepreneurship. The results also indicated the importance of developing a desirable and feasible perception in motivating SMEs to embark on sustainable entrepreneurship. This thesis contributed to the literature by confirming an integrative research model that explained the causal process of intention in regard to sustainable entrepreneurship. It also highlighted the factors that should be considered in forming intention towards sustainable entrepreneurship among SMEs. From the practical perspective, it showed that in promoting sustainable entrepreneurship among SMEs in Malaysia, developing the owner-managers' intention is crucial at the beginning stage. Furthermore, in achieving Malaysia's sustainability goals, it requires the efforts from both government and business operators.

## ABSTRAK

Aktiviti-aktiviti keusahawanan telah menyumbang kepada pembangunan ekonomi dan juga masalah persekitaran. Kini, firma-firma perniagaan disarankan untuk memainkan peranan yang pro-aktif dalam keusahawanan lestari untuk menyelesaikan masalah persekitaran. Di Malaysia, keusahawanan lestari masih berada di tahap permulaan, kebanyakan perniagaan kecil dan sederhana (PKS) menganggap keusahawanan lestari sebagai sesuatu yang baru dan tidak giat untuk menceburinya. Justeru, sebagai usaha permulaan dalam membangunkan usahawan lestari, kajian ini bertujuan untuk menyiasat kecenderungan pemilik-pengurus PKS terhadap keusahawanan lestari dan penyebab-penyebab kecederungan tersebut. Dengan menggabungkan dua model kecenderungan yang popular, iaitu *Entrepreneurial Event Model (EEM)* dan *Theory of Planned Behavior (TPB)*, kajian ini menerangkan proses pembentukan kecenderungan keusahawanan lestari melalui penggerak kelestarian dan persepsi. Sebuah model kajian dan 32 hipotesis telah dibina sebagai panduan kajian ini. Kajian ini menggunakan pendekatan kuantitatif. Data dikumpul daripada 404 buah PKS di Malaysia melalui borang soal-selidik. Seterusnya, data dianalisa dengan menggunakan model regresi dan pendekatan *Baron-Kenny*. Hasil kajian menunjukkan bahawa pemilik-pengurus PKS di Malaysia mempunyai tahap kecenderungan yang agak tinggi terhadap keusahawanan lestari. Ini adalah disebabkan oleh kebanyakan daripada mereka mengetahui keusahawanan lestari dan mereka merancang untuk melaksanakannya. Bagi penyebab-penyebab kecenderungan pula, penggerak kelestarian dan kesemua komponennya (nilai kelestarian, perangai kelestarian, norma sosial, perundangan kerajaan, orientasi masa dan orientasi kelestarian) menunjukkan hubungan-kaitan yang positif dan ketara dengan kecenderungan. Oleh itu, dapatan kajian menyokong *TPB* bahawa faktor luaran dan dalaman mempengaruhi kecenderungan seseorang. Kajian ini juga mengesahkan peranan persepsi sebagai pembolehubah mencelah separa. Hasil kajian juga menunjukkan penggerak kelestarian mempengaruhi kecenderungan keusahawanan lestari secara tidak langsung melalui persepsi. Oleh itu, persepsi ialah salah satu faktor yang menerangkan proses bagaimana penggerak kelestarian membawa kepada kecenderungan keusahawanan lestari. Keputusan kajian ini juga menunjukkan kepentingan membangunkan persepsi yang positif untuk mendorong PKS menceburi keusahawanan lestari. Tesis ini menyumbang kepada literatur dengan mengesahkan sebuah model kajian gabungan yang menerangkan proses pembentukan kecenderungan keusahawanan lestari. Kajian ini juga menunjukkan faktor-faktor yang perlu dipertimbangkan dalam pembentukan keusahawanan lestari. Dari segi praktikal, tesis ini menunjukkan bahawa membangunkan kecenderungan yang tinggi adalah penting dalam pembangunan keusahawanan lestari di kalangan PKS. Tambahan pula, dalam usaha mencapai matlamat kelestarian Malaysia, usaha dan kerjasama dari kerajaan dan pengusaha perniagaan adalah amat diperlukan.

## ACKNOWLEDGEMENTS

It was not easy for me to complete this long journey of thesis writing. There were various challenges and difficulties that I encountered throughout the entire process. Luckily, I was able to overcome all those hurdles successfully with the helps from many important parties. Thus, I would like to take this opportunity to extend my deepest thanks and appreciation to those who have made a special contribution to this thesis.

First, I would like to express my greatest gratitude to my thesis supervisor, Associate Professor Dr. Izaidin Abdul Majid, who has provided me with clear direction, helpful advices, unwavering support and encouragement. His immense knowledge and patience has continuously motivated me to go through this challenging journey. It was a pleasure experience to have him as my main supervisor.

Then, I would like to say thank you to my beloved family members for their unwavering love, understanding and support over the period of this thesis writing. First, to my parents who have offered their constant loves and supports. Then, to my wife who has continuously motivated and inspired me to complete this research. Lastly, to my two lovely princesses who have cheered me up during my down times.

Finally my thanks and appreciations also go to many other parties who have generously offered their helping hands in the completion of this thesis. They are: the owner-managers of the firms who have participated as respondents in this study; senior researchers who have provided constructive comments on my works and; all my friends and acquaintances who have provided assistances in various occasions when needed.

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## LIST OF ABBREVIATIONS

|        |   |  |
|--------|---|--|
| ACCA   | - | Association of Chartered Certified Accountants |
| ANOVA  | - | Analysis of variance                           |
| CSR    | - | corporate social responsibility                |
| DOSM   | - | Department of Statistic Malaysia               |
| EEM    | - | Entrepreneurial Event Model                    |
| ERMM   | - | Environmental Resources Management Malaysia    |
| GDP    | - | gross domestic production                      |
| GE     | - | General Electric                               |
| ICT    | - | information and communication technology       |
| IST    | - | integrative sustainability triangle            |
| KeTTHA | - | Ministry of Energy, Green Technology and Water |
| KLSE   | - | Kuala Lumpur Stock Exchange                    |
| KMO    | - | Kaiser-Meyer-Olkin                             |
| MPC    | - | Malaysia Productivity Corporation              |
| MSA    | - | measure of sampling adequacy                   |
| MSIC   | - | Malaysia Standard Industrial Classification    |
| NEP    | - | new ecological paradigm                        |
| NGOs   | - | non-governmental-organizations                 |
| PUNB   | - | Perbadanan Usahawan Nasional Berhad            |
| SME    | - | Small and medium enterprises                   |

|      |   |   |
|------|---|---|
| TBL  | - | Triple-bottom-line                              |
| TIB  | - | Theory of Interpersonal Behavior                |
| TPB  | - | Theory of Planned Behavior                      |
| TRA  | - | Theory of Reasoned Action                       |
| VIF  | - | variance inflation factor                       |
| WCED | - | World Commission on Environment and Development |



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# CHAPTER 1

## INTRODUCTION

### 1.1 Overview

Entrepreneurship is an important input to the growth of a nation. Many researchers referred it as “engines of economic growth” (Baron and Shane, 2008; Mellor *et al.*, 2009) because it is related to wealth generation, competitiveness and economic growth (Thurik and Wennekers, 2004). Despite of its positive contributions, entrepreneurship has its “dark sides” as well (Wright and Zahra, 2011). For instance, entrepreneurial business activities have contributed to environmental degradation as a result of market failure (Cohen and Winn, 2007). Specifically, climate change, global warming, acid rain, deforestation, overused of non-renewable resources are among the environmental problems caused by the business and industrial sectors. Those problems have significantly impacted human health, natural ecological system and socio-economic system (Greenpeace International, 1998).

Knowing the seriousness of the effects of environmental degradation, business practitioners are urged to play a more active role in resolving environmental related problems (Dean and McMullen, 2007). As Palazzi and Starcher (1997) pointed out, linking economic and environmental interests to create benefit for the whole society has become a vital practice among corporations nowadays. As such, a new discipline called “sustainable entrepreneurship” has been introduced to rectify the sustainability issues through

entrepreneurial activities (Dean and McMullen, 2007). Sustainable entrepreneurship is believed to be able to bring paradigm shift or transition in business (Crals and Vereeck, 2004; Schwartz, 2009; O'Neil and Ucbasaran, 2011; Nowduri, 2012). In particular, Gibbs (2009) called it a kind of creative destruction in the industry. Meanwhile, other types of changes are such as shifting from profit orientated towards sustainable orientated businesses (Crals and Vereeck, 2004; Tilley and Young, 2009; Smith and Sharicz, 2011) or transforming from shareholder centred to stakeholder centred business (Schwartz, 2009; McDonald, 2009). Most importantly, shifting towards sustainable entrepreneurship helps to deal with unresolved global issues such as energy related issues, non-renewable resource issues and land encroachment issues (Keijzers, 2002). It can be said that sustainable entrepreneurship is changing the ways businesses are managed and performed; further, it can also leave a significant effect on economic, social and environment. Thus, understanding of business practitioners' intention to solve environmental problems through entrepreneurship is important.

As a term under the umbrella of entrepreneurship, sustainable entrepreneurship is a process that requires human interaction. As Davidsson (2006) mentioned, when human interaction is involved, studying the human's cognition is important. As Krueger and Brazeal (1994, p91) pointed out that "before there can be entrepreneurship, there must be the potential for entrepreneurship". Bird (1988) also mentioned that the first stage in becoming an entrepreneur is possessing sufficient intention towards entrepreneurship. Thus, potential for sustainable entrepreneurship precedes any sustainable entrepreneurial behavior. Simply put, an individual should show intention prior to become a sustainable entrepreneur. Therefore, in order to have a better understanding on business practitioners' participation on sustainable entrepreneurship, it is crucial to address the first of stage of their cognitive process, i.e.: intention to embark on sustainable entrepreneurship.

Sustainable entrepreneurship is definitely not only the business of developed countries. Developing countries and their businesses are also playing a significant role on handling environmental issues and moving towards environmental sustainability. As a developing country, Malaysian government has started to look into the sustainability issues seriously only recently. Both sustainability and entrepreneurship are main national priority. Encouraging the integration of them is now a priority and a possible solution to environment degradation. For example, the integration of sustainability management into governmental agendas such as The 10<sup>th</sup> Malaysian Plan, the establishment of Ministry of Energy, Green Technology and Water (KeTTHA) and the implementation of National Green Technology Policy were comparatively later than other advanced countries. Being late to embark on such topic could cause a disastrous effect to the country by leaving the country well behind the torrent of sustainability development and further degrading the environment. Although sustainability policies, rules and regulations have been established, research found they have not been properly implemented and enforced. This has caused the nation to continuously facing the environmental problems (Mohammad, 2011).

In terms of entrepreneurial activities in the country, small and medium enterprises (SMEs) contribute to a large portion of business activities as they constitute 99.2% of business establishments in the country. The SME Masterplan 2012-2020 released by National SME Development Council revealed that in 2010, SMEs have contributed to 32% of nation's gross domestic production (GDP), employed 59% of workforce and denoted to 19% of nation's export. The figures are expected to increase to 41% of GDP, 62% of employment and 25% of export by 2020. Despite those contributions, SMEs could also be deemed as a major contributor to environmental degradation. Unfortunately, many SMEs still regard sustainability as something new to them (Moorthy *et al.*, 2012). Although SMEs possess a substantial role in managing the scarce environmental and social resources

(Moore and Manring, 2009), their embarkation on sustainable management is still less embracing as compared to their larger counterparts due to many reasons (Schaper, 2002b; Omar and Samuel, 2011; 2012). Successful entrepreneurs should firmly have this question in their mind: “How am I impacting on my environment”, but it is often missing in SMEs (World Islamic Economic Forum Foundation, 2012). Furthermore, reports showed there were merely 28% of public-listed non-financial firms which revealed their environment information. The disclosure of such information is even less aspiring for SMEs (Environmental Resources Management Malaysia, ERMM, 2002; Buniamin *et al.*, 2011). In addition, the firms took part in Association of Chartered Certified Accountants (ACCA) Malaysia Sustainability Reporting Awards (MaSRA) were mainly large public-listed companies (ACCA, 2010; 2011). Malaysia Productivity Corporation (MPC, 2010) also undisclosed that large manufacturing-based multinationals, such as Panasonic, General Electric (GE) and Toyota were more willing to initiate sustainable development than other smaller firms. It can be said that SMEs are the main contributors of entrepreneurial activities in the country. However, not many of them really show great enthusiasm for sustainable entrepreneurship (Boxer, 2005).

The low participation of business operators in sustainable entrepreneurship could negatively impact the achievement of sustainability objectives of the country and also slow down the development of sustainable entrepreneurship. As such, an initial step to promote sustainable entrepreneurship among SMEs could be trying to understand the SME owner-manager’s cognitive process in making such decision. This could help to provide a clear guideline in understanding how they think and what they need to balance up between the subjects of business and sustainability and, further achieve our national agenda in building a sustainable society through efficient resource allocation.