UNIVERSITI PUTRA MALAYSIA

SUSTAINABILITY PRACTICES IN MALAYSIAN GROCERY RETAIL INDUSTRY

GOWRI VIJAYAN

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SUSTAINABILITY PRACTICES IN MALAYSIAN GROCERY RETAIL INDUSTRY

By

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Dedicated to
My dear Appupan and Ammuma
Always in my memories
Malaysia is in the midst of a nationwide green movement to combat the environmental problems plaguing the nation. Water pollution, air pollution, deforestation, soil and coastal erosion, overfishing, and solid waste mismanagement are some of the many problems faced by the nation. However, solid waste mismanagement has become a major environmental issue of concern to the government. Overflowing capacity of landfills, limited recycling centers, poor waste collection system, and weak policies on waste management elevate the seriousness of this situation. The Malaysian government’s solution to this problem is shifting from depending solely on environmental policies to preventive steps for calculation and management of pollution, through holistic focus on introducing sustainability and 3R (reduce, reuse, recycle) campaigns to businesses and consumers. With the changing governmental stand towards environmental conservation, industries can no longer avoid getting into sustainability practices for their operations.

The grocery retail is one of the largest service industries in Malaysia, and also a major contributor to environmental pollution in the nation. The environmental effects from retail operations in this industry includes solid waste generation, energy use, water pollution, and air pollution. However, the grocery retail industry is in a unique position to also green its services. Retailers can effectively implement sustainability along upstream and downstream ends of supply chain. They are widely recognized as change-agents for introducing sustainability into supply chains. The retail stores can play a role in reducing food wastage, implementing better waste management practices, promotion of green products, while introducing more sustainability practices into the food supply chain. Thereby, it is imperative to understand sustainability as practiced in this industry.

However, the Malaysian grocery retail industry is heavily fragmented, with 56% provision stores, 43% hypermarkets and supermarkets, and 1% convenience stores. This fragmentation makes monitoring of sustainability both difficult and critical for sustainable development in the industry. It is essential to identify the practices that retail formats identify as sustainable, and to evaluate their level of sustainability based on its implementation. Specifically, the implementation of reverse logistics in the
Malaysian retail industry needs to be evaluated, due to its contribution to waste management among other benefits. Since business decisions on change often depend on value added benefits, the evaluation of contribution of sustainability to firm performance is critical for sustainable development. A study on mediation is critical to study the effect of intervening variables on sustainability implementation. The verification of such an effect could be used by regulatory bodies for policy development and evaluation.

The large concentration of provision stores in this industry (56%), followed by widespread distribution across the nation makes it a critical agent to sustainable development in the industry. Also, the government’s focus on Program Transformasi Kedai Runcit or Small Retailer Transformation Program (TUKAR) makes information on sustainability in provision stores critical. However, such studies on sustainability, focused across retail formats in the Malaysian grocery retail industry are limited. Especially since the grocery retail industry is fragmented, information on sustainability as understood and practiced by all the major retail formats is required to summarize on sustainability in the retail industry.

The current research was carried out to study the sustainability as implemented in this industry. A post-positivist approach was adopted in the study, incorporating the Stakeholder Theory to confirm the predictors to sustainability implementation in stores. The level of sustainability across retail formats were categorized using the Three Tiers Ranking System. Descriptive statistics was used to categorize the level of sustainability, environmental concern of retailers, and reverse logistics in stores. The influencers to sustainability implementation were identified across stakeholder pressure, CSR, economic, and environmental factors, and barriers that hinder sustainability in business. Mean ranking, confirmatory factor analysis (CFA), and mediation were used to evaluate and interpret all possible effects of these factors to eco-friendly and reverse logistics implementation in retail stores. The contributions of eco-friendly and reverse logistics to firm performance were evaluated for managerial implications using importance-performance matrix analysis (IPMA). The associative relationship between firmographic characteristics of retail stores and sustainability implementation across the formats were tested using chi-square analysis. Mediation analysis using bootstrapping method was used to estimate the effects of intervening variables to reverse logistics implementation and firm performance. Content analysis was used to verify the factors found significant to sustainability implementation in provision stores.

The study interviewed 375 respondents using a structured questionnaire to understand sustainability in the industry. The respondent stores included representatives from the four major retail formats, namely provision stores, supermarkets, hypermarkets, and convenience stores. The stores identified waste management issues, water crisis, and energy crisis to influence their store operations. Majority of the stores were found to be unfamiliar with the Malaysian government’s Solid Waste and Public Cleansing Management Act 2007 (SWPCMA 2007), though 3R campaigns were familiar to them. Product take-back policy was adopted by majority of the retailers, mainly as per supplier instructions for returns.

The study showed that Tier 1 eco-friendly practices like reducing energy consumption and energy saving activities were mainly followed by the retail formats. The green
practices of local supplier support, green consumer research, and promotion of green products in stores were found to be highly practiced by hypermarkets, and supermarkets. Hypermarkets were the major practitioners of Tier 3 sustainability practices, followed by convenience stores.

The firmographic characteristics of store location, years of store operation, and annual sales were found to influence the implementation of sustainability in the retail industry. The predictors CSR and barriers to implementation were found to significantly influence the implementation of Tier 1 sustainability practices in retail stores. The predictors CSR, barriers, stakeholder pressure, and implementation of Tier 1 sustainability practices were found to significantly influence the implementation of reverse logistics practices by retail stores. The implementation of Tier 1 practices was found to contribute more to the firm performance. However, the implementation of reverse logistics practices were found to reduce the effect of Tier 1 practices to the firm performance. This could be because of increased resource commitment required for execution of the reverse logistics operations at the retail end of the supply chain. Since Tier 1 practices were found important to the firm performance, the implementation of reverse logistics could be considered a hindrance. But, it was found that reverse logistics contributed greatly to operational firm performance. Also, the implementation of Tier 1 practices was found to reduce the pressure on retailers to turn sustainable. This could be due to the familiarity among stakeholders on Tier 1 practices and its implications over reverse logistics. Therefore, in order to ensure reverse logistics implementation, the government has to develop specific policies for implementation of reverse logistics by grocery retail stores.

Content analysis revealed governmental, competitor, NGO pressures, and barriers to significantly influence the implementation of sustainability in provision stores. Provision stores focused on competitor practices to retain their markets, to meet consumer needs, and as temporary experts for sustainability adoption. Government played the most important role in influencing the implementation of reverse logistics practices in the provision stores. Therefore, the government could turn the provision stores green with stricter policies and economic incentives.

The study conducted a detailed evaluation of sustainability as implemented across retail formats. All possible interactions between interacting variables provided an insight into the relationship between intervening variables and their influence on sustainability. These observations could be used by regulatory bodies and top management for policy development. The Three Tier Ranking System used in this study could be used by other agencies to monitor the level of sustainability across retail formats. The academicians could use this study as a base for confirmation based and post-positivist research, and pave the way for extensive sustainability studies in the food sector. In the long run, the combination of increased academic awareness and specific policies could pave the way for voluntary practices and a greener, cleaner, and healthier Malaysia.
Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

AMALAN KELESTARIAN DALAM INDUSTRI BARANGAN RUNCIT MALAYSIA

Oleh

GOWRI VIJAYAN

Oktobor 2015

Pengerusi       : Profesor Madya Nitty Hirawaty Kamarulzaman, PhD
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Malaysia berada di tengah-tengah sebuah gerakan hijau dunia bagi memerangi masalah alam sekitar yang melanda negara. Pencemaran air, pencemaran udara, penebangan hutan, tanah dan hakisan pantai, penangkapan ikan secara berlebihan, dan salah urus sisa pepejal adalah beberapa masalah yang dihadapi oleh negara. Walau bagaimanapun, salah urus sisa pepejal telah menjadi isu utama alam sekitar yang penting kepada kerajaan. Kapasiti melimpah di tapak pelupusan, pusat kitar semula yang terhad, sistem pengumpulan sisa yang teruk, dan dasar-dasar pengurusan sisa yang lemah menunjukkan betapa seriusnya keadaan tersebut. Penyelesaian kerajaan Malaysia terhadap masalah ini beralih daripada hanya bergantung kepada dasar alam sekitar kepada langkah pencegahan bagi pengiraan dan pengurusan pencemaran, melalui tumpuan secara holistik dengan memperkenalkan kelestarian dan kempen 3R (kurangkan, gunakan semula, kitar semula) kepada peniagaan dan pengguna. Dengan perubahan pendirian kerajaan ke arah pemuliharaan alam sekitar, industri tidak boleh lagi mengelak daripada terlibat dalam amalan kelestarian bagi operasi mereka.


Dengan kepadatan kedai-kedai runcit (56%), diikuti dengan pengagihan yang meluas di seluruh negara menjadikannya industri ini sebagai ejen kritikal kepada pembangunan lestari. Begitu juga, tumpuan kerajaan kepada Program Transformasi Kedai Runcit atau Small Retailer Transformation Program (TUKAR) membuatkan maklumat mengenai kelestarian kedai-kedai runcit adalah kritikal. Walau bagaimanapun, kajian ke atas kelestarian yang memberi tumpuan menyeluruh terhadap format peruncitan dalam industri runcit di Malaysia adalah terhad. Disebabkan oleh industri runcit berpecah-belah, maklumat mengenai kelestarian seperti yang diamalkan oleh semua format runcit utama diperlukan untuk meringkaskan amalan kelestarian dalam industri runcit.


Penyelidikan ini telah dilaksanakan dengan responden seramai 375 menggunakan soal selidik berstruktur untuk memahami kelestarian dalam industri. Kedai-kedai responden termasuk wakil-wakil dari empat format runcit utama, iaitu...


Analisis kandungan mendedahkan kerajaan, pesaing, tekanan NGO, dan halangan amat ketara mempengaruhi pelaksanaan kelestarian oleh kedai runcit. Kedai runcit tertumpu kepada amalan pesaing untuk mengekalkan pasaran mereka, untuk memenuhi keperluan pengguna, dan kelestarian sebagai pakar sementara untuk diterima pakai. Kerajaan memainkan peranan yang paling penting dalam mempengaruhi pelaksanaan amalan logistik terbalik di kedai runcit. Oleh yang demikian, kerajaan boleh menghijaukan kedai runcit dengan dasar-dasar yang lebih ketat dan insentif ekonomi.

Kajian ini menjelaskan penilaian terperinci kelestarian oleh seluruh format runcit. Semua interaksi yang mungkin diantara pembolehuhub berinteraksi membeikan kefahaman tentang hubungan antara pembolehuhub yang berselang dan pengaruh mereka ke atas kelestarian. Pemerhatian ini boleh digunakan oleh badan-badan kawal selia dan pengurusan atasan untuk pembangunan dasar. Sistem Kedudukan Tahap 3 yang digunakan dalam kajian ini boleh digunakan oleh agensi-agensi lain untuk
memantau tahap kelestarian kesemua format runcit. Ahli akademik boleh menggunakan kajian ini sebagai asas kepada pengesahan dan penyelidikan pasca-positivis, dan membuka jalan bagi kajian kelestarian yang menyeluruh dalam sektor makanan. Dalam jangka masa panjang, gabungan peningkatan kesedaran akademik dan dasar-dasar tertentu dapat membuka jalan untuk amalan secara sukarela bagi Malaysia yang lebih hijau, lebih bersih, dan lebih sihat.
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“Mata Pitha Guru Deivam” is a Sanskrit phrase, translated as “Mother Father Teacher God”. Linked to Hindu mythology, this phrase signifies the roles played by different individuals on the path of knowledge gain by children. A child’s first teachers are her parents. It is said that parents light the way for a child to develop her mind and inquisitiveness to gain knowledge. In that aspect, I was blessed by god to have two very dynamic, qualified, and supportive parents, who valued education, and understood the relevance of knowledge in one’s life. I was encouraged from a very early age to read more, work hard, and to never quit unless perfection is attained. I was taught by my parents to never undermine anyone or any work, and to respect my elders. It is through their constant support and belief in me, that I was able to complete my PhD successfully. I would like to thank them wholeheartedly for this strong and relentless support to my aspirations and dreams.

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I certify that a Thesis Examination Committee has met on 8 October 2015 to conduct the final examination of Gowri Vijayan on her thesis entitled "Sustainability Practices in Malaysian Grocery Retail 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 Doctor of Philosophy.

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# TABLE OF CONTENT

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
</tr>
<tr>
<td>ABSTRAK</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
</tr>
<tr>
<td>APPROVAL</td>
</tr>
<tr>
<td>DECLARATION</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
</tr>
</tbody>
</table>

## CHAPTER

### 1 INTRODUCTION

1.1 Retailers and Sustainability  
1.2 Problem Statement  
1.3 Research Questions  
1.4 Research Objectives  
1.5 Significance of the Study  
1.6 Scope of the Study  
1.7 Organization of the Thesis  
1.8 Summary  

### 2 MALAYSIAN GROCERY RETAIL INDUSTRY AND GREEN POLICIES

2.1 Background and Economy  
2.2 Service Sector  
2.2.1 Services Sector Classification  
2.2.2 Retail Trade Sub-sector  
2.2.3 Malaysian Grocery Retail Industry  
2.3 Vision 2020 and Economic Transformation  
2.4 Environmental Problems and Green Policies  
2.5 Incentives for Environmental Management  
2.6 Summary  

### 3 LITERATURE REVIEW

3.1 Reverse Logistics  
3.2 Sustainability Indicators  
3.3 Sustainability Measurement  
3.4 Firm Performance  
3.5 Sustainability Motivators  
3.6 Sustainability Barriers  
3.7 Organizational Theories on Sustainability  
3.7.1 Resource-Based View  
3.7.2 Contingency Theory  
3.7.3 Institutional Theory  
3.7.4 Stakeholder Theory  

xiii
3.8 Summary

4 RESEARCH METHODOLOGY

4.1 Research Design
  4.1.1 Strategies of Inquiry
  4.1.2 Philosophical Worldviews
  4.1.3 Research Methods
  4.1.4 Summary on Research Design
  4.1.5 The Approach Adopted By Current Study

4.2 Conceptual Framework

4.3 Data Collection
  4.3.1 Sampling Frame and Techniques
  4.3.2 Sources of Data
  4.3.3 Instrument Development
  4.3.4 Pre-test of Instrument
  4.3.5 Pilot Test of Formative Construct
  4.3.6 Pilot Test for Reflective Constructs
    4.3.6.1 EFA of Triple Bottom Line Factors to Implementation of Sustainability
    4.3.6.2 EFA on Stakeholder Pressure towards Sustainability Implementation
    4.3.6.3 EFA of Degree of Implementation of Sustainability Practices
    4.3.6.4 EFA on Firm Performance through Sustainability Implementation

4.4 Final Data Processing and Analysis
  4.4.1 Descriptive Statistics
  4.4.2 Chi-square Analysis
  4.4.3 Confirmatory Factor Analysis
    4.4.3.1 Measurement Model Evaluation
    4.4.3.2 Structural Model Evaluation
  4.4.4 Predictive Relevance and Effect Size
  4.4.5 Importance-Performance Matrix Analysis
  4.4.6 Mediation Analysis
  4.4.7 Content Analysis

4.5 Summary

5 RESULTS AND DISCUSSION

5.1 Store Firmographic Characteristics
5.2 Environmental Concern of Stores
5.3 Reverse Logistics Practices
5.4 Three Tiers of Sustainability in Stores
5.5 Firm Performance due to Sustainability
5.6 Associative Relationship between Firmographic Characteristics and Sustainability
  5.6.1 Association between Sustainability and Type of Retail Formats
  5.6.2 Association between Sustainability and Store Location
  5.6.3 Association between Sustainability and Years of Store Operation
5.6.4 Association between Sustainability and Annual Sales of the Store

5.7 Predictors to Sustainability and Firm Performance

5.7.1 Evaluation of Reflective Measurement Models

5.7.1.1 Triple Bottom Line Measurement Model (I)
5.7.1.2 Stakeholder Pressure Measurement Model (II)
5.7.1.3 Firm Performance Measurement Model (III)
5.7.1.4 Degree of Implementation Measurement Model (II)

5.7.2 Evaluation of Formative Measurement Model

5.7.3 Confirmation of Structural Model

5.8 Importance-Performance Matrix Analysis

5.9 Mediation Analysis

5.9.1 Effect of Barriers on Implementation of Reverse Logistics in Retail Stores
5.9.2 Effect of CSR on Implementation of Reverse Logistics in Retail Stores
5.9.3 Effect of Stakeholder Pressure on Implementation of Reverse Logistics in Retail Stores
5.9.4 Effect of Tier 1 to Firm Performance in Retail Stores

5.10 Discussion on Sustainability Implementation

5.11 Confirmation and Verification of Factors to Sustainability Implementation in Provision Stores

5.12 Summary

6 CONCLUSION AND RECOMMENDATIONS

6.1 Summary
6.2 Policy Implications
6.3 Academic Relevance
6.4 Limitations of the Study
6.5 Recommendations for Future Research
6.6 Summary

REFERENCES

APPENDICES

BIODATA OF STUDENT

LIST OF PUBLICATIONS
<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Total Population and Labor Force of Malaysia</td>
<td>9</td>
</tr>
<tr>
<td>2.2</td>
<td>Contribution from Retail Trade to GDP</td>
<td>11</td>
</tr>
<tr>
<td>2.3</td>
<td>Volume Index of NSS Retail Trade Activity</td>
<td>13</td>
</tr>
<tr>
<td>2.4</td>
<td>Non-Specialized (NSS) Retail Trade in Store</td>
<td>14</td>
</tr>
<tr>
<td>2.5</td>
<td>Quarterly GNI and GDP at Current Prices</td>
<td>19</td>
</tr>
<tr>
<td>3.1</td>
<td>Category of Returns</td>
<td>25</td>
</tr>
<tr>
<td>3.2</td>
<td>Summary of Previous Literature on Sustainability Indicators</td>
<td>28</td>
</tr>
<tr>
<td>3.3</td>
<td>Summary of Previous Literature on Motivators to Sustainability</td>
<td>36</td>
</tr>
<tr>
<td>3.4</td>
<td>Summary of Previous Literature on Barriers to Sustainability</td>
<td>39</td>
</tr>
<tr>
<td>4.1</td>
<td>Results of Test-Retest of Barriers Statements</td>
<td>59</td>
</tr>
<tr>
<td>4.2</td>
<td>Results of Cronbach’s Alpha, KMO and Bartlett’s Test</td>
<td>60</td>
</tr>
<tr>
<td>4.3</td>
<td>Communality and Factor Loadings for Economic, Environmental and CSR Factors to Sustainability Implementation</td>
<td>62</td>
</tr>
<tr>
<td>4.4</td>
<td>Results of Cronbach’s Alpha, KMO and Bartlett’s Test</td>
<td>64</td>
</tr>
<tr>
<td>4.5</td>
<td>Communality and Factor Loadings for Stakeholder Pressure to Sustainability Implementation</td>
<td>67</td>
</tr>
<tr>
<td>4.6</td>
<td>Results of Cronbach’s Alpha, KMO and Bartlett’s Test</td>
<td>69</td>
</tr>
<tr>
<td>4.7</td>
<td>Communality and Factor Loadings for Degree of Implementation of T1 Sustainability and Reverse Logistics</td>
<td>70</td>
</tr>
<tr>
<td>4.8</td>
<td>Results of Cronbach’s Alpha, KMO and Bartlett’s Test</td>
<td>72</td>
</tr>
<tr>
<td>4.9</td>
<td>Communality and Factor Loadings on Firm Performance from Implementation of Sustainability</td>
<td>73</td>
</tr>
<tr>
<td>4.10</td>
<td>List of Hypotheses Tested using Chi-Square Analysis</td>
<td>75</td>
</tr>
<tr>
<td>4.11</td>
<td>List of Hypotheses Tested using CFA</td>
<td>81</td>
</tr>
<tr>
<td>5.1</td>
<td>Firmographic Characteristics of the Stores</td>
<td>87</td>
</tr>
<tr>
<td>5.2</td>
<td>Annual Rate of Return of Food Products by Consumers</td>
<td>92</td>
</tr>
<tr>
<td>5.3</td>
<td>Time Frame for Return of Food Products by Consumers</td>
<td>93</td>
</tr>
<tr>
<td>5.4</td>
<td>Implementation of Tier 1 Sustainability Practices across Retail Formats</td>
<td>99</td>
</tr>
<tr>
<td>5.5</td>
<td>Implementation of Tier 2 Sustainability Practices across Retail Formats</td>
<td>100</td>
</tr>
<tr>
<td>5.6</td>
<td>Implementation of Tier 3 Sustainability Practices across Retail Formats</td>
<td>101</td>
</tr>
<tr>
<td>5.7</td>
<td>Firm Performance due to Sustainability among Retail Formats</td>
<td>102</td>
</tr>
<tr>
<td>5.8</td>
<td>Firm performance due to Tiers of Sustainability</td>
<td>103</td>
</tr>
<tr>
<td>5.9</td>
<td>Chi-Square on Sustainability Implementation across Formats</td>
<td>104</td>
</tr>
<tr>
<td>5.10</td>
<td>Chi-Square on Sustainability Implementation across Locations</td>
<td>105</td>
</tr>
<tr>
<td>5.11</td>
<td>Chi-Square on Sustainability Implementation and Years of Store Operation</td>
<td>106</td>
</tr>
<tr>
<td>5.12</td>
<td>Chi-Square on Sustainability Implementation and Annual Sales of Store (RM million)</td>
<td>107</td>
</tr>
<tr>
<td>5.13</td>
<td>Results Summary for Triple Bottom Line Measurement Model (I)</td>
<td>108</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>5.14</td>
<td>Results summary for Stakeholder Pressure Measurement Model (II)</td>
<td>109</td>
</tr>
<tr>
<td>5.15</td>
<td>Results Summary for Firm Performance Measurement Model (III)</td>
<td>110</td>
</tr>
<tr>
<td>5.16</td>
<td>Results Summary for Degree of Implementation Measurement Model (IV)</td>
<td>110</td>
</tr>
<tr>
<td>5.17</td>
<td>Results Summary for Formative Measurement Model</td>
<td>111</td>
</tr>
<tr>
<td>5.18</td>
<td>Collinearity Assessment (VIF Values)</td>
<td>112</td>
</tr>
<tr>
<td>5.19</td>
<td>Results of Significance Testing on Tier 1 Path Model</td>
<td>112</td>
</tr>
<tr>
<td>5.20</td>
<td>Results of Significance Testing on Reverse Logistics Path Model</td>
<td>113</td>
</tr>
<tr>
<td>5.21</td>
<td>Results of Significance Testing on Firm Performance Path Model</td>
<td>113</td>
</tr>
<tr>
<td>5.22</td>
<td>Results on Effects of Barriers on Reverse Logistics Implementation</td>
<td>115</td>
</tr>
<tr>
<td>5.23</td>
<td>Results on Effects of CSR on Reverse Logistics Implementation</td>
<td>116</td>
</tr>
<tr>
<td>5.24</td>
<td>Results on Effect of Stakeholder Pressure on Reverse Logistics</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>Implementation</td>
<td></td>
</tr>
<tr>
<td>5.25</td>
<td>Results on Effect of Tier 1 on Firm Performance</td>
<td>118</td>
</tr>
<tr>
<td>5.26</td>
<td>Summary on CFA Results on Factors to Sustainability in Provision</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>Stores</td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>Summary on Sustainability across Formats</td>
<td>128</td>
</tr>
<tr>
<td>B01</td>
<td>Details on Panel of Experts Selected for Pre-testing of Questionnaire</td>
<td>175</td>
</tr>
<tr>
<td>C01</td>
<td>Cross Tabulation of T1 Sustainability Implementation and Retail</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Format</td>
<td></td>
</tr>
<tr>
<td>C02</td>
<td>Cross Tabulation of T2 Sustainability Implementation and Retail</td>
<td>177</td>
</tr>
<tr>
<td></td>
<td>Format</td>
<td></td>
</tr>
<tr>
<td>C03</td>
<td>Cross Tabulation of T3 Sustainability Implementation and Retail</td>
<td>178</td>
</tr>
<tr>
<td></td>
<td>Formats</td>
<td></td>
</tr>
<tr>
<td>C04</td>
<td>Cross Tabulation of T1 Sustainability Implementation and Store</td>
<td>179</td>
</tr>
<tr>
<td></td>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>C05</td>
<td>Split File on Implementation of T1 Sustainability across Locations</td>
<td>180</td>
</tr>
<tr>
<td>C06</td>
<td>Cross Tabulation of T2 Sustainability Implementation and Store</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>Locations</td>
<td></td>
</tr>
<tr>
<td>C07</td>
<td>Split File on Implementation of T2 Sustainability across Locations</td>
<td>181</td>
</tr>
<tr>
<td>C08</td>
<td>Cross Tabulation of T3 Sustainability Implementation and Store</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>Locations</td>
<td></td>
</tr>
<tr>
<td>C09</td>
<td>Split File on Implementation of T3 Sustainability across Locations</td>
<td>182</td>
</tr>
<tr>
<td>C10</td>
<td>Cross Tabulation of T1 Sustainability Implementation and Years of</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td>Store Operation</td>
<td></td>
</tr>
<tr>
<td>C11</td>
<td>Split File on Implementation of T1 Sustainability in Stores by</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>Years of Operation</td>
<td></td>
</tr>
<tr>
<td>C12</td>
<td>Cross Tabulation of T2 Sustainability Implementation and Years of</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>Store Operation</td>
<td></td>
</tr>
<tr>
<td>C13</td>
<td>Split File on Implementation of T2 Sustainability in Stores by</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>Years of Operations</td>
<td></td>
</tr>
<tr>
<td>C14</td>
<td>Cross Tabulation of T3 Sustainability Implementation and Years of</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>Store operation</td>
<td></td>
</tr>
<tr>
<td>C15</td>
<td>Split File on Implementation of T3 Sustainability in Stores by</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>Years of Operation</td>
<td></td>
</tr>
</tbody>
</table>
C16  Cross Tabulation of T1 Sustainability Implementation and Store Annual Sales 185
C17  Split File on Implementation of T1 Sustainability in Stores and Annual Sales 186
C18  Cross Tabulation of T2 Sustainability Implementation and Store Annual Sales 186
C19  Split File on Implementation of T2 Sustainability in Stores and Annual Sales 187
C20  Cross Tabulation of T3 Sustainability Implementation and Store Annual Sales 187
C21  Split File on Implementation of T3 Sustainability in Stores and Annual Sales 188
C22  Discriminant Validity through Fornell-Larcker Criterion Assessment of Measurement Model Constructs 189
C23  Triple Bottom Line Measurement Model (I) 190
C24  Stakeholder Pressure Measurement Model (II) 191
C25  Firm Performance Measurement Model (III) 192
C26  Degree of Implementation Measurement Model (IV) 192
C27  Formative Measurement Model 193
C28  Collinearity Assessment 194
C29  Significance Testing on Tier 1 Path Model 195
C30  Significance Testing on Reverse Logistics Path Model 195
C31  Significance Testing on Firm Performance Path Model 196
C32  Economic Interest of Retailers to Implement Sustainability Practices in Retail Stores 197
C33  Environmental Commitment of Retailers to Implement Sustainability in Retail Stores 198
C34  CSR of Retailers to Implement Sustainability Practices 199
C35  Barriers to Implementation of Sustainability among Retail Formats 200
C36  Stakeholder Pressure on Sustainability Implementation across Retail Formats 201
LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Flow Chart on Contents of Chapter 1</td>
</tr>
<tr>
<td>2.1</td>
<td>Flow Chart on Contents of Chapter 2</td>
</tr>
<tr>
<td>2.2</td>
<td>Quarterly GDP at Current Prices of ASEAN Nations</td>
</tr>
<tr>
<td>2.3</td>
<td>Industrial Classification of the Malaysian Services Sector</td>
</tr>
<tr>
<td>2.4</td>
<td>Volume Index of Distributive Trade and Retail Trade Sub-sector</td>
</tr>
<tr>
<td>3.1</td>
<td>Flow Chart on Contents of Chapter 3</td>
</tr>
<tr>
<td>3.2</td>
<td>Resource-based View Framework</td>
</tr>
<tr>
<td>3.3</td>
<td>Otley’s (1980) Contingency Theory Framework</td>
</tr>
<tr>
<td>3.4</td>
<td>Institutional Theory Framework</td>
</tr>
<tr>
<td>3.5</td>
<td>Stakeholder Theory Framework</td>
</tr>
<tr>
<td>4.1</td>
<td>Flow Chart on Contents of Chapter 4</td>
</tr>
<tr>
<td>4.2</td>
<td>Conceptual Framework of the Study</td>
</tr>
<tr>
<td>4.3</td>
<td>Flow Diagram on Data Collection Process</td>
</tr>
<tr>
<td>4.4</td>
<td>Steps followed for CFA Analysis in Current Study</td>
</tr>
<tr>
<td>4.5</td>
<td>Measurement Models used in Current Study</td>
</tr>
<tr>
<td>4.6</td>
<td>Structural Sets for Collinearity Assessment</td>
</tr>
<tr>
<td>4.7</td>
<td>Hypothesized Mediation Models for Assessment</td>
</tr>
<tr>
<td>5.1</td>
<td>Flow Chart on Contents of Chapter 5</td>
</tr>
<tr>
<td>5.2</td>
<td>Environmental Issues of Concern for Retail Stores</td>
</tr>
<tr>
<td>5.3</td>
<td>Sources of Information on Reverse Logistics for Retail Stores</td>
</tr>
<tr>
<td>5.4</td>
<td>Reverse Logistics Practices Implemented in Stores</td>
</tr>
<tr>
<td>5.5</td>
<td>Reasons behind Product Return across Retail Formats</td>
</tr>
<tr>
<td>5.6</td>
<td>Foods Commonly Returned by Consumers to Retail Stores</td>
</tr>
<tr>
<td>5.7</td>
<td>Returned Food Management by Retail Stores</td>
</tr>
<tr>
<td>5.8</td>
<td>Unsold Food Products in Retail Stores</td>
</tr>
<tr>
<td>5.9</td>
<td>Left-over Packaging Materials in Retail Stores</td>
</tr>
<tr>
<td>5.10</td>
<td>Graphical Representation of IPMA Results on Firm Performance</td>
</tr>
<tr>
<td>5.11</td>
<td>Tier Levels of Sustainability across Retail Formats</td>
</tr>
<tr>
<td>6.1</td>
<td>Flow Chart on Contents of Chapter 6</td>
</tr>
<tr>
<td>A.3</td>
<td>Appendix C</td>
</tr>
<tr>
<td>C01</td>
<td>Structural Model for Evaluation for Sustainability in Industry</td>
</tr>
<tr>
<td>C02</td>
<td>Structural Model Used to Study Sustainability in Provision Stores</td>
</tr>
</tbody>
</table>
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3R</td>
<td>Reduce, Reuse, Recycle</td>
</tr>
<tr>
<td>ANP</td>
<td>Analytical Network Process</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of South-East Asian Nations</td>
</tr>
<tr>
<td>ASR</td>
<td>Asian Sustainability Rating</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>BC</td>
<td>Bias Corrected</td>
</tr>
<tr>
<td>CETDEM</td>
<td>Centre of Environment, Technology and Development Malaysia</td>
</tr>
<tr>
<td>CFA</td>
<td>Confirmatory Factor Analysis</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>CRC</td>
<td>Centralized Returns Centre</td>
</tr>
<tr>
<td>CRM</td>
<td>Customer Relationship Management</td>
</tr>
<tr>
<td>CSL</td>
<td>Competition, Standards, and Liberalization</td>
</tr>
<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
<tr>
<td>CTP</td>
<td>Community Transformation Programme</td>
</tr>
<tr>
<td>CVR</td>
<td>Content Validity Ratio</td>
</tr>
<tr>
<td>DASN</td>
<td>National Environmental Policy</td>
</tr>
<tr>
<td>DC</td>
<td>Distribution Centre</td>
</tr>
<tr>
<td>DJSI</td>
<td>Dow Jones Sustainability Index</td>
</tr>
<tr>
<td>DOE</td>
<td>Department of Environment</td>
</tr>
<tr>
<td>DOSM</td>
<td>Department of Statistics, Malaysia</td>
</tr>
<tr>
<td>ECO</td>
<td>Economic</td>
</tr>
<tr>
<td>EFA</td>
<td>Exploratory Factor Analysis</td>
</tr>
<tr>
<td>ENVR.</td>
<td>Environment</td>
</tr>
<tr>
<td>EPP</td>
<td>Entry Point Projects</td>
</tr>
<tr>
<td>ESG</td>
<td>Economic, Social, and Governance</td>
</tr>
<tr>
<td>ETP</td>
<td>Economic Transformation Program</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization</td>
</tr>
<tr>
<td>FTP</td>
<td>Fiscal Transformation Programme</td>
</tr>
<tr>
<td>HCD</td>
<td>Human Capita Development</td>
</tr>
<tr>
<td>GBI</td>
<td>Global Building Index</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GLBE</td>
<td>Government Lead by Example</td>
</tr>
<tr>
<td>GNI</td>
<td>Gross National Income</td>
</tr>
<tr>
<td>GRI</td>
<td>Global Reporting Initiative</td>
</tr>
<tr>
<td>GOVT</td>
<td>Government</td>
</tr>
<tr>
<td>GRiB</td>
<td>Reducing Government’s Role in Business</td>
</tr>
<tr>
<td>GTFS</td>
<td>Green Technology Financing Scheme</td>
</tr>
<tr>
<td>GTM</td>
<td>Green Technology Malaysia</td>
</tr>
<tr>
<td>GTP</td>
<td>Government Transformation Programme</td>
</tr>
<tr>
<td>GTTIF</td>
<td>Green Technology Tax Incentive Framework</td>
</tr>
<tr>
<td>IPMA</td>
<td>Importance-Performance Matrix Analysis</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>JIT</td>
<td>Just In Time</td>
</tr>
<tr>
<td>KETTHA</td>
<td>Ministry of Energy, Green Technology, and Water</td>
</tr>
<tr>
<td>KLD</td>
<td>Kinder, Lydenberg, and Domini</td>
</tr>
<tr>
<td>KMO</td>
<td>Kasier-Meyer-Olkin Measure of Sampling Adequacy</td>
</tr>
<tr>
<td>KR</td>
<td>Kedai Raykat</td>
</tr>
<tr>
<td>LCCF</td>
<td>Low Carbon City Framework</td>
</tr>
</tbody>
</table>
MDTCC  Ministry of Domestic Trade, Cooperative and Consumerism
MGTC  Malaysian Green Technology Corporation
MIDA  Malaysian Investment Development Authority
MIGHT  Malaysian Industry-Government Group for High Technology
MP  Malaysian Plan
MSIC  Malaysian Standard Industrial Classification
ND  Narrowing Disparity
NEM  New Economic Model
NGO  Non-Governmental Organizations
NKEA  National Key Economic Areas
NSDC  National SME Development Council
NSS  Non-Specialised Retail Trade in Store
NTP  National Transformation Programme
OLS  Original Least Square
PFR  Public Finance Reform
PLS  Partial Least Square
PLS-SEM  Partial Least Square Structural Equation Modelling
POP  Pop-Up
PSD  Public Service Delivery
PTM  Pusat Tenaga Malaysia
PTP  Political Transformation Programme
Q₁  First Quarter
Q₂  Second Quarter
Q₃  Third Quarter
RBV  Resource-Based View
RL  Reverse Logistics
SAVE  Energy Efficiency
SC  Supply Chain
SCM  Supply Chain Management
SECH  Social, Ethical, Cultural, and Health
SEM  Structural Equation Modelling
SME  Small and Medium Enterprises
SPM  Sustainability Performance Measurement
SPSS  Statistical Package for Social Sciences
SRI  Strategic Reform Initiatives
SSC  Sustainable Supply Chain
SSCM  Sustainable Supply Chain Management
STP  Social Transformation Programme
SWPCMA  Solid Waste and Public Cleansing Management Act
TBL  Triple Bottom Line
TCOS  Technological, Commercial, Organizational, and Social
TFP  Total Factor Productivity
TUKAR  Program Transformasi Kedai Runcit
UHLG  Ministry of Urban Wellbeing, Housing, and Local Government
UN  United Nations
UNEP  United Nations Environmental Programme
VAF  Variance Accounted For
VIF  Variance Inflation Factor
WCED  World Commission for Environment and Development
CHAPTER 1
INTRODUCTION

This chapter of the thesis discusses the role of retailers as change agents to sustainable development in an industry. The chapter consists of background discussions on the role of retailers for sustainability, problem statement, research questions, research objectives, significance of the study, and organization of the thesis (Figure 1.1).

1.1 Retailers and Sustainability

Sustainable Development (SD) is defined as “a development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” (World Commission for Environment and Development [WCED], 1987, p. 43). The concern on environmental preservation and economic stability led the nations to unite for SD across borders. Over the years, this intense focus on SD by governments led to the development of sustainability regulations and market restrictions on business operations. The resultant corporate sustainability is a customized version of SD, with focus on business operations. Corporate sustainability is defined as “the meeting of needs of the current stakeholders, without affecting the interests of potential future stakeholders to the business” (Dyllick & Hockerts, 2002, p.131). In order to do this, the companies have to maintain their economic, social, and environmental capital base without lagging behind on the sustainability aspect for political reasons.

Corporate sustainability involves serious decision-making and provides a balance between environment commitment and interest of the company. It is not a short-term application, and responsible decisions made might lead to a successful green company in the future. However, adapting sustainability into existing business operations is one of the main hurdles to its acceptance by companies. The role of retailers as change-agents starts here.

Retailers’ influence on the upstream and downstream supply chain is well recognized, making them the optimal initiators for sustainability in any industry (Davis & Konisky, 2000). Retailers influence environment sustainability directly as well as indirectly. The
direct effects of their operations include channel selection, operations management, and resource control. The indirect influences can be upstream or downstream (Davies & Konisky, 2000). The upstream lane see retailers in a strong position to influence the green supply chain management. They act as the connecting link between manufacturers or producers and demand of consumers. This alone positions them to a primal role in upstream management of green practices and products by controlling demand and supply (Connor & Schiek, 1997; Itterhus, Arnestad, & Lothe, 1999). The capability of retailers like Walmart to green their supply chain through selection of green suppliers and sustainable purchasing decisions supports their role in creating a sustainable supply chain (Brammer, Hoejmose, & Millington, 2011; Green, Morton, & New, 1996). They can also address food safety and animal welfare by implementing management guidelines, as Tesco did in its meat supply chains (Lindgreen & Hingley, 2003).

The downstream influences of retailers is on their consumers. A study done on the effect of green image of retailers on shopping value and store loyalty has found that the green image of a store significantly influences its shopping value. Store loyalty also has a mediating effect on shopping value and green image (Yusof, Musa, & Rahman, 2011). Another study done on environment conscious consumption has shown retailers to have a stronger influence than their peers in guiding consumers towards green purchasing (Tsarenko, Ferraro, Sands, & McLeod, 2013). Consumer preference studies showed that environmental impact factor of a product is not the main selling point for majority of the consumers (95% of consumers). This is the result of lack of awareness about the environmental implications of each product. According to Tsarenko et al. (2013) this is where the retailers can play an important role in educating consumers on green retailing and purchasing. The role of retailers to reverse this situation, especially in case of organic and green foods is immense (Speer, 1997).

The opportunity for retailers to influence consumer purchase decisions directly through Point-of-Purchase (POP) materials have been found effective (Reicks, Splett, & Fishman, 1997). Besides, as retailers deal with the consumers directly, they are often affected by product crises related to food safety and animal welfare issues (Wiese & Toporowski, 2013). This is true in case of the food industry, wherein sustainability can be effectively branded and promoted by grocery retailers. Their ability to create a multiplier effect on the huge number of suppliers under them helps in greening the upstream food supply chain, while their high rate of consumer footfall supports spread of mass marketing initiatives. It is thereby opportune for nations to utilize retailers to spread the message of SD to their society.

1.2 Problem Statement

Malaysian economy is the 29th largest economy in the world, with GDP worth US$492.4 billion and per capita income of US$16,922 (Market Watch, 2012). With policies and programs in place to develop the economy, Malaysia is well on its route to become a developed country by 2020. However, rapid industrialization and investments introduced a basketful of new environmental pollution woes with it. Water pollution, air pollution, noise pollution, deforestation, pollution of inland and marine waters, soil and coastal erosion, overfishing, coral reef destruction, and problems in waste disposal
are some of the many environmental problems plaguing the nation (Hezri & Hasan, 2006).

Solid waste mismanagement is one of the major environmental problems of immediate concern to the Malaysian government. Waste management problems arise from overflowing capacity of landfills, limited recycling centers, and weak policies on waste management. Statistics show daily solid waste production of 25,000 tons in Malaysia with expected rise to 30,000 tons by 2020. Majority of the solid wastes comprise food wastes (45%), plastics (24%), and paper (7%) (Sreenivasan, Govindan, Chinnasami, & Kadiresu, 2012). Increasing population and rapid development along with the fact that less than 5% of the actual waste gets recycled further aggravates the situation. Therefore, there is an urgent need to control the waste flow from industries, considering that majority of the industrial solid wastes go to landfills. However, governmental policies on waste management and recycling in industries are still in the infancy stage. One of the most common ways of waste disposal followed by industries is incineration. The burning of solid waste only adds to air pollution. Understanding the situation, the Malaysian government is bent on perfecting its environmental laws and regulations to cover all areas for penalty.

The government has taken up a holistic approach to manage environmental problems, with the establishment of departments like the Department of Environment (DOE), Ministry of Energy, Green Technology and Water (KeTTHA) to monitor progress on environmental conservation, policies like Solid Waste and Public Cleansing Management Act (SWPCMA) and National Policy on Environment-Green Strategy, programs like Green Technology Foresight 2030, Green Building Index (GBI) for corporate sustainability, Malaysian Investment Development Authority (MIDA) for tax incentives to green companies, Green Technology Financing Scheme to finance green initiatives, No Plastic Bag and 3R (reduce, reuse, recycle) campaigns for waste management, and compulsory environmental education in schools. Mini thermal treatment plants in Pulau Pangkor, Pulau Langkawi, Pulau Tioman and Cameron Highlands and mini incinerators in Kuala Lumpur, Johor and Melaka have been initiated for waste control and management.

The focus is shifting from solely environmental policies to preventive measures for pollution control. With the government redefining its role in environment conservation, industries can no longer be mere observers. Due to their large presence and contribution to pollution, industries should play a major role in curbing the spread of pollution in the nation.

The grocery retail industry is one of the largest and fastest growing industries in Malaysia. It is also one of the major contributors to environmental pollution in the nation. The retail industry contributes heavily to the solid waste management problem, through its food waste, paper and plastic wastes among others. The food wastes also contribute to generation of greenhouse gases in the nation. The grocery retail industry generates two types of solid wastes, particularly food waste and packaging materials. The food wastes comprise food product returns by consumers and unsold food products in shelves. The types of packaging wastes include left-over corrugated boxes, cardboard boxes, paper, plastics, steel, glass, and aluminum. The other environmental effects include energy use, water pollution, and air pollution. In grocery retail, significant energy consumption goes towards refrigeration, and lighting. The energy
intensity required for this industry necessitates the establishment of energy conservation policies in stores. The contribution of grocery retail activities to water pollution is minimal. However, the logistics and transportation activities do contribute to air pollution. Along with control on carbon emission, food waste management is also recommended to reduce the generation of greenhouse gases.

With the Malaysian government’s extreme focus on SD of the nation, it is imperative to understand sustainability as practiced by grocery retailers. Information on the current situation of sustainability could help the government initiate measures to ensure complete greening of this industry. Also, grocery retailers could aid the government in the role of change-agents for sustainability along the food supply chain. The presence of such a competent partner would certainly lessen the burden on government to fulfil the dream of green Malaysia.

However, the grocery retail industry of Malaysia is heavily fragmented with 56% provision stores, 43% hypermarkets and supermarkets, and 1% convenience stores (Pin & Suresh, 2013). The presence of multiple formats makes monitoring sustainability in this industry difficult. Nevertheless, several questions arise on the current level of sustainability implementation across formats, the role of firmographic characteristics in influencing sustainability implementation, hindrances and motivators to retailers to implement sustainability, benefits they attained from its implementation, and possibility of eco-friendly practices influencing sustainability in retail stores. Specifically, the implementation of reverse logistics in the Malaysian industry needs to be evaluated, due to its contribution to waste management among other benefits.

Since business decisions on change often depends on value added benefits, the evaluation of contribution of sustainability to firm performance is critical for SD. However, such studies on sustainability, focused across retail formats in the Malaysian grocery retail industry are limited. This gap in literature will not only prevent a complete understanding of sustainability as practiced in the industry, but also prevent the development of policies and programs targeted across formats.

Provision store is the most important format in the Malaysian industry, due to its industrial distribution (56%) and wide spread across the nation. Also, the government is currently focused on Program Transformasi Kedai Runcit or Small Retailer Transformation Program (TUKAR) for provision stores in the nation. The TUKAR program could be used to initiate sustainability practices into provision store operations. Any information on motivators to sustainability in provision stores could help the government a long way to ensure sustainable development in this industry. Retailers only tend to adopt practices that add tangible or intangible value to their businesses. It is up to the government to communicate on the tangible and intangible values to businesses from sustainability implementation, and influence retailers to voluntarily accept sustainability.

1.3 Research Questions

This study addresses four specific research questions. The questions focus on understanding the level of sustainability as implemented across the grocery retail formats, and the predictors to its implementation and firm performance.
1. What is the current level of sustainability practiced across retail formats?
2. Do firmographic characteristics influence the implementation of sustainability in a store?
3. What factors influence grocery retailers in implementing sustainability practices?
4. Do retail formats achieve significant firm performance by sustainability implementation?
5. Can eco-friendly practices\(^1\) mediate on reverse logistics in retail stores?
6. Does reverse logistics mediate on firm performance due to sustainability?
7. Are factors to sustainability implementation in provision stores different from the industry?

1.4 Research Objectives

The general objective of this study is to examine sustainability as practiced by the grocery retail industry of Malaysia, with special focus on reverse logistics. The specific objectives of this study are:
1. To study the effect of firmographic characteristics on sustainability implementation in retail stores.
2. To identify the factors to sustainability implementation in the grocery retail industry.
3. To estimate the contribution of sustainability implementation to firm performance.
4. To evaluate eco-friendly practices for mediation effect on reverse logistics in retail stores.
5. To examine for mediation effect of reverse logistics on firm performance in retail stores.
6. To verify the factors to sustainability implementation in provision stores.

1.5 Significance of the Study

Malaysia is striving to be a green nation. The policies and programs developed to initiate sustainable development across industries necessitates an evaluation of current situation. However, fragmentation of the grocery retail industry makes an evaluation of the industry and comparative studies difficult. Nevertheless, this research aims to provide a conclusive study on the current level of sustainability across the formats, highlighting on the waste management practice of reverse logistics. An insight into factors that motivate the industry to adopt sustainability, especially the provision stores could be useful for initiating sustainable development in this industry. Considering the relevance of this industry to the national economy, and its contribution to environmental problems, the observations from this study could be used to green the retail operations, without compromising on firm performance of the stores. The regulatory and authority bodies could use this information to motivate, evaluate, and support sustainability in the retail industry. In the long run, the retailers could turn partners to support the government fulfil the dream of green Malaysia.

\(^1\) Eco-friendly practices come under Tier 1 classification of Sustainability. This term will be explained further in Chapter 3
1.6 Scope of the Study

The scope of the study will cover the implementation of sustainability practices as implemented across retail formats in Klang Valley. Klang Valley was selected due to the large number of retail stores and revenue output from the area. The level of sustainability implementation will be ranked into three tiers based on the Three Tiers ranking system. The study will also try to understand the reverse logistic practices in terms of its returns and waste management across formats. The reasons behind the implementation of sustainability practices for the industry will be studied, with special focus on reverse logistics implementation by stores. Provision stores will be exclusively evaluated and verified for reasons behind sustainability implementation. The possibility of mediation effect between the tier practices will also be studied, for its effect on the firm performance.

1.7 Organization of the Thesis

The study is organized in the following order. In Chapter 1, the essential background information on sustainability and the study are given. Chapter 2 gives an introduction into the grocery retail industry and a contextual summary on environmental policies and programs in Malaysia. Chapter 3 summarizes previous studies on sustainability indicators, reverse logistics, and discusses their effect on firm performance. Chapter 4 explains the philosophy and research design behind the study, development of the conceptual framework, justifies the selection of variables and hypotheses construction, sampling and data collection. The process of questionnaire development and results of pre-testing and pilot testing are also summarized. Chapter 5 provides the results of the study. Chapter 6 gives a conclusion of the study by summarizing the results, limitations, and recommendations of the study.

1.8 Summary

This chapter introduced corporate sustainability, and explained on the role of retailers as change-agents to sustainability implementation. The problems and gaps identified in the area of retail sustainability in Malaysia have also been summarized above. The significance of the study and scope has been given, highlighting the research questions and objectives to be achieved.
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149


154


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