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Assessing determinants of green practices adoption: a conceptual framework

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ABSTRACT

The raising of environmental issues has drawn attentions of businesses to participate in green practices. The conceptual framework of this paper underpinned the theory of Resources Based View (RBV) by identifying four firms' key resources namely physical capital resources, human capital resources, organisational capital resources and financial resources. In this article, these four resources were proposed to be positively influence fast food restaurants to adopt green practices. This is in line with the literature whereby resources played as productive assets role in helping firm to accomplish activities. Activities that will be discussed in this study are adoption of green practices. If this is true, then the conceptual framework is expected to show positive results, indicating that firm resources determine the adoption of green practices among fast food restaurants. Hence, fast food restaurants should manage and utilise resources to adopt green practices in their daily business operations.

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Introduction

According to Pacific Gas and Electric's Food Service Technology Center (FSTC), restaurants are retail world's largest energy user, they use almost five times more energy per square foot than any other type of commercial building (Horovitz, 2008). Green Restaurant Association (GRA) revealed that on average restaurant uses 300,000 gallons of water per year; restaurant industry is the number one electric consumers (33%) in the retail sector. GRA also revealed that each restaurant produces an average of 5,000 pounds of garbage per year. Therefore, the negative effects on the environment from the restaurant industry would be substantial if the restaurant industry did not pursue green practices (e.g. energy efficiency, water conservation, pollution prevention, environmental health, reuse and recycle programs, etc), (Chou, Chen & Wang, 2011). If restaurant industry can slightly reduce down the energy consumption and garbage produced, the impact will be huge (Horovitz, 2008).

According to a survey conducted by Nielson (2009), consumers in Asia Pacific dined out more frequent as compared to consumers in other region. This is also applies to Malaysia where more than two-thirds of Malaysians dine at restaurants at least once a week. The increasing numbers of dining at restaurants will eventually leads to greater demand of energy consumption and also larger amount of garbage. According to Euromonitor International (2011), consumer foodservice in Malaysia can be classified into six segments, namely cafes/bars, full service restaurants, fast food, 100% home delivery/takeaway, self-service cafeterias and street stalls. Table 1 shows the number of outlets by each segment from 2006 to 2010. Based on the information in Table 1, fast food shown the highest growth (8%) in terms of number of outlets from 2009, followed by self-service cafeterias (6%).

In addition, according to the Market Analysis Report (2011), the number of transactions in consumer foodservice industry increased significantly over the period of 2005 to 2009, at a compound annual growth rate (CAGR) of 6.80%, and recorded an absolute growth of 38.92%. The focus of this study

is on fast food mainly due to fast food was recorded as the fastest growth segment (CAGR of 11.64%; absolute rate of 7.40%), followed by the café and bar segment (CAGR of 7.93%; absolute rate of 46.47%). Fast food is also expected to be the fastest growing segment of the foodservice industry with a CAGR of 3.47% and an absolute growth of 14.60% between 2010 to 2014.

As most of the fast food restaurants in Malaysia were introduced from western countries, Malaysia Ministry of Health (MOH) defined fast food as "foods that are prepared in large quantities, following standardised procedures and served rapidly in restaurants commonly known as fast food restaurants, which usually advertise their services through the electronic and print media". Malaysians have changed their eating habits due to the emerging trends of lifestyle. The working hours are longer now especially for people who work in urban areas. This has shifted their eating habits to the convenience of prepared and processed meals, where fast foods are one of their favourite choices (Euromonitor International, 2011). According the Malaysian minister of health, the increasing number of fast food outlets was also one of the causes of higher demand for fast food (BBC News, 2011). As mentioned earlier, restaurants are the largest energy user in retail industry, the increasing numbers of fast food restaurant show that Malaysian consumers are now more accessible to fast food restaurant. With that, fast food restaurants will need to consume more energy to cater the greater demand from consumers. The greater amount of energy used (water, electricity, cooking gas, etc) will caused negative effects towards the environment (Chou et al., 2011). Therefore, restaurant industry cannot escape from its responsibility for contributing to protect the environmental (Kasim, 2009). It is indeed crucial for fast food restaurants to take action in implementing practices that cause least environmental negative impact towards the environment in their daily business activity, where one of the ways will be via adoption of green practices.

Research Gaps

Oh et al. (2004) conducted a study on the developments of research in hospitality and tourism industry, finding from the

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study showed that research in restaurant/foodservice industry is still in infancy stage. Revell and Blackburn (2007) observed that it is very interesting to find out how restaurateurs react towards the growing environmental practice as very little research has touched on impact of green practices within restaurant industry. In addition, Tzschentke et al. (2008) commented that most of the studies in environmental response in hospitality business were focusing on corporate sectors. Only limited are concerning in restaurant industry. According to Line and Runyan (2011), the study of green practices in hospitality industries was mainly focusing on hotel or lodging industry, restaurant industry was being ignored. Based on aforementioned, more study should be conducted to fill in the gap in restaurant industry.

In United States, restaurants will be awarded as certified green restaurant if they fulfil the criteria set by Green Restaurant Association (GRA). Green Restaurant Association (GRA) was established since 1990. It is a non-profit organisation in San Diego that provides comprehensive and cost effective tools for restaurant industry to become more environmentally responsible in order to become more sustainable in current competitive market. There are seven broad categories that GRA had identified: i) water efficiency, ii) waste reduction and recycling, iii) sustainable furnishings and building materials, iv) sustainable food, v) energy, vi) disposables, vii) chemical and pollution reduction. Restaurant need to fulfil these seven categories (points will be awarded) before they can earn a certificate as a certified green restaurant. There are three levels certified green restaurants, i.e two-star certified green restaurant, three-star certified green restaurant and four-star certified green restaurant. The levels are depending on the total points obtained. The points will be evaluated based on the green practices the restaurant adopts. Unlike United States, as of today, Malaysia does not have an association which grants green certificate to restaurant that fulfils the criteria, to be named as certified green restaurant. In Malaysia, we have an online directory to keep track firms that are engaging in green initiatives, named Malaysia Green Directory. This directory was developed by Malaysia Green Technology Corporation with the purpose to facilitate both businesses and consumers in searching for green products or services (<http://www.greendirectory.my>). In addition, other than Green Directory Malaysia, Malaysia government had also launched Green Building Index (GBI) which focuses on increasing the efficiency of resource use (energy, water, and materials) while reducing building impact on human health and the environment during the building's lifecycle, through better siting, design, construction, operation, maintenance, and removal (<http://www.greenbuildingindex.org>). Unlike GRA in United States, GBI in Malaysia is intended to promote sustainability in the built environment and raise awareness among developers, architects, engineers, planners, designers, contractors and the public about environmental issues, it is more applicable for buildings construction. GRA assessment is mainly for restaurant and the criteria covered a wider scope of assessment including sustainable food which is more appropriate for restaurant. Also, Vlosky et al. (1999) proposed that there is a positive correlation between green certification and consumers' willingness to buy green product. Hence, it will be useful for this study to adapt the guidelines set by GRA and propose guidelines for fast food restaurants in Malaysia to be qualified as a certified green restaurant.

According to Nezakati et al. (2011), the fast food industry in Malaysia is expanding. Fast food restaurants are now accessible

in shopping malls, airports, universities, as well as petrol stations. The growing numbers of fast food restaurants will consequently leads to greater amount of energy consumption and this will also brings negative impact towards the environment. Consequently, if this issue remain untouched, the limited resources will be diminishing eventually. In addition, due to the increasing of global environmental crisis, consumers are now put more attentions on environmental issues (Follows & Jobber, 2000). The heavy promotions through media and exposures of information technology had raised the awareness of consumers on their roles in contributing to save the environment, one of the roles is to consume green product or service (Eze et al., 2011). Previous studies showed that there is a growing demand of green products or services from consumers (Clark, 2009; Environmental Leader, 2009; The Star, 2010), and consumers are also concerned on the level of involvement of businesses in adopting environmental friendly activities (Pelsmacker et al., 2005). With that, one of the challenges for businesses to be sustainable is to deal with the growing demand from consumers in concerning on the environmental protection conducted by them (Follows & Jobber, 2000). Adoption of green practices can be categorised as one of the action carry out by businesses in showing effort of implementing of environmental protection because this action will eventually contributes to a better environment (Chou et al., 2011). Therefore, it is timely for businesses in all sectors including foodservice to engage in green practices to be competitive and achieve sustainability in the market place.

In Malaysia, the government is also engage in green initiative by searching for alternative sources of energy that caused less harmful towards the environment. Malaysian government highlighted in the 10th Malaysia Plan that in order to cater the increasing demand of resources (e.g: energy, water, gas, etc), there is a need to develop a better way of handling resources. For instance, develop the alternative sources of energy, water reductions and etc. Restaurant are claimed to be the retail world's largest energy user, if, there are no efforts from restaurant in showing interest or willingness to adopt green practices to further reduce down the energy consumption, it will be meaningless for Malaysian government's effort in introduce the alternative sources of energy. Thus, it will be useful to study factors that influence fast food restaurants to adopt green practices. By knowing this, appropriate measures can be taken by relevant parties in order to adopt green practices which caused lesser negative impacts towards the environment.

Moreover, researchers have begun to urge to put more emphasis in developing a theoretical grounding for the study in green practices in foodservice industry (Chou et al., 2011). Studies on green practices is not new, however, the major focus was on consumers' perspective (Robinot & Giannelloni, 2010; Wahid et al., 2011; Thøgersen et al., 2011). There are, however, limited studies focused on organisation's perspective on the implementation of green practices in foodservice industry, particularly within Malaysia context. Therefore, this study aims to fill the abovementioned gaps in Malaysia context by exploring how resources influence green practices adoption in fast food industry.

Resources Based View Theory

This study underpins the theory of resource based view and further includes financial resources as one of the firm's resources. RBV has been applied in various studies to study how a firm's success driven from resources a firm poses (Galbreath,

2005; Wong & Karia, 2010; Zhuang & Lederer, 2006; Bakar & Ahmad, 2010; Progoulaki & Theotokas, 2010). Mathews (2006) defined resources as the means through which activities are accomplished, which are also the productive assets of firms. Resources also refer to the stocks owned or controlled by the firm which can later be converted into final products or services (Amit & Schoemaker, 1993; Capron & Hulland, 1999). According to Barney (1991), resources can be classified into three categories namely physical capital resources, human capital resources and organisational resources. Financial resources was included in this study as previous studies in various fields commented that firm focuses on the three main resources (physical capital resource, human capital resources and organizational capital resources) are not sufficient (Galbreath, 2005; Bakar & Ahmad, 2010).

Proposed Framework and Hypotheses Development

The proposed framework underpins the theory of Resources Based View (RBV) and extends it by adding financial resources as one of the firm's resources. The proposed framework comprises of green practices adoption as the dependent variable while physical capital resources (location, organisation infrastructure), human capital resources (number of employee, teamwork, flexibility, top management commitment), organisational capital resources (organisational culture, organisational policies, organisational structure), financial resources (operating costs, cash on hand) as the independent variables. These variables were chosen based on the support from prior studies and their suitability in the context of green practices adoption among fast food restaurants in Malaysia.

Green Practices

The term green and environmental friendly refers to the commitment of various sound practices that minimized its negative environmental impacts, such as saving energy, saving water, and reducing solid waste (Manaktola & Jauhari, 2010). Kane (cited in Norton, 2010), identified that there are two things that firms must adopt in their business operations in order to gain sustainability. First, firms need to consume lesser resource, i.e. energy, materials and water. Second, firms should shift to an economy which mimics the natural environment by consuming resources that without poison economy system, practice recycle activities and consume energy that is renewable. In addition, businesses that following practices to protect environment are able to position it distinctly in the competitive market place (Manaktola & Jauhari, 2010).

Based on the aforementioned, in this study, green practices refer to practices adopted by fast food restaurant that reduce environmental adverse effects of its facilities and operations. The green practices in this study will be developed based on the criterias that have been set by GRA. According to Micheal Oshman, the Executive Director as well as founder of the GRA, there are seven reasons to become a certified green restaurant, that is restaurant receive great publicity, cut costs, improve staff productivity and morale, stay ahead from legislation and create a health environment. Oshman also pointed out that these benefits mimic the key environmental objectives and targets of many industrial organisations striving for ISO 14001 certification (Business and the Environment, 2008). In San Diego, one of the restaurant owners revealed that there was a significant decrease between 11% and 15% in their monthly energy usage after the adoption of green practices (Business and the Environment, 2008).

Physical Capital Resources

Physical resources include physical technology, location, plant and equipment and its access to raw material (Barney, 1991). In another word, it also meant the hard resources that related to a firm (Wu et al., 2008; Goh, 2011). Location and organisation infrastructure will be identified as physical resources in this study. Bakar and Ahmad (2010) had also adopted location as one of the firm's physical resources in their study on assessing the relationship between firm resources and the success of new product implementation. In this study, since green practices in Malaysia are claimed to be in its infancy stage, it is justifiable to include location as one of the firm's physical resources. Davison & Worrell (2001) revealed that firm must create infrastructure in order to implement environmentally friendly activities. Based on aforementioned, the following hypotheses were developed:

H1: The location of fast food restaurant has a positive and significant relationship with green practices adoption

H2: The infrastructure of fast food restaurant owned has a positive and significant relationship with green practices adoption

Human Capital Resources

According to Barney (1991, pp.101), "human capital resources include the training, experience, judgment, intelligence, relationships and insight of individual managers and workers in a firm". In this study, human capital resources include number of employees, flexibility, teamwork and top management commitment. These items were chosen because it has been discussed and explained in prior studies, i.e. Zhuang & Lederer (2006), Wong & Karia (2010), Goh (2011). Earlier study conducted by Hackes (1999) on resources allocation decisions by school foodservice directors revealed that number of employees (e.g. availability of qualified employees, recruitment of part time employees) will be the most important issue in future. Wolf (1998) commented that there is a need to access the development of teamwork for foodservice organization because teamwork provides the opportunity to achieve a better outcome with fewer resources. Organisational flexibility and top management commitment is necessary when a new application is introduced in an organisation (Zhuang & Lederer, 2006; Benjamin & Levinson, 1993). In this study, green practices are claimed to be still in early stage within Malaysia. Therefore, it is appropriate to propose that the flexibility of restaurant and top management commitment may has a relationship with green practices adoption. In this study, flexibility refers to the acceptance of employees towards the adoption of green practices and top management commitment refers to the top executives has committed and giving supports in adopting green practices (Zhuang & Lederer, 2006). Chou et al. (2011) conducted a study in Taiwan on the factors adopting green practices in the restaurant industry, findings indicated that flexibility of restaurant to accept the change is vital in influencing restaurant to adopt green practices. Zhu and Sarkis (2004) identified that commitment from top management as one the factors affect environmental management within an organization. Lun (2011) also revealed that supports from management played as a role in influencing the green practices in the firm. Abovementioned leads to the following hypotheses:

H3: Number of employee of fast food restaurant has a positive and significant relationship with green practices adoption

H4: The teamwork among employees of fast food restaurant has a positive and significant relationship with green practices adoption

H5: Flexibility of fast food restaurant has a positive and significant relationship with green practices adoption

H6: Top management commitment has a positive and significant relationship with green practices adoption

Organisational Capital Resources

According to Barney (1991), organisational capital resources include a firm's formal reporting structure, its formal and informal planning, controlling, coordinating systems, relationships with stakeholders. In this study, organisational culture, organisational policies and organisation structure falls into category of organisational capital resources. These items were chosen as it has been adopted in previous studies. For instance, Bakar and Ahmad (2010) classified organisational culture, organisational policies and organisational structure as firm's organisational capital resources in their study. According to Harris and Crane (2002), organization culture played as a vital role in changing the organization to be green. One of the tips for organization to go green is to encourage a culture within an organization by telling employees the impact of collective effort in saving energy over a year if everyone makes an effort (Olsen, 2008). Olsen (2008) revealed that another important tip for organization to go green is to make it standardise procedure that all employees should undergo training on environmental issues. In addition, Jackson and Sloane (2007) revealed that there is a link between organisation's structure and the ease of adoption new practices or innovation within an organisation. Hence, the following hypotheses were developed:-

H7: The organisation culture of fast food restaurant has a positive and significant relationship with green practices adoption.

H8: The organisation policies of fast food restaurant has a positive and significant relationship with green practices adoption.

H9: The organisation structure of fast food restaurant has a positive and significant relationship with green practices adoption.

Financial Resources

Galbreath (2005) revealed that most of the previous studies that underpinned RBV theory were mainly focused on a few resources which are less adequate. Galbreath (2005) suggested that a new approach can be considered to test the theory of RBV by including other resources into firm's resources pool. Financial resources had also been identified as one of the important resources a firm must pose (Galbreath, 2005; Bakar & Ahmad, 2010; Progoulaki & Theotokas, 2010). The traditional economic theory of capital refers to money, and financial resources make up the capital, together with land and labor that represents one of the factors of production (Smith, 1904). In this study, financial resources defined as the means of payment for obtaining other types of resources (Siano et al. 2010). Galbreath (2005) had identified cash on hand as one of the resources that can influence success of a firm. In addition, Tzschentke al. (2004) revealed that financial resources (e.g. operating cost) constraint plays a role in the decision to adopt green practices in hospitality industry. Since restaurant is a part of hospitality industry (Tzschentke et al., 2008), therefore, financial resources may play a role in influencing restaurants manager to adopt green practices. Hence, this leads to the following hypothesis:

H10: Cash on hand that fast food restaurant holds have a positive and significant relationship with green practices adoption.

Based on the review of the relevant literature and discussion on the Resource Based View, the propose framework is developed. Figure 1 illustrates the propose research framework of this study.

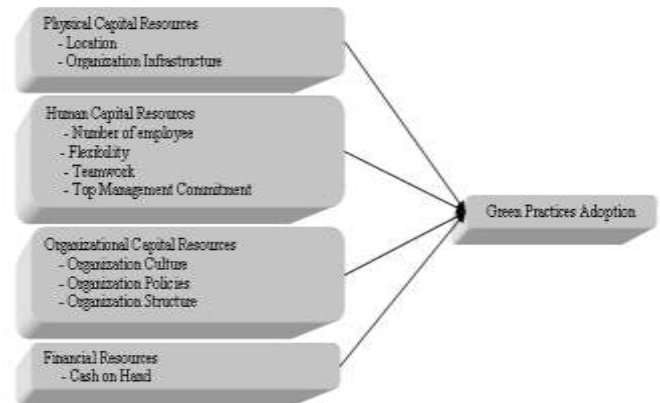


Figure 1: Proposed Framework of Determinants of Green Practices Adoption among Fast Food Restaurants

Research Methodology

Item Measurements

Survey type of research will be carried out to obtain information. Questionnaire items for green practices can be derived from the detailed scarce measurements developed by GRA. For physical capital resources, human capital resources, organisation capital resources and financial resources, the questionnaire items will be adapted from prior studies (Bakar & Ahmad, 2010; Goh, 2010; Progoulaki & Theotokas, 2010; Galbreath, 2005; Wong & Karia, 2010; Zhuang & Lederer, 2006). The measurement used for this study is the Likert scale which is designed to measure the extent which respondents agree or disagree with statements. This measurement has been widely used in previous studies for testing hypotheses (Galbreath, 2005; Choi & Parsa, 2008; Schubert et al., 2010)

Sampling Method

To fit the objective of this study, the unit of analysis for this research is fast food restaurant in Malaysia. The respondents of the survey will be the manager of fast food restaurants. Hence, the population frame should be drawn from existing, formal directory of fast food industry, such as Euromonitor International. Euromonitor International, the world leader in strategic research for consumer markets. There were several previous research had also utilized Euromonitor reports in their study (Ryan et al., 2010; Ungku et al, 2011; Bruwer et al., 2011). According to the research survey conducted by Euromonitor (2011), burger fast food showed the fastest value growth in 2010 and chicken fast food is the most popular type in 2010. This study will focus on the burger and chicken fast food outlets as they are the major shares among all fast food.

Data Analysis Techniques

Reliability and validity tests are compulsory in order to measure the goodness of measure (Sekaran & Bougie, 2010). Cronbach's Alpha can be used in measuring the reliability of inter-item consistency among variables (Nunally, 1978). Factor analysis needs to be conducted to measure the validity of each construct (Field, 2009). In addition, to measure the relationship between independent and dependent variable, correlation analysis can be conducted. Several studies had used correlation

analysis in testing relationship between independent and dependent variable (Kincaid et al., 2010; Lee et al., 2011; Ryu et al., 2010). Statistical Package for Social Sciences (SPSS) will be used for the above mentioned analysis.

Theoretical and Managerial Implications

With regards to the various arguments on resources based view theory, this study proposes a framework underpinned RBV theory and extended the theory by including financial resources to examine the role of these resources influencing the adoption of green practices in fast food restaurants to gain competitive advantage. The findings are expected to confirm the relationship between independent variables (physical capital resources, human capital resources, organisational resources and financial resources) and the dependent variable (adoption of green practices). The result of this study can also serve as a reference for scholars to enrich the literature on green practices, perhaps in different orientation or different industry.

Previous research showed that pollutions happened due to the inefficient uses of resources, and organisations that initiate in environmental management will possess as first mover advantage which results in improving their green images and also to gain competitive advantage (Porter & Linde, 1995; Chen, 2008; Chen, 2011). This study will enhance managers' understanding of the importance and values of firm's resources. The proposed framework provides a better understanding on the role of firm resources in influencing restaurant to adopt green practices. If the proposed framework is true, the next challenge will be on how restaurant management team manages and control their resources in order to adopt green practices in their business operation. In Malaysian Green Forum 2010, our Prime Minister Dato' Sri Mohd Najib Abdul Razak mentioned that the world is now paying more attentions on environmental issues, especially on green initiatives. They have yet to realize their roles in saving the environment. Hence, relevant government agencies may find this study useful so that appropriate initiatives can be carried out in helping restaurant to utilize their resources in adopting green practices.

Conclusion

Based on aforementioned, fast food industry in Malaysia is expanding. The growing number of fast food restaurants and the widespread eating fast foods habit in Malaysia will certainly results greater amount of energy to be needed to support the demand. There will be massive impact towards the environment if no measure taken to reduce the energy consumption. More research in the domain of environmental practices in fast food industry is needed. Hence, in this study, the framework proposes that firm's resources may influence green practices adoption. According to Manaktola and Jauhari (2007), adoption of green practices can be the foundation of marketing strategy to be positioned in the competitive market place, as consumers are now more concern towards organisation that poses green practices. In addition, Andersen (2010) mentioned that strategic analysis based on resources and capability approaches is more appropriate for today's business environment, previous models such as product market analysis and Porter's (1980) five forces framework are obsolete to certain extent. In a competitive market, identification and possession of strategic resource or strategic resources alone is not compatible with competitors (Sirmon et al. 2007). Firms should diversify by effectively managed resources they have to create value for their customers, rather than focusing on physical products they can offer to their customers (Andersen, 2010). Therefore, if fast food restaurants

can recognise the importance of the resources they owned in adopting green practices, this will help restaurant to contribute not only towards the environment, but it is also beneficial to themselves by building their reputation in involving in green practices to target .

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Table 1. Total Outlets of Foodservices by Segments in Malaysia 2006 to 2010

Segments	2006	2007	2008	2009	2010
100% Home Delivery/Takeaway	170	177	189	207	215
Cafés/Bars	4,464	4,669	4,804	4,894	5,081
Full-Service Restaurants	9,010	9,434	9,717	9,742	9,946
Fast Food	1,988	2,312	2,574	2,743	2,953
Self-Service Cafeterias	220	240	258	268	284
Street Stalls	10,114	10,417	10,645	10,756	10,862
Total Consumer Foodservice	25,966	27,249	28,187	28,610	29,341

Source: Euromonitor International (2011)