

Greening the Service Delivery Process in Food Service Sector

Rosini Nawang Mustapen¹, Azmawani Abdul Rahman²

¹ Department of Operation Management, School of Technology Management & Logistic,
College of Business, Universiti Utara Malaysia 06010 Sintok Kedah,
Malaysia

² Faculty of Economic & Management, University Putra Malaysia,
43400 Serdang, Selangor Malaysia

DOI Link: <http://dx.doi.org/10.6007/IJARBSS/v7-i4/2913>

Published Date: 14 April 2017

Abstract

Greening the service sector study has currently increased as service sector become a part of climate change and environmental damage contributor and food service sectors are not exempted. This topic has been debated among scholars and practitioners for over the past 10 years due to increasing of environmental concern. The research in food service operator to date tend to involve the general green practices rather than specific stage process such as the service delivery process, since this process has pertinent connection in service operation. Thus, the purpose of this study is to identify the specific green practices in service process delivery of food service operator and then to review greening service process delivery factors that enhance the greening effort of food service operator through service delivery process. Finally, a conceptual model of the study is proposed.

Keywords: Service Process, Green Restaurant Practice, Green Service Delivery.

1 Introduction

The growing number of food service operators in this country showing the positive figure in food service industry and this sector is expected will contribute more than 50% of Malaysian economic growth (MIDA, 2011). Despite the growing of food service sector, food service operation has potential in contributing the environmental demolition through its production, process and consumption stage. As reported in the local news by the Solid Waste Management and Public Cleansing Corporation (SWCorp) Research Department 2015, (Bernama, 2015) food service activities were contributed on food wastage and this problem is worsening during Ramadhan season which has contributed about 270, 000 tons of food waste.

Similar study on food waste in Finnish has categorized the food waste into kitchen waste, service waste and customer and the study also suggested that service of buffet style and

overproduction is the main driver for wasted food problem (Heikkilä, Reinikainen, Katajajuuri, Silvennoinen, & Hartikainen, 2016). These problems have negatively impact the environmental because wastage food has become the large source of solid and main driver of greenhouse gas emission and contribute to climate change issues. Current studies suggested the involvement from food service operator is highly recommended in assist to reduce food waste problem (Ofei et al., 2015).

Service delivery is a part of services concept which describing the manner processes which started with how the services is delivering, customer's service experience, service result and the values of the service for service provider and customer itself (Katzan, 2015). In food Service sector, delivery process may classified into three components which consist, service setting, service intangibles and service core offering (Sulek & Hensley, 2010). Whilst, (Lin, Lu, & Yeh, 2015), identified service delivery process may categorized into three stage which are before service, during service and after service.

By referring the (Heikkilä et al., 2016) idea's, which indicated that the effectiveness of food waste reduction in restaurant may induce by careful planning and proper management of service delivery process, this paper wants to emphasized the green practice implementation by highlighting the service delivery process and known as a green service delivery process.

However, until today there is no specific guideline to be main reference for food service operator thus this paper seeks to expand the knowledge of greening food service delivery process in Malaysia food service sector perspective. Thus, the integration of service delivery process is required to promote the sustainable development in food service sector. Furthermore, through Integrate better service process system in food service perhaps contribute to improving the creation of social and environmental value.

Additionally, the decision of management line will affect the service provider's manner in delivering the service from the stage of service delivery process. The previous study of greening effort in delivery services much emphasizing on customer experience which highlighted food appearance during service process which dealing with a healthy food, food quality, food safety and food handling (Yee et al., 2016; Leong, Melissa, Hassan, & Chern, 2014).

However, the study of greening service delivery process on service operator (management line) perspective has very limited. The discussion on become green practitioner or not has been a debated issue both in manufacturing and service sector. As highlighted by (Tan, Yong, & Nguyen, 2016), sustainability implementation in current business environment is being the appropriate strategy to improve competitiveness. Therefore, it is important to get response from food service operator to get real feedback for better practical and understanding in food service industry.

2.0 LITERATURE

2.1 Identifying Green Practices in Food Service Delivery Process

Discussion of sustainability in food service delivery was not being the focus on previously service literature, but its' has indirectly touched upon different forms of green practices such as green building, water and energy consumption, solid management, food security and food hygiene or food handling

In line with the side effect of food service activities towards environmental and customer preference hence the food service operator should react to this matter. By using the life cycle assessment (Baldwin, Wilberforce, & Kapur, 2011) has grouped the food service operation

into four subsystem food procurement, food storage, food preparation and cooking and food service & operational supplies. They also identified at the food storage, food preparation and cooking and food service and operational support are being the most usage of energy and water consumption. Whilst, (Wang, Chen, Lee, & Tsai, 2013) has categorized three dimension for green practice in food service respectively for restaurant in Taiwan which are material, environmental and people. Figure 2.1 showed the dimension of greening effort in restaurants.

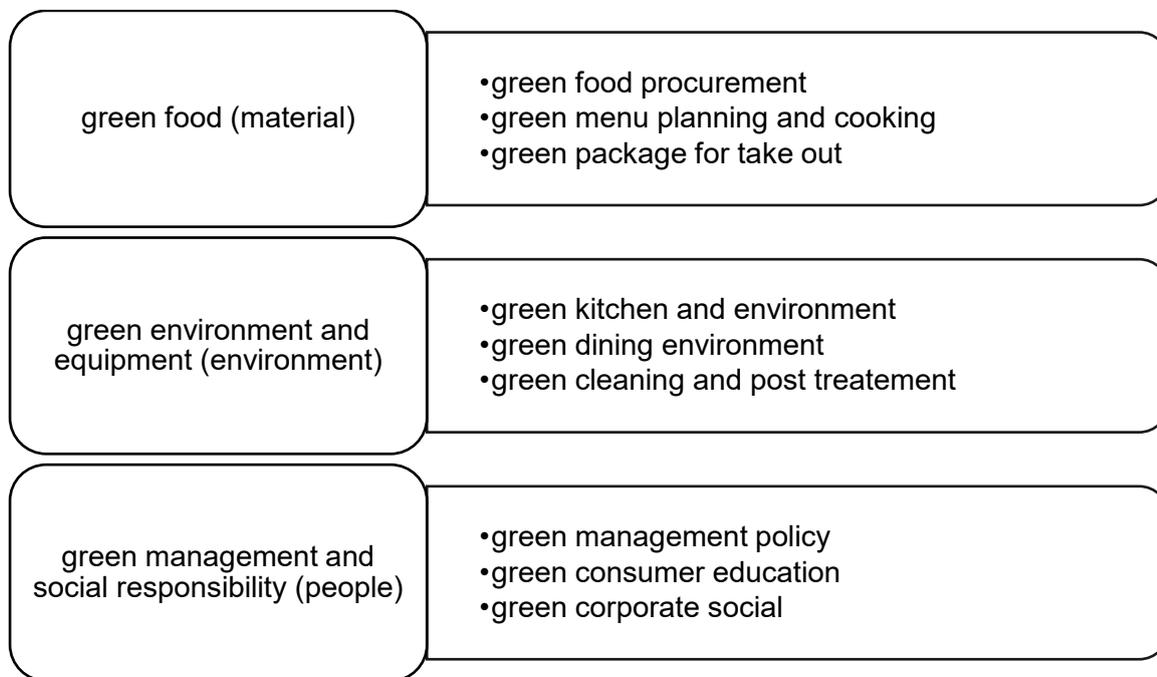


Figure 2.1: Green Restaurant Management Indicators

Sources: Wang, Chen, Lee, & Tsai, (2013)

Wang et al (2013) try to combined the strategy and practices in the restaurant operation which consists of a few sub dimension which combine the internal and external components that cover food service process according to green supply chain management perspective. Although they work's is meaningful insight for food service knowledge however, they are not relates how customer may involved and contributed of greening effort in service process delivery?.

Prior study claimed it is challenging to engage the customer in green initiative as environmental activities are normally hidden at the back outlet for example waste disposal and recycling and customer and customers are not realized what they are doing in support pro-environmental activities.

There is no specific way to inform and encourage customer participation but a firm perhaps can declare that they are practicing environmental sustainability and give some rewards. For example, Starbuck café is one of the acknowledge outlet that introduce and implemented green practice almost at all their outlet over the world. They proudly announce they green effort through website (Starbuck.com, 2016). Additionally, in this paper, the greening effort will focus on service delivery process. By referring the phase of service process delivery then the greening effort will propose accordance to its phase which consist before service, during service and post service and all these phases will combine the back and in front office. The table 2.1 show the greening service delivery initiative.

Table 2.1: Greening Service Delivery Process

| Back office | Front Office | Back Office | | |
|--|--|---|--|---|
| Before service | During Services | Post-Services | Green Practices initiative | |
| <ul style="list-style-type: none"> • Green Procurement for food, material and equipment purchasing • Green processes - kitchen • Green layout for kitchen • Green food menu • Green inventory | <ul style="list-style-type: none"> • ordering-using Point of sale system (POS)-can be tracking the inventory, appropriate customer ordering, | <ul style="list-style-type: none"> • green cleaning material-less harmful product for human and environmental • practice 3R • Separated solid waste according its specification • proper drainage system • manage FOG-(Fat, oil and grease | <ul style="list-style-type: none"> • Green procurement • Green building • Purchase local product • Renewable energy • Efficient device and equipment • Composition • Collect FOG • Reusable & recyclable item • Green layout • Green food <p>STRATEGIES IN GREENING INITIATIVE</p> <ul style="list-style-type: none"> • Policy Integration • Environmental monitoring • Training • Education • Publish environmental activities • Rewards | |
| | <ul style="list-style-type: none"> • service setting-green ambience including lighting, decoration, table setting, music, put information about green practices on the table, stick the sign of No Smoking, reduce water consumption | | | <ul style="list-style-type: none"> • consumption-send the right ordering right menu, portion, taste, encourage customer to take away uneaten dishes to prevent food waste, using recyclable packaging |
| | <ul style="list-style-type: none"> • Payment and Exiting-give receipt if requested, multiple payment method-card-less | | | |

2.2 Antecedent to Greening Effort in Food Service

A case study by (Kanyan, Ngana, & Ho, 2016) on local fast-food restaurant in Kuching Sarawak has supported that inefficiency of service delivery has affect the customer service quality. Emphasizing on certain green practice and put attention on employee behavior is likely not the comprehensive solution to meet the customer satisfaction matter as the concept of service is involve the physical and intangible components.

Furthermore, the dimension of service delivery explained there are bonding requirement between employee and employer, unfortunately, this study only pointed the customer's perspective and less highlighted the management context. As the superior the management line, they should provide the service system as an organization guideline thus the involvement from top managerial is very important.

In service-Dominant Logic, service delivery process has described as a the moment of truth of customer experience which will be influence the organizational performance (Wallin et al., 2016). By reveiweing the prior studies the food service operator can greening their service delivery to increase the customer satisfaction through food, environment and people.

Additionally, Sulek et al (2010) identified three components of service delivery in restaurants industry which consists service setting, service intangible and core service offerings. Whilst, in (Lin et al., 2015) study on Taiwan banquet operation classified the service process delivery into three stage which are before service, during service and after service. Additionally (Namkung Y & Jang Soocheong, 2010), redefined the service process delivery that suggested by (Lemmink, Ruyter, & Wetzels, 1998) into 4 stages that consists:

1. Greeting and Seating
2. Ordering and Delivery
3. Consumption
4. Payment and existing

Based on the previous studies, the flow of service process delivery in food sector may to specified into before service, during service and post service. The prior studies also have successfully show the flow of service process in delivering the service to customer. However, much of the previous studies on green restaurants are more emphasized on general greening effort which like similar on manufacturing sector such as water and energy consumption rather than service process delivery which generally have highly customer contact.

In corporate social responsibility studies, ethical leadership has been of special interest with responsibility and sustainability, human, justice and moderation (Chiarini & Vagoni, 2016; Eisenbeiss, 2012). Those studies described the positive influence of ethical leadership including environmental leadership on social responsibility practices. For example, Eisenbeiss, (2012) classified the ethical leadership based on Western-based an Eastern-based of international leaders in selected company in Asia, Germany, UK and Isreal. The findings suggested that in view of increasing globalization, shortage of resources, climate change and world poverty the ethical leadership orientation on responsibility and sustainability is likely be more relevent and important with the current environment and will become a crucial success factor for long-run excellence.

However, without the commitment from the leader an ethical leadership orientation is uselees. For example (Chiarini & Vagoni, 2016), confirmed that the deficiency of environmental implementation such as eco-management and ISO 14001 in public health organization is related to mangement commitment and leadership. In other word, the mangers is holding the crucial part in decision making for organization benefit. Therefore, it is important to discover how top management respond to sustainability effort and this perhaps explained through individually environmental value.

The discussion of value was pioneer by Schwartz in 1977 through norm-activation theory. (Nordlund & Garvill, 2002), has related this theory to explained the environmental or eco-centric values and believed it will show up the pro-environmental behavior whereas pro-

environmental is a part of physiological component through action such as energy consumption and recycling activity. They added, altruism assist people to understand individual altruistic behavior that was likely influence by moral obligation that come from an individual's pertinent value.

Furthermore, a study by (Stern, Dietz, Abel, Guagnano, & Kalof, 1999) used the norm-altruistic concept to explain the relationship between pro-environmental behavior and specific value. They extend the early value theory to value-belief norm and indicated, individual which have strong environmental values are likely better understand what the consequences of environmental problem, show the responsibility and contribute in or perhaps support pro-environmental actions.

Additionally, (Chen, Tsou, & Ya Hui Huang, 2009) has examined the role of service delivery innovation on firm performance. They revealed, the effect of service delivery innovation on firm performance is undirected but also influenced by another factor including external partner collaboration. Jo, William, Amy, Valarie, & Bitner, (1997) supported that in certain types of services, customers have important role in affecting the nature of the service outcome. Whilst, an investigation of the perception of green purchasing from customer of upscale restaurants perspective in USA has done by (Robin et al., 2013) found that customer show the preference on environmental friendly effort by restaurants operators which use safe product. Hence, it's worth it to considered that stakeholder as key contributors on corporate commitment in greening effort (Park, Kim, & McCleary, 2014).

3. Methodology

The purpose of this study is to identify the greening effort in service delivery process, and appraisal greening factor and finally propose a conceptual framework. Thus, secondary data was used to achieve these aims. The data have been serene of numerous journals, pertinent government agency report, newspapers and books. By implementing this study for future research, a quantitative method is suggested.

Quantitative approach is practical to assessed green service delivery factors which a set of the questionnaire are designed based on previous studies. To conduct a survey, the questionnaires will be distributed to the food service operators which consist of upper and medium scale restaurant including outlet and independent basis to be specific. The food service operators can be accessed from the (TripAdvisor.com.my, 2016) and Malaysian Tourism Book Directory (Ministry of Tourism and Culture, 2015). Then, the primary date will be analyzed using Structural Equation Model (SEM).

4 The Contribution of the Proposed Study

This study is expected will offer several contributions to the body of knowledge. Firstly, as mentioned before this study is highlighted on green service delivery process. The prior studies discussed various type of green practice generally in hospitality but overlooked the service process dimension. A studies on green food service at the previously were published on customer perspective by using multiple terms such as willingness to buy green product or service (Robin et al., 2013), willingness to revisit restaurants that offer green food (Namkung & Soocheong, 2013), consumer response on green products (Spack, Board, Crighton, Koska, & Ivory, 2012). Despite the existing works on customer perspective, there is an inadequacy study on managerial perspective which have authority as a decision maker for their own business performance.

Accordingly, the study highlighted the service process delivery as an important of service operation that need to be green for better outcome. Meanwhile, the service delivery process was adopted from (Sulek & Hensley, 2010) study which carried out in North Carolina USA. In this respect, the sources of service process delivery which effects on sustainability will be study.

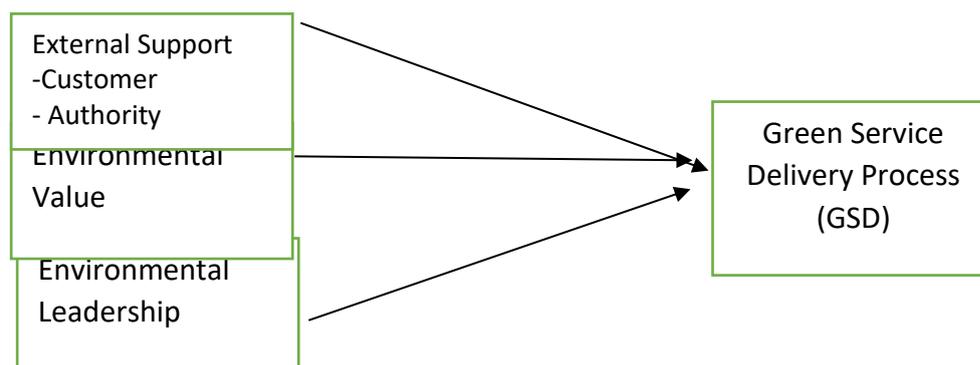
Furthermore, this study also considering on factor that will support the implementation of green service delivery process in food service. The general of green service process adoption, stakeholder pressure has been key elements in supporting the environmental strategy. However, in this study the customer participation is postulated as external factor that highly relevant in this study context. As stated by (Gersch, Hewing, & Scho, 2011; Hilton et al., 2016) customer engagement during service process has revealed increased the customer value creation. In addition, in a previous study by (Jitmaneroj, 2016) stakeholder pressures from authority perspective was identified as remain uncertain due for lack of policy enforcement and most of the environmental practicing intend to be treated as corporate social responsibility.

Furthermore, the isolation of service delivery process discussion in greening effort is seems not comprehensive in obtaining an effective sustainability. Hence, it is likely to be more effective if tackling the issue through the whole system approach (Ryan-Fogarty, Becker, Moles, & O'Regan, 2016). But in contrast, some organization rejected to involve in sustainability effort due for the wrong perception towards pro-environment. The relationship between managerial contribution on sustainability have been deliberate by previous scholars (Llach, Alonso-almeida, & García-castellví, 2015; Perramon & Alonso-almeida, 2014). However, (Perramon & Alonso-almeida, 2014) argued that much studies on this aspect has been emphasized in developed country. Simultaneously, in Malaysia, no empirical study has been tried to consider in this part.

4 Proposed research model

By consider on the previous studies, it will offer a better understanding on the expansion of green practice dimension in food service sector. Thus, in this paper, the new dimension of green effort has been proposed for future research, which is refer to green service delivery process. This paper also argued that environmental value, environmental leadership and an external contribution mainly from customer's side may influence the direction of effort in greening the service delivery process. Figure 1 exhibits the proposed conceptual research model.

Figure 1: Proposed conceptual framework of the study



5 Conclusion and Future Research

Fundamentally, the main objective of this paper is to offer preliminary concept of green service delivery process (GSD) within the food service operator sector through identify how food service operator mainly in restaurants implement pro environmental idea in different phase of service process. Previous study also exposed that a decision to implement best practice sound may lost their economic competitiveness thus be green is no longer an option for food service provider.

Green practicing in food service sector has utilize the greening effort as a point to be different from others and show the social responsibility. They have demonstrated various types of approach to improve the business performance through environmental performance. However, the involvement much dominated by food service operator in advance countries compare to middle economic countries. Thus, to induce the food service operator perhaps this paper offer an idea as guideline for local food service operator to expand their effort into green.

While, this paper is only a conceptual paper, forthcoming studies can benefit by undertaking empirical research to investigate the consequence of green service delivery process in food service sector.

Corresponding Author

Rosini Nawang Mustapen

¹Universiti Utara Malaysia, ²University Putra Malaysia, Malaysia
rosiniross@gmail.com or rosini@uum.edu.my

¹Department of Operation Management,
School of Technology Management & Logistic,
Universiti Utara Malaysia,
Kedah, Malaysia

² Faculty of Economics and Management,
University Putra Malaysia,
Selangor, Malaysia

References

- Baldwin, C., Wilberforce, N., & Kapur, A. (2011). Restaurant and food service life cycle assessment and development of a sustainability standard. *International Journal of Life Cycle Assessment*, 16(1), 40–49. <https://doi.org/10.1007/s11367-010-0234-x>
- Bernama. (2015). Up to 270,000 tonnes of food go to waste during Ramadan. Retrieved from <http://www.thestar.com.my/news/nation/2015/06/19/food-waste-ramadan/>
- Chen, J., Tsou, H. T., & Ya Hui Huang, A. (2009). Service Delivery Innovation: Antecedents and Impact on Firm Performance. *Journal of Service Research*, 12(June), 36–55. <https://doi.org/10.1177/1094670509338619>
- Chiarini, A., & Vagoni, E. (2016). Environmental sustainability in European public healthcare

- Could it just be a matter of leadership? *Leadership in Health Services*, 29(1), 2–8.
<https://doi.org/10.1108/LHS-10-2015-0035>
- Eisenbeiss, S. A. (2012). Re-thinking ethical leadership: An interdisciplinary integrative approach. *Leadership Quarterly*, 23(5), 791–808.
<https://doi.org/10.1016/j.leaqua.2012.03.001>
- Gersch, M., Hewing, M., & Scho, B. (2011). Business Process Blueprinting – an enhanced view on process performance. *Business Process Management*, 17(5), 732–747.
<https://doi.org/10.1108/14637151111166169>
- Heikkilä, L., Reinikainen, A., Katajajuuri, J., Silvennoinen, K., & Hartikainen, H. (2016). Elements affecting food waste in the food service sector. *Waste Management*, 56(1), 446–453.
<https://doi.org/10.1016/j.wasman.2016.06.019>
- Hilton, T., Hughes, T., Chalcraft, D., Hilton, T., Hughes, T., & Service, D. C. (2016). Service co-creation and value realisation, 1376(October).
<https://doi.org/10.1080/0267257X.2012.736874>
- Jitmaneroj, B. (2016). Reform priorities for corporate sustainability: Environmental, social, governance, or economic performance? *Managerial Decision*, 54(6), 1497–1521.
[https://doi.org/DOI 10.1108/MD-11-2015-0505](https://doi.org/DOI%2010.1108/MD-11-2015-0505)
- Jo, M., William, B., Amy, T. F., Valarie, R. H., & Bitner, M. J. (1997). Customer contributions and roles in service delivery. *International Journal of Service Industry Management*, 8(3), 193–205. <https://doi.org/http://dx.doi.org/10.1108/09564239710185398>
- Kanyan, A., Ngana, L., & Ho, B. (2016). Improving the Service Operations of Fast-food Restaurants. *Procedia - Social and Behavioral Sciences*, 224(August 2015), 190–198.
<https://doi.org/10.1016/j.sbspro.2016.05.439>
- Katzan, H. (2015). Design For Service Innovation. *Journal of Service Science*, 8(1), 1–7.
- Lemmink, J., Ruyter, K. De, & Wetzels, M. (1998). The role of value in the delivery process of hospitality services. *Economy Psychology*, 19, 159–177.
- Leong, W., Melissa, W., Hassan, W., & Chern, H. (2014). The product-related failures in restaurants. In *Social and Behavioral Sciences* (Vol. 144, pp. 223–228). Elsevier.
<https://doi.org/10.1016/j.sbspro.2014.07.314>
- Lin, L., Lu, C., & Yeh, H. (2015). Developing Service Delivery Processes through Fuzzy AHP Framework. *Journal of Tourism Research & Hospitality Research*, 4(2), 1–14.
<https://doi.org/http://dx.doi.org/10.4172/2324-8807.1000149>
- Llach, J., Alonso-almeida, M. D. M., & García-castellví, A. (2015). A Fresh Approach to Context Influence, Development and Performance in Environmental Management. *Business Strategy and the Environment*, 24(April 2014), 855–872.
<https://doi.org/10.1002/bse.1850>
- MIDA. (2011). MIDA | Malaysian Investment Development Authority. Retrieved from <http://www.mida.gov.my/home/electrical-and-electronic/posts/>
- Ministry of Tourism and Culture, M. (2015). *Malaysia Culinary Delights*. Tourism Malaysia.
- Namkung, Y., & Jang Soocheong. (2013). International Journal of Hospitality Management Effects of restaurant green practices on brand equity formation : Do green practices really matter? *International Journal of Hospitality Management*, 33, 85–95.
<https://doi.org/10.1016/j.ijhm.2012.06.006>
- Namkung Y, & Jang Soocheong. (2010). Service Failures in Restaurants: Which Stage of Service Failure Is the Most Critical? *Cornell Hospitality Quarterly*, 51(3), 323–343.
<https://doi.org/10.1177/1938965510364488>
- Nordlund, & Garvill. (2002). Values Structures Behind Proenvironmental Behaviour.

- Environmental and Behaviour*, 34(6), 740–756.
<https://doi.org/10.1177/001391602237244>
- OFELI, T. K., MICHELLE, W., THOMSEN, D. J., METTE, H., RASMUSSEN, H. H., & E, M. B. (2015). Reducing Food Waste in Large-Scale Institutions and Hospitals : Insights From Interviews With Danish Foodservice Professionals. *Journal of Foodservice Business Research*, 18(January 2016), 502–519. <https://doi.org/10.1080/15378020.2015.1093457>
- Park, J., Kim, H. J., & Mccleary, K. W. (2014). The Impact of Top Management’s Environmental Attitudes on Hotel Companies’ Environmental Management. *Journal of Hospitality & Tourism Research*, 38(1), 95–115. <https://doi.org/10.1177/1096348012452666>
- Perramon, J., & Alonso-almeida, M. M. (2014). Green practices in restaurants : Impact on firm performance. *Operation Management Restaurant*, 7(2), 2–12. <https://doi.org/10.1007/s12063-014-0084-y>
- Robin, B. D., Yang, C., Charles, P., Dipietro, R. B., Cao, Y., & Partlow, C. (2013). Green practices in upscale foodservice operations Customer perceptions and purchase intentions. *International Journal of Contemporary Hospitality Management*, 25(5), 779–796. <https://doi.org/10.1108/IJCHM-May-2012-0082>
- Ryan-Fogarty, Y., Becker, G., Moles, R., & O’Regan, B. (2016). Backcasting to identify food waste prevention and mitigation opportunities for infant feeding in maternity services. *Waste Management*. <https://doi.org/10.1016/j.wasman.2016.12.029>
- Spack, J. A., Board, V. E., Crighton, L. M., Koska, P. M., & Ivory, J. D. (2012). It’s Easy Being Green: The Effects of Argument and Imagery on Consumer Responses to Green Product Packaging. *Environmental Communication*, 6(October 2014), 37–41. <https://doi.org/10.1080/17524032.2012.706231>
- Starbuck.com. (2016). Starbucks – The Best Coffee and Espresso Drinks. Retrieved from <http://www.starbucks.com/>
- Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A Value-Belief-Norm Theory of Support for Social Movements : The Case of Environmentalism. *Human Ecology Review*, 6(2), 81–97.
- Sulek, J. S., & Hensley, R. L. (2010). Updating service operations. *Managing Service Quality*, 20(5), 475–489. <https://doi.org/10.1108/09604521011073759>
- Tan, B., Yong, G., & Nguyen, L. (2016). What Drive the Intention of Restaurant Operators to Go Green? *World Applied Sciences*, 34(12), 1627–1638. <https://doi.org/10.5829/idosi.wasj.2016.1627.1638>
- TripAdvisor.com.my. (2016). TripAdvisor.com.my. Retrieved from <https://www.tripadvisor.co.uk/>
- Wallin, A. T., Per, K., Line, L.-O., Pasuraman.A., Janet., M.-K. R., Bo, E., & Maria, C. (2016). Linking service design to value creation and service research. *Journal of Service Management*, 27(1), 21–29.
- Wang, Y., Chen, S., Lee, Y., & Tsai, C. S. (2013). Developing green management standards for restaurants : An application of green supply chain management. *International Journal of Hospitality Management*, 34, 263–273. <https://doi.org/10.1016/j.ijhm.2013.04.001>
- Yee, P., Lin, K., Marian, J., Watkin, J., Nursheena, S., & Zain, M. (2016). Evaluation of basic knowledge on food safety and food handling practices amongst migrant food handlers in Peninsular Malaysia. *Food Control*, 70, 64–73. <https://doi.org/10.1016/j.foodcont.2016.05.033>