

The Study of the Relationship between Store Green Practices and Consumer's Perception of Sustainability Brand Image toward Coffee Store

Joseph Si-Shyun Lin^{*}, Herman Hung-Sheng Lai, Hao-Yuan Chen

Department of Restaurant, Hotel and Institutional Management, Fu-Jen Catholic University, R. O. C.

Abstract This study examined how customers perceive store green practices and the relationship with their perception of sustainability brand image towards coffee stores. Due to the increasing awareness of the impact of global warming in private and public sectors and thereby the increased eco-awareness of consumers, the concept of sustainability has been gaining its momentum in the foodservice industry. Coffee outlet, as a promising foodservice business in Taiwan, is encouraged to initiate green approaches in their stores. It is assumed that the green initiatives from the coffee stores are supported by consumers and considered as an added value to the brands. However, no related research has been conducted to reveal the relationship. Therefore, the purpose of this study was attempted to find out whether green practices have strong effects on the sustainability brand image of coffee stores, and how consumers perceive green practices in response to the sustainability image of coffee brands of different business models. A total of 389 responses indicated that 'waste treatment' dimension was the most implemented practices in coffee channels (44.1%) among all green practices, followed by 'Sustainable foods' (29.5%), 'Water conservation' (25.2%), 'Sustainable construction material and furniture' (20.3%), and 'Energy saving' (16.1%). The results of the study also confirmed that customers' perception of implemented green practices have a positive effect on the sustainability image of the coffee brand. The contents and levels of green practices implemented, however, had different responses to the perceived sustainability brand image of coffee stores. It is also interesting to found that participants perceived the green practices most related to the sustainability image for chain operation brands, where the practice of 'offer sustainable coffees and local foods' was the best contributor to their sustainability image. Managerial implications were suggested to coffee store operation that, with proper implementation of green practices, coffee stores can enhance their sustainability brand image. Further study examining the influence of coffee store sustainability brand image on consumers' perceived value and behavior intention will be conducted.

Keywords Green practices, Sustainability brand Image, Coffee channels

1. Introduction

Coffee is the second largest commodity and the largest agricultural produce in the world. The global coffee production of 2013 has reached 144,611,000 bags, which the number has increased 24% since 2008 (ICO, 2013). It is estimated that approximately 1.6 billion cups of coffee were consumed each day worldwide, and this market has kept growing at the rate of 12% to 15% every year (Taiwan fair-trade association, 2014). According to the data from Taiwan chain stores and franchise association, the coffee business of Taiwan was fifty billion NT dollars in 2012, which has grown 30% as compared to the one in previous year (TCFA, 2013). The coffee consumption per capital in

Taiwan is about 100 cups per year, which is twice the number 15 years ago (Yang, 2013). Drinking coffee has gained its popularity and become part of an everyday routine to many people in Taiwan.

Recently, coffee shops have popped out on the streets to meet the demands of the growing market in Taiwan. Coffee bands from oversea (i. g. Starbucks, illy, Gloria jeans, etc.) as well as local have joined the battle field. In 2013, there are 70 chain operation coffee brands in Taiwan, which the number of coffee brand has grown almost 15% as compared to 2012. Along with the chain operation brands, it is estimated that around 8000 self-employed coffee shops are also in service (TCFA, 2014). Beside regular coffee stores, the competitors from other sectors, such as convenient stores (i. g. 7-11 and Family mart), fast food and super markets, who provide freshly brew coffee at fair price are also important players in the market.

With the growing market and yet a competitive business, chain coffee brand like Starbucks emphasize their global

^{*} Corresponding author:

003542@mail.fju.edu.tw (Joseph Si-Shyun Lin)

Published online at <http://journal.sapub.org/tourism>

Copyright © 2015 Scientific & Academic Publishing. All Rights Reserved

team efforts and legendary service, while local brands (such as Cama coffee and 85C) and some self-employed coffee shops stress the freshness of coffee, delicious foods, exclusive designs and experiences, or fair price. Therefore, it is an important task for these players to attract their loyal consumers and consolidate their brands in the market.

Recently, due to the increasing awareness of the impact of global warming in private and public sectors and thereby the increased eco-awareness of consumers, the concept of sustainability has been gaining its momentum in the foodservice industry. Research showed that, besides a value-over-price experience, consumer nowadays also expect the companies to provide their products and services with less or no impact to the environment and society (Liao, 2009; Chien, 2011). Therefore, it becomes more and more important that company (especially foodservice business) to accommodate environmental friendly programs such as using energy and water-serve facilities, or waste recycling and reuse to their operations (Alexander & Kennedy, 2002; GRA, 2010; Jurowski, 2003), so as to differentiate themselves from competitors to acquire consumer's trust and preferences (Hu et al., 2010; Yesowich, 2009; Namkung & Jang, 2014).

Companies accommodate green practices to their operation to show their commitments to environmental concern and social supports and, consequently, enhance their brand image to consumers (Chen, 2009; Namkung & Jang, 2010; Tan & Yeap, 2012). The perceived image of the company, which could be considered as the 'Sustainability brand image' is different from 'Green brand image'; the company has deliver its concern not only to environmental protection but also to social supports (for example, the welfare of the farmers/workers) while providing its products or services to consumers (Belz & Peattie, 2009).

Coffee outlet, as a promising foodservice business in Taiwan, is encouraged to initiate green approaches. It is indicated that the green initiatives from the foodservices have been supported by consumers and considered as an added value to the brands (Penny, 2007; Han, Hsu, & Lee, 2009; Lee, Hsu, Han, & Kim, 2010). However, no related research has been conducted to reveal the relationship in coffee business. Therefore, the purpose of this study was attempted to find out whether green practices have strong effects on the sustainability brand image of coffee stores, and how consumers perceive green practices in response to the sustainability image of coffee brands of different business models.

2. Method

Research was conducted in Taiwan areas. Convenience sampling of freshly brew coffee drinkers were asked to fill out the questionnaire. Participants were asked to write down the name of the coffee channel of their last purchasing and then record their perceptions of the green practices implemented in the coffee channel and the Sustainability

brand image accordingly. In the end, three hundred and eighty nine valid questionnaires out of four hundred and fifty were obtained.

The construct of 'Green practice of coffee channel' are modified from the studies of green practices in restaurants by Jeong & Jang (2010), Hu (2014) and Wang (2012). It includes dimensions of 'energy saving', 'water conservation', 'wastes treatment', 'sustainable foods', and 'sustainable construction materials'. Participants were asked to mark 'Implemented', 'Not implemented' or 'No idea' on each of the listed 19 green practices, according to their perception of the implementation of these practices to this designated coffee channel. The percentage of the green practices implemented in the coffee channel was calculated. The implemented rate of each proposed green practice was also calculated by consolidating the data from all participants.

The 'Sustainability brand image' of the coffee channel was modified from the 'Green brand image' of restaurant constructed by Namkung & Jang (2014). It was used as the instrument to interpret the participant's perception of the sustainable image of these coffee brands. It includes the brand's performance in environmental conservation and social support (for example, 'I regard this coffee channel as a benchmark/standard of environmental commitment' and 'This coffee channel is professional in terms of its social support reputation'). The perception of sustainability brand image of the participants were measured by using a Likert-type rating scale from "1: the least agree" to "7: very much agree". The method of Peterson correlation was executed to analyze the relationship between the levels and contents of green practices implemented and the perceived sustainability brand image toward coffee channels.

3. Results and Discussion

Reliability check by Factor analysis showed that the construct displayed ample reliability with factor loadings exceeding 0.80 for the scales of Sustainability brand image. It is found that the dimension of 'Waste treatment' was perceived the most implemented practices in these coffee channels (44.1%), followed by 'Sustainable foods' (29.5%), 'Water conservation' (25.2%), 'Sustainable construction materials and furniture' (20.3%), and 'energy saving' (16.1%) (Table 1). Among the studied business models, chain store brands and self-employed coffee stores had similar implemented rate (33.1% and 31.1%, respectively) while convenient store was perceived to have the lowest rate (24.7%).

From the results of the correlation analysis, it revealed that the participant's perception of implemented green practices have a positive effect on the sustainability image of the coffee brands. Participants considered that the dimension of 'Sustainable foods' had the strongest relationship to the sustainability brand image ($\beta=0.403, p<0.001$), while 'Waste treatment' ($\beta=0.314, p<0.001$), the most implemented

practice, and other practices such as 'Water conservation' ($\beta=0.370, p<0.001$), 'Sustainable construction material, and furniture' ($\beta=0.286, p<0.001$), and 'Energy saving' ($\beta=0.229, p<0.001$) were less responsive to the perceived sustainability brand image of these coffee channels.

It is found that consumers perceived the green practices highly related to the sustainability image for chain operation brands and self-employed stores, where the dimension 'Sustainable foods' was the best contributor to their sustainability image for both channels. On the other hand, for the coffee sold in convenient stores, consumers considered their green practices were less related to their sustainability brand image; in these cases, the dimension of 'Water conservation' had the strongest effect on their sustainability image.

Further study examined how participants perceive green practices in response to the sustainability image of coffee brands of different business models. Table 2 showed the implemented rate of green practices and their correlation with the Sustainability brand image to three studied freshly-brewed coffee channels.

The chain operation coffee brands were considered the most green-oriented coffee channels as compared to other two. It is speculated that higher visibility and awareness of these brands to the consumers and public made them be more willing to take action in implementing green practices in their business. However, good deeds paid off that it is observed, for chain operation coffee brands, the implemented green practices had highest contribution to their perceived Sustainability brand image than other two business models. For example, the effect of green practices such as 'Offer local and on-season foods', 'Offer a discount to encourage customers using personal mug/ Tumbler.', 'Do recycle', 'Green design' and 'Green and ethics purchasing', which were implemented in chain operation coffee brands,

were more significant and higher correlated to their Sustainable image than the ones to self-employed coffee shops and convenient stores who had the similar or even higher implemented rate of the green practices.

Convenient store, on the contrary, was perceived to have the lowest green practice implemented rate and its effect to the store's sustainable image. It is showed from Table 2 that only 5 practices (i. g., 'Use energy-efficient equipment', 'Use water-efficient equipment', 'Offer a discount to encourage customers using personal mug/tumbler', 'Green and ethics purchasing' and 'Avoid over-package for take-out') out of 19 were considered to be related to the Sustainability brand image of this channel. Their correlations were low and the correlation coefficients ranged from 0.19 to 0.28. It is believed that convenient store had a disadvantage in demonstrating professional image of a coffee house (for example, ambient and services) may lower consumers' attention and expectation to this channel. For self-employed coffee shops, though only 6 green practices were correlated to their Sustainability brand image (i. g., 'Use energy-efficient equipment', 'Use water-efficient equipment', 'offer local foods on menu', 'Offer sustainable coffees', 'Do recycle', and 'Use green coating/paint'), this channel has demonstrated a stronger relationship between the implemented green practices and the Sustainability brand image, similar to the one of chain operation brands.

It is interestingly found that for some well-known and highly implemented green practices (for examples, 'Cup discount: 54.1-84.9%', 'Minimize plate decoration: 52-75%', 'Only serve customers water upon request: 22.5-57.5%', 'Green design: 26.5-50.4%'), had low or even no effect on the Sustainable image of the coffee channels. It was particularly obvious found in self-employed coffee shops.

Table 1. The implemented rate of the dimension of green practices and their correlation with the Sustainability brand image to freshly brew coffee channels

Dimension of green practice		Freshly brew coffee channel	Chain store operation	Convenient store	Self-employed coffee shop
Overall	I. R. [†]	30.6%	33.1%	24.7%	31.1%
	C. C. ^{††}	0.489***	0.494***	0.350***	0.500***
Energy saving	I. R.	16.1%	17.5%	15.7%	11.5%
	C. C.	0.229***	0.218***	0.230*	0.335**
Water conservation	I. R.	25.2%	29.9%	15.7%	24.0%
	C. C.	0.370***	0.335***	0.310**	0.245*
Sustainable foods	I. R.	29.5%	32.0%	22.3%	32.5%
	C. C.	0.403***	0.428***	0.302**	0.383**
Wastes treatment	I. R.	44.1%	45.9%	40.5%	43.2%
	C. C.	0.314***	0.358***	0.142	0.308
Sustainable construction materials and furniture	I. R.	20.3%	23.0%	11.8%	24.6%
	C. C.	0.286***	0.305***	0.117	0.134

[†] I. R.: implemented rate of green practices

^{††} C. C. (β): Peterson correlation coefficient between green practices implemented rate and perception of Sustainability brand image.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2. The implemented rate of green practices and their correlation with the Sustainability brand image to three freshly brew coffee channels

Green practices		Chain store operation	Convenient store	Self-employed coffee shop
Use energy-efficient equipment	I. R. [†]	16.8%	13.7%	9.8%
	C. C. ^{††}	0.161 [*]	0.221 [*]	0.365 ^{**}
Use auto-monitor and control device for energy efficiency	I. R.	18.1%	17.6%	13.1%
	C. C.	0.187 ^{**}	0.123	0.154
Use water-efficient equipment	I. R.	27.0%	23.5%	26.2%
	C. C.	0.271 ^{***}	0.280 ^{**}	0.319 [*]
Collect gray water or rain to reuse	I. R.	5.3%	1.0%	0.0%
	C. C.	0.186 ^{**}	0.163	.
Only serve customers water upon request	I. R.	57.5%	22.5%	45.9%
	C. C.	0.197 ^{**}	0.196 [*]	0.049
Offer local foods on menu	I. R.	17.3%	9.8%	23.0%
	C. C.	0.288 ^{***}	0.161	0.281 [*]
Offer foods of current season	I. R.	28.3%	13.7%	36.1%
	C. C.	0.274 ^{***}	0.185	0.241
Offer sustainable coffees	I. R.	34.5%	5.9%	18.0%
	C. C.	0.367 ^{***}	0.149	0.392 ^{**}
Green and ethics purchasing	I. R.	27.9%	7.8%	24.6%
	C. C.	0.431 ^{***}	0.223 [*]	0.176
Minimize plate decoration	I. R.	51.8%	74.5%	60.7%
	C. C.	0.049	0.087	0.123
Cup discount: offer a discount to encourage customers using personal mug/ Tumbler.	I. R.	81.9%	80.4%	54.1%
	C. C.	0.174 ^{**}	-0.113	0.008
Do not offer disposable utensils to customers	I. R.	15%	9.8%	36.1%
	C. C.	0.108	0.068	0.157
Reuse as a means of waste disposal	I. R.	44.2%	18.6%	50.8%
	C. C.	0.274 ^{***}	0.129	0.129
Avoid over-package for take out	I. R.	31.4%	33.3%	39.3%
	C. C.	0.108	0.283 ^{**}	0.224
Adopt package or container is made of biodegradable and composted materials	I. R.	30.5%	32.4%	16.4%
	C. C.	0.308 ^{***}	0.074	0.009
Do recycle	I. R.	72.1%	68.6%	62.3%
	C. C.	0.232 ^{***}	-0.004	0.340 ^{**}
Green design (such as lighting, heating or ventilation)	I. R.	50.4%	26.5%	49.2%
	C. C.	0.274 ^{***}	0.105	-0.028
Use green coating/paint	I. R.	14.2%	6.9%	6.6%
	C. C.	0.298 ^{***}	-0.025	0.260 [*]
Use used furnishing or building materials	I. R.	4.4%	2.0%	18.0%
	C. C.	0.057	0.173	0.035

[†] I. R.: implemented rate of green practices,

^{††} C. C. (β): Peterson correlation coefficient between green practices implemented rate and perception of Sustainability brand image,

^{*} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$

4. Conclusions

The results of this study revealed that participant's perception of implemented green practices have positive effects on the sustainability image of the coffee brand. The

contents and levels of green practices implemented, however, had different responses to the perceived sustainability brand image of coffee store. It is also found that participants did perceive green practices differently in response to the sustainability image of coffee brands towards different

business models. They considered the green practices most related to the sustainability image for chain operation brands, while convenient store had the lowest correlation.

Therefore, it is clear to the brand owners that they could increase consumer's perception of their Sustainability brand image by implementing green practices in the coffee stores. Coffee channels are encouraged to prioritize their resources in 'Sustainable foods' that they can offer sustainable coffees, purchase local and on-season foods, and take the initiative of green and ethic purchasing', waste-recycle, and using energy and water efficiency equipments. Besides, it is also important, for both public and private sectors, to explain the multi-dimensional green practices in coffee business, and communicate to the consumers the urgency and consequence of their implementation.

Further study examining the influence of coffee store sustainability brand image on consumers' perceived value and behavior intention will be conducted.

REFERENCES

- [1] Alexander, S. & Kennedy, C. (2002). *Green Hotels: Opportunities and Resources for Success*. Retrieved March 12, 2014, from http://www.zerowaste.org/publications/GREEN_HO.PDF.
- [2] Belz, F. M. & Peattie, K. (2009). *Sustainability marketing*. Chichester: Wiley.
- [3] Chen, Y. S. (2009). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of business ethics*, 98, 307-319.
- [4] Chien, Y. J. (2011). *A study of the tendency about green consumption towards the recognition of food green marketing and the patterns of LOHAS* (Master's thesis). Retrieved from <http://ndltd.ncl.edu.tw/cgi-bin/gs32/gsweb.cgi/login?o=dnclcdr&s=id=%22099THU00253009%22.&searchmode=basic>.
- [5] GRA (2010). *Green Restaurant Association, Dine Green*. Retrieved June 10, 2014, from <http://www.dinegreen.com/consumers/education.asp>.
- [6] Han, H., Hsu, L. T., Lee, J. S. (2009). Empirical investigation of the roles of attitude toward green behavior, overall image, gender, and age in hotel consumers' eco-friendly decision-making process. *International Journal of Hospitality Management*, 28, 519-528.
- [7] Hu, H., Parsa, H. G., Self, J. (2010). The Dynamics of Green Restaurant Patronage. *Cornell Hospitality Quarterly*, 51(3), 344-362.
- [8] Hu, M., L. (2014) Building a green restaurant. *Science development*, 494, 14-18.
- [9] Jeong, E. H. & Jang, S. C. (2010). Effects of restaurant green practices: Which practices are important and effective?". *Caesars Hospitality Research Summit*. Paper 13.
- [10] Jurowski, C. (2003). *A Tool for Improving the Sustainability of Tourism Industries*. Retrived June 10, 2012, from http://www.besteducationnetwork.org/think_tanks.php
- [11] Lee, J. S., Hsu, L. T., Han, H., & Kim, Y. (2010). Understanding how consumers view green hotels: How a hotels' green image can influence behavioural intentions. *Journal of sustainable tourism*, 18, 901-914.
- [12] Liao, S., C. (2009). *The study of Taiwan's policy guidelines for sustainable consumption* (Doctoral dissertation). Retrieved from <http://thesis.lib.nccu.edu.tw/cgi-bin/gs32/gsweb.cgi/login?o=dstdcdr&s=id=%22G0912565061%22.&searchmode=basic#XXXX>.
- [13] Namkung, Y., & Jang, S. (2010). Service failures in restaurants: Which stage of service failure is the most critical? *Cornell Hospitality Quarterly*, 51, 323-343.
- [14] Namkung, Y., & Jang, S. (2014). Are consumers willing to pay more for green practices at restaurants? *Journal of Hospitality & Tourism Research*, Advance online publication. doi:10.1177/1096348014525632.
- [15] Penny, W. Y. K. (2007). The use of environmental management as facilities management tool in the Macao hotel sector. *Facilities*, 25(7-8), 286-295.
- [16] Taiwan chain stores and franchise association (2013). *Taiwan chain store almanac 2013*. Taipei, Taiwan: Taiwan chain stores and franchise association.
- [17] Taiwan fair-trade association (2014). Fair-trade coffee. Retrieved from http://fairtrade.org.tw/?page_id=377.
- [18] Tan, B. C. & Yeap, P. F. (2012). What drives green restaurant patronage intentions? *International Journal of Business and Management*, 7, 215-223.
- [19] Wang, R. (2012). Investigations of important and effective effects of green practices in restaurants. *Procedia – Social and behavioral Sciences*, 40, 94-98.
- [20] Yang, Y., M. (2013, August 26). Coffee is current: 23 billion cups of coffee are consumed in Taiwan for a year. *The liberty times*. Retrieved from <http://www.libertytimes.com.tw/2013/new/aug/26/today-e1.htm>.
- [21] Yesowich, P. (2009). *Going green but not willing to pay for it*. Retrieved March 21, 2014, from <http://www.worldpropertyjournal.com/international-markets/vacation-leisure-real-estate/real-estate-news-peter-yesawich-y-partnership-hotel-trends-leisure-travel-vacation-1536.php>.