INVESTIGATING THE RESEARCH OF THE TAIWAN RESTAURANT WEB DESIGN AND WEBSITE MARKETING CHARACTERISTICS BY CAPITAL SCALE

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Abstract - The aim of this study is to explore how restaurants can utilize high-quality web design and online marketing to showcase their product value and accurately meet customer needs, in order to achieve sustainable management. The study employs the indicators developed by Baloglu and Pkcan (2006) to measure the appropriateness of restaurant website design, and utilizes descriptive statistics and contingency table analysis based on capital scale to understand the current status of website design quality of Taiwan's restaurants and how to improve it. In addition, the study also investigates the characteristics of website design quality of Taiwan's restaurants in relation to the development of online marketing, with the hope of making restaurant-customer interactions more timely and attractive, and reducing the phenomenon of inadequate interaction caused by the COVID-19 pandemic.

Keywords: Taiwan Restaurants, Website Design, Website Marketing, Capital Scale.

I. RESEARCH MOTIVATION AND RESEARCH QUESTIONS

The proportion of people eating out is increasing, and consumers are faced with the challenge of quickly choosing from numerous restaurants. Typically, they start with internal searches and then turn to mobile internet searches (Ho et al., 2016), considering information such as menus, prices, addresses, and photos of dishes. It is crucial for potential customers to find food pictures and physical evidence of restaurants generated by other users (Oliveira and Casais, 2019).

The most convenient source of consumption information for customers is the official website of the restaurant, as the internet can disseminate information and services widely. A well-designed restaurant website is not only easy to find, but also allows customers to find the answers they are looking for. Generally, most internet search technologies only focus on keyword retrieval and the analysis of website content and themes is still not ideal (Zou et al., 2010). The quality of website design can indicate the interactive links between store owners and consumers, such as interactivity, orientation, functionality, and marketing characteristics (Baloglu and Pekcan, 2006).

What benefits can an official website bring to restaurant marketing? In terms of brand shaping and management, website design contributes more to the brand than social platforms. Website service quality generates positive website experience and relationship quality; website experience also has a positive impact on relationship quality, and relationship quality will produce positive consumer behavior intentions (Jiang et al., 2007). Therefore, it can be seen that if the official website gives customers a good impression, it will have a positive impact on overall marketing.

Does the size of a company affect the financial performance of using e-commerce? (Bordonaba-Juste et al., 2012). The size of a company will affect the export ratio or research and development intensity (Kuo and Yang, 2003). Thus, capital size may have an impact on the development of e-commerce. This article is the first study in Taiwan to investigate the situation of restaurant website design and discuss whether small, medium, and large businesses may use e-commerce more intensively depending on their capital size.

II. LITERATURE REVIEW AND DISCUSSION

This article discusses the relationship between restaurant website design and online marketing based on capital scale. It is the first study in Taiwan to explore this topic. The following sections introduce relevant literature on restaurant development, website design, online marketing, and restaurant asset scale.

2.1 Restaurant Development

Innovations in the restaurant industry include selling personalized meals in emerging consumer markets (Symons, 2013). There is an increasing number of customized services that prioritize meeting customer needs, and customers perceive restaurant quality based on three marketing quality dimensions: (1) people, (2) location, and (3) product (food) and physical evidence (Kukanja et al., 2017). Restaurant

environment and food quality have a positive impact on brand image and customer satisfaction (Jin et al., 2012). As evidenced by the literature above, the pursuit of restaurant quality can bring good brand image and help restaurants operate sustainably in the long term. Therefore, issues related to restaurants are worth attention and research.

2.2 Web Design

Many businesses today have their own websites, which not only help establish their brand value but also make it easier for customers to search for them. However, not every website designed by a company is perfect. In other words, if there is a lack of recognition and approval from higher-ups, a website that could have been perfect might lose points in the minds of customers due to missing information. The higher the satisfaction level of a website, the higher the willingness of users to use it. Quality and interactivity also affect website satisfaction. Therefore, improving the quality of website information and increasing interactivity are relatively important.

The prevalence of the Internet has made marketing techniques more diverse. Information and communication technology has completely changed the core business areas of restaurants, such as operations and strategic management, market promotion and web design, customer service, security, food and nutrition, and human resources. (Moreno and Tejada, 2019). Internet marketing is all about building relationships with customers, and methods such as social media marketing, search engine optimization, and KOL marketing were not seen in traditional marketing. Digital marketing and even social marketing have become popular marketing techniques (Wang Mingli, 2017).

2.3 Capital Size

Large corporations, due to their massive size and numerous customers, may find it difficult to maintain good interaction with their customers. On the other hand, small and medium-sized enterprises (SMEs) can cultivate trust and maintain good relationships with their customers. Therefore, it is not only large corporations that can gain advantages in the vast market; SMEs also have their own place to stand. In summary, this article argues that it is valuable to classify restaurants based on their capital size as large, medium, or small. The advantages of large-scale restaurants may be the disadvantages of small-scale ones, and the advantages of small-scale restaurants may be the disadvantages of large-scale ones. (Kuo and Yang, 2003)

III. RESEARCH METHODS

This study obtained research samples based on the registration data of restaurants in Taiwan provided by the National Business Administration. Using the questionnaire developed by Baloglu and Pkcan (2006) as the foundation, the study constructed indicators to measure the restaurant's usage and conducted descriptive statistics, contingency table analysis, and scale analysis according to capital scale.

3.1 Restaurant Website Design Measurement Indicators

There are four dimensions of website design features: interactivity, navigation, functionality, and aesthetics. Interactivity includes having a phone number listed, having an address listed, having email hyperlinks, having online customer service, having an email subscription option, having a restaurant calendar, having real-time currency updates, having online market surveys, having a space for customer reviews and comments, and having a guestbook.

3.2 Descriptive Statistics

By collecting data, using graphics, tables, and some formulas to describe the characteristics of the data, one can understand the frequency, central tendency, dispersion, data distribution, and statistical charts of each dimension of the restaurant website design measurement indicators. When processing data, frequency tables and cross-tabulation analysis can be used to not only understand the frequency of each group but also identify any abnormal values and conduct further analysis. When presenting data, expressing data in a graphical form is clearer and more concise than using text or tables. Therefore, various statistical graphs, such as bar charts, horizontal bar charts, pie charts, etc., can be used for data explanation.

3.3 Contingency Table Analysis

A contingency table (sometimes called a two-way frequency table) is a tabular mechanism for analyzing the differences or associations between rows and columns. There are many statistical tools for analyzing contingency tables, but the most commonly used and appropriate is the chi-squared test.

IV. ANALYSIS OF EMPIRICAL RESULTS

This study selected restaurants with websites from the data provided by the National Administration for Commerce and Industry. A total of 1,866 data were obtained and sorted by capital size (large, medium, and small) for analysis. Descriptive statistics of interactivity, navigation, functionality, and website marketing features of Taiwan restaurant websites. According to Table 1, the interactivity indicators (phone and address), navigation indicator (index page), and functionality indicators (corporate identity, background image, and scrolling) were all above 70%, indicating that these indicators are highly valued by restaurant websites regardless of capital size.

Interactivity		Navigation		Funcitionality		Site Marketing Characteristics	
Indicators	(%)	Indicators	(%)	Indicators	(%)	Indicators	(%)
Phone Number Listed	98.5	Links toFB	63.77	Corporate Identity	71.49	Menu Picture	59.00
Address Listed	98.82	Links toIG	21.01	Background Color	67.79	Restaurant Pictures	60.45
E-mail Hyperlink	19.77	Links toline	25.40	Background Image	94.48	Any Promotion Mentioned	15.01
Online Information Request Form	36.87	Links to Other Sites	13.93	Video	15.27	Description of Product and Services	26.85
E-mail Listed	24.06	Links to Other Revenue Centers	24.28	Audio	0.59	Location Map of the Hotel	69.19
Calendar (for special programs)	53.80	www links (hyperlinks)	19.72	Date Last Updated	0.11	Online Payment	6.43
Online Survey	1.13	Index Page	98.71	Banner Advertisement	6.11	Online Reservation	11.90
Online Commnet Form	28.94	Search Capabilities	12.11	Do you have to scroll down on first page?	93.94	Links to Tourist Information	18.60
				Download Facilities	5.04	Availability of Price Info	69.35
				Ease of Download	4.72		
				What's New?	69.29		
				Variety of Information	29.10		
				Detailed Information	63.67		
				Multilingual Capabilities	12.92		
				Flash Animation	58.09		

Table1 Measurement components and indicators of Taiwanese restaurant web design and marketing characteristics

Exploring the differences in website design among large, medium, and small capital restaurants in Taiwan
Table 2 reveals the differences in indicators among various capital sizes in terms of interactivity. We can see that both large, medium, and small capital restaurants place great emphasis on the indicators of phone and address, regardless of the differences in capital size. Even though these two indicators are crucial, there are still some restaurants in Taiwan that do not clearly display their phone number and address on their website. It is recommended to promptly supplement this information to facilitate customers in obtaining important information.

▪ Items	Capital Sizes (Large)	Capital Sizes (Medium)	Capital Sizes (Small)
Phone Number Listed	98.39	98.71	98.39
Address Listed	98.82	99.36	99.04
E-mail Hyperlink	24.44	17.68	17.20
Online Information Request Form	43.57	32.32	34.73
E-mail	29.26	22.19	20.74
Calendar (for special programs)	51.93	49.36	60.13
Online Survey	1.13	0.64	1.61
Online Commnet Form	14.15	31.51	41.16

Table 2 Comparison of the capital scale of restaurant website interactivity

Based on Table 3, we can see the differences in navigation design among restaurants of different capital sizes in Taiwan. There is still room for improvement in the usage of social media platforms, and restaurant operators can select the appropriate social media platforms to target different consumer groups in order to maximize the benefits of online marketing. We can observe that restaurants with large capital size place a higher emphasis on linking to FB, IG, LINE, and other websites than restaurants with medium and small capital sizes. Moreover, the index page is a critical indicator that all restaurant websites, regardless of their capital sizes, highly prioritize.

Items	Capital Sizes (Large)	Capital Sizes (Medium)	Capital Sizes (Small)
Links toFB	76.21	59.81	55.31
Links toIG	27.33	16.88	18.81
Links toline	31.19	22.67	22.35
Links to Other Sites	17.85	13.34	10.61
Links to Other Revenue Centers	24.44	20.74	27.65
www links (hyperlinks)	23.47	16.88	18.81
Index Page	97.91	99.04	99.20
Search Capabilities	15.27	13.02	8.04

Table 3 Comparison of capital scale of restaurant website navigation

Table 4 reveals the differences in interactive design among restaurants with different capital sizes. We found that compared to restaurants with medium or small capital sizes, those with large capital sizes place greater importance on corporate identification, background color, message diversity, multilingual functionality, and animation. However, it is worth noting that multilingual functionality is not emphasized in Taiwanese restaurant websites. Liu and Lee (2000) suggested that strengthening visual design and using images and animations can attract consumers more easily. Restaurants with large capital sizes prioritize background color, background images, and animation, and it is recommended that web designers pay more attention to these three indicators to attract consumers' attention more easily.

Items	Capital Sizes (Large)	Capital Sizes (Medium)	Capital Sizes (Small)
Corporate Identity	86.62	68.97	58.68
Background Color	82.64	65.43	55.31
Background Image	96.30	92.12	95.02
Video	15.43	14.15	16.24
Audio	1.29	0.48	0.00
Date Last Updated	0.32	0.00	0.00
Banner Advertisement	8.36	5.95	4.02
Do you have to scroll down on first page?	90.19	94.69	96.95
Download Facilities	3.54	5.31	6.27
Ease of Download	3.22	5.31	5.63
What's New?	70.90	63.67	73.31
Variety of Information	35.53	22.51	29.26
Detailed Information	66.40	56.43	68.17
Multilingual Capabilities	17.04	11.90	9.81
Flash Animation	74.92	53.86	45.50

Table 4 Comparison of capital scale of restaurant website functionality

According to Table 5, we can observe the differences between large, medium, and small capital restaurants in terms of website marketing features. The indicators such as (menu pictures, restaurant pictures, promotion prompts, online reservations, and linking to customer information) show that large capital restaurants perform better than medium and small capital restaurants. We can also notice that the overall usage rate of online reservations is not high for Taiwan restaurant websites, and many restaurants choose to outsource the task to other platforms. Lastly, we can see that the indicator with the highest proportion is (traffic location map) for medium capital restaurants, while the worst-performing indicator is surprisingly large capital restaurants. Therefore, large capital restaurants should pay more attention to whether they have a traffic location map, which can help customers find their restaurants more easily.

▪ Items	Capital Sizes (Large)	Capital Sizes (Medium)	Capital Sizes (Small)
Menu Picture	64.63	57.88	54.50
Restaurant Pictures	66.24	60.45	54.66
Any Promotion Mentioned	21.38	13.67	9.97
Description of Product and Services	28.80	25.56	26.69
Location Map of the Hotel	63.34	74.44	69.77
Online Payment	7.07	4.66	7.56
Online Reservation	21.54	9.97	4.18
Links to Tourist Information	24.44	17.20	14.15
Availability of Price Info	72.83	68.81	66.4

Table 5 Comparison of capital scale of restaurant website marketing features

V. CONCLUSIONS AND RECOMMENDATIONS

Against the backdrop of the raging pandemic, the pace of progress in restaurant websites has been accelerating, and restaurants have shifted from traditional marketing to online marketing. In online marketing, social marketing is also an important channel that companies now place a great emphasis on. The information provided by restaurant websites can now answer most of customers' questions, saving a lot of manpower and time costs, and making it easier to convey the latest news. It is recommended that companies make the information transmission on their restaurant websites clearer. Operators can add some practical indicators to the platform website or increase language variations, creating websites that are different from other operators, and more able to attract customers' attention.

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