The Factors of Information System Success: An Example of Customer Relationship Management Implementation in Food & Beverage Industry

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Abstract: The fierce competition in F&B industry has led companies to look for new tools urgently, and the rapid progress of communication and information technology cause the concept of CRM occurred to assist companies attracting and retaining customers. However the failure rate of IS implementation was reported to be high and the failed reasons were not the same for different companies.

For giving assistance to F&B companies for successfully implementing CRM, this study aims to sum factors would impact the success of CRM implementation. By using questionnaire developed based on literatures review, and collecting data from famous F&B companies in Taiwan, 197 valid samples were gathered. Consequently, the EFA statistic technology was used to extract component, and five factors are extracted after an iterative analysis process. These five factors include both negative and positive aspects that respondents indicated that would influence the success of CRM implementation in their companies. Finally, practical and academic implications and recommendations are discussed at the end of this paper.

Key words: Customer relationship management, exploratory factor analysis, food and beverage industry, information technology.

1. Introduction

Eating out of the home is becoming more prevalent [1] and the food and beverage (F&B) industry has expanded globally in recent years [2]. According to Global Industry Analysts Inc. (2011), the global F&B industry was projected to reach $2.2 trillion in revenues by 2015. This market consists of more than 8 million outlets ranging from small family-owned units to large multinational chains operating thousands of stores worldwide. Driven by increasing disposable incomes and changing lifestyles, the Asia-Pacific area is expected to offer the highest growth potential for F&B industry.

The F&B industry, in Taiwan, has made significant progress over the past few years. According to the report from Department of Statics, Ministry of Economic Affair, F&B industry had grown steadily in Taiwan. But, according to the report of Ministry of Economic Affairs, Taiwan, the operating year of F&B industry were less than five years accounted for about 60 percent while survival rate of over five years was only about 40 percent. It shows that intense competition in the market leads to high rate of elimination and replacement due to the low entry threshold of F&B industry. The increasing competition and decreasing customer loyalty have shaped the need for implementing particular tools to help companies to succeed and

win customers' loyalty by providing more customized products and services [3]. Many companies today are racing to re-establish their connections to new as well as existing customers to boost long-term customer loyalty [4]. The fierce competition and rapid progress in communication and information technology have led to the concept of customer relationship management (CRM) to attract and retain customers [5], therefore, many organizations are turning to CRM to better serve customers and facilitate closer relationships with them [6].

CRM is a combination of people, processes and technology that seeks to understand a company's customers, and applies those qualities in specific marketing activities [7]. In today's world CRM is used in many industries such as banks and financial centers and manufacturing industries [5]. The main objective of CRM is to translate the customer information into customized products and services that meet the changing needs of customers in order to gain their loyalty [3]. Previous researches in F&B industry mostly focused on customer behavioral intention [8]-[11], satisfaction [8]-[13], loyalty [14], [15], expectation and perception [16]. However, few of previous researches discussed the utilities of CRM and the factors, both positive and negative, that impact implementation of CRM from F&B viewpoint. Therefore, this study aims to identify both positive factors and negative barriers that affecting the implementation of CRM by using data collected from F&B industries in Taiwan. This study also discusses CRM from multiple perspectives of both restaurateurs and academics to explore (a) what current business situations and problems F&B industry is facing? (b) What positive factors would influence the implementation of CRM in Taiwan's F&B industry? And (c) what barriers F&B industry faced when executing CRM? We address these questions by, firstly, defining and combining CRM and F&B industry based on previous researches. Then a quantitative analysis was conducted by using data came from 197 samples to dig out the factors.

The remainder of this paper is organized as follows. We present relevant literature to define CRA and show current situation in F&B industry in Section 2. Section 3 identifies research sample, describes development of questionnaire design and data collecting process. Section 4 shows the detail analysis results. Finally, we conclude with discussion and practice suggestion as well as future research avenues in Section 5.

2. Literature Review

2.1. Food and Beverage Industry

The F&B industry has expanded globally and has become highly competitive in recent years. It can be defined as organizations which offer meals with services out of home, also called as "food service industry". It was also narrowly defined as the profit institution where supplies food and beverage with services by [17]. Others such as [18] indicated that F&B industry provides consumers food and beverage, service, ambience, and delightful dining time and space. Reference [1] defined F&B industry, using the term "foodservice", as the serviced provision of food and beverages (meals) purchased out of the home but which may be consumed both in and out of the home.

Customers eat out for variety of reasons, such as convenience, changing tastes, pleasure, celebratory and business. F&B industry can be categorized into service industry [19] composed of three basic components to meet customer's demands:

(1) The provision of food and beverage with service.

(2) A fixed place that provides customer relaxing environment and atmosphere.

(3) The provision no matter meals or service that must meet customers' needs and expectations while achieve business goals and profits.

In recent years, Taiwan's F&B industry has become a new business with intensive network that consists of talents, technology, capital, raw materials and customers. According to the statistics from the Ministry of Finance, Taiwan, the number of F&B operators increased almost 18 percent in past five years, was 5.5

percent higher than the average of other industries. Many F&B groups with multiple brands appeared one after another. Most of them own brand and channels, as well as flexibility to price by themselves. Customers', in Taiwan, high acceptance of all kinds of meal motivate F&B operators to keep changing and innovating. However, the replacement rate of this industry is very high that resulting from lack of management skills, especially the management for customer relationship. With the fierce competitive situation and rapid development of IT, the implementation of CRM is becoming more and more important and imperative for F&B industry to attract new customers and retain existing customers. Therefore, CRM application would become the key success factor for F&B industry.

2.2. Customer Relationship Management (CRM)

In 1960, Levitt suggested that the goal of businesses was to "create and maintain customers" [20]. The concept of CRM was originated from the 1980s, the Contact Management in the United State. Reference [21] divided the history of CRM into Database Marketing (1980s), Relationship Marketing (1990s) and Customer Relationship Management (2000s). Relationship marketing emphasizes that customer retention affects the company's profitability because it is more efficient to maintain an existing customer relationship than create a new one [20]. The term "customer relationship management" emerged in the information technology (IT) vendor community and practitioner community in the mid-1990s. It was initially considered as a technology-only tool or simple database marketing [4], [22] and often used to describe technology-based customer solutions, such as sales force automation [23]. The development of customer management techniques using IT to track multiple activities of customers, distinguishes CRM from earlier approaches to customer management [24]. The development of innovative information communication technology helps companies track customers' interactions with the firms and allow the firms' employees to quickly retrieve all information about the customers [7].

The definitions and descriptions of CRM differ from different authors and authorities, signifying a variety of CRM viewpoints [23]. Reference [25] defined CRM as a combination of business process and technology that seeks to understand a company's customers from the perspective of who they are, what they do, and what they are like. Reference [26] defined CRM as Activities a business performs to identify, qualify, acquire, develop and retain increasingly loyal and profitable customers by delivering the right product or service, to the right customer, through the right channel, at the right time and the right cost. CRM is an enterprise approach to understand and influence customer behavior through meaningful communications in order to improve customer acquisition, customer retention, customer loyalty, and customer portability [27]. Reference [22] suggested that CRM was a comprehensive strategy and process of acquiring, retaining, and partnering with selective customers to create superior value for the company and the customer. CRM allows companies to gather customer data swiftly, identify the most valuable customers over time, and increase customer loyalty by providing customized products and services [28]. Reference [29] viewed CRM as "the strategic use of information, processes, technology, and people to manage the customer's relationship with your company (Marketing, Sales, Services, and Support) across the whole customer life cycle". CRM is a management approach that seeks to create, develop, and enhance relationships with carefully targeted customers to maximize customer value, corporate profitability, and thus, shareholder value [30]. Reference [31] defined CRM as "the process that identifies customers, creates customer knowledge, builds customer relationships, and shapes customers' perceptions of the firm and its products/solutions". CRM was often defined as a form of relationship strategy [32].

Companies have recognized that the cost of acquiring a new customer is six times than keeping an old one, the longer the customer is retained, the higher the profits company earns [33]. CRM provides solutions that help companies improve the relationship to their customers, and it can help businesses enhance their customer relationships by attracting more profitable customers and establishing stronger and more

durable customer relationships [34]. Reference [35] suggested that the main goals of CRM implementation are (a) acquiring new customers, (b) sustaining a competitive advantage, (c) customer retention, (d) improving customer services and (e) decreasing costs. Moreover, a good CRM performance encourages customers to provide the firm with valuable suggestions for improving products and services [36]. Therefore, there are seven core benefits of CRM identified by [32], (1) improving ability to target profitable customers; (2) integrating offerings across channels; (3) improving sales force efficiency and effectiveness; (4) individualizing marketing messages; (5) customizing products and services; (6) improving customer service efficiency and effectiveness; and (7) improving pricing.

Although researchers have developed different definitions for CRM, there is a general acceptance among researchers of the categorization of CRM components [3]. That is, CRM is a combination of people, processes and technology that seeks to understand a company's customers. Managing a successful CRM implementation requires an integrated and balanced approach to technology, process, and people [4].

"Technology" refers to the information technology (IT) has long been recognized as an enabler that for CRM application to foster closer relationships with customers. IT refers to computing capabilities that allow a company to collect, organize, save, classify, maintain and use data about its customer [3]. To integrate IT and facilitate implementing the CRM strategy, concepts such as Information systems, software for CRM, sales force automation, data warehouse and data mining, help desk and call centers, and internet influence should be addressed [20].

"Processes" refers to a business process that is organized to treat customers individually based on their needs and their values [37]. CRM success requires a change of business processes towards customer-centric approach [3]. Reference [25] depicted CRM as a combination of business process and technology that seeks to understand a company's customer from the perspective of who they are, what they do, and what they are like. It is therefore requires redesigning core business processes starting from the customer perspective and involving customer feedback. The main processes that involve client interaction are: marketing, sales, and services [20], [38].

"Human factor (people)" refers to there are at least two parties involved: a provider and a buyer, i.e. organization aspect and client aspect. In the aspect of organization, reference [20] proposed as: the change in culture within the company staff, the role played by the employee in successfully establishing a relationship with the customer, and in turn, generating customer loyalty, as well as profit, and the degree of commitment and participation on the part of those in high management positions. There are several underlying dimensions surrounding management and employees that successful CRM implementations require [4], i.e. top management, project teams and employees. Top management support and involvement as a key success factor for CRM implementations, and project teams assist companies to integrate their core business processes, combine related activities, and eliminate the ones that do not add value to customers while re-engineering a customer-centric business model requires the participation of all employees within the organization [4]. In the aspect of client, it must work toward retention and loyalty from the customer, involving to generate value for client, satisfy customer's needs, and gain retention and loyalty from customers [20].

3. Methodology

3.1. Research Object

The implementation of CRM requires adequate capital investment. Although there is enormous number of different scales of F&B operators in Taiwan, it is not everyone can afford the expense of CRM. According to Market Observation Post System of Taiwan Stock Exchange Corporation, many F&B service operators who have capabilities of building CRM were listed, we selected those well-known firms as the research

objects of this study.

In order to obtain a more valid result of factor analysis and reliable responses, the respondents must be those stuffs whose work relevant to customer relationship, such as those worker who work directly to service customers, as well as those personnel who work in customer service/call centers, marketing and information technology departments in F&B companies. Questionnaires were distributed to 27 F&B companies by mail, including those well-know F&B companies such as Gourmet Master Co. Ltd., Wowprime Corp., New Palace International Co., Ltd., An-Shin Food Services Co., Ltd. and TTFB Co. Ltd. etc. Of the population of 254 potential participants, 240 questionnaires were returned, representing a response rate of 94%. Among these 240 respondents, 43 of them were removed without completing the questionnaire. Thus, the valid sample consisted of 197 respondents for the ratio of valid cases was 82 percent.

3.2. Questionnaire Development

Many previous studies [20], [39]-[41] were utilized in order to design questionnaires for this study. The questionnaire was structured based on literatures [35], [42] to collect data from well-known Taiwanese F&B companies to understand research objects' personal cognition of the benefits of CRM implementation, practice of CRM, the requirements of implementing CRM and the difficulties they faced. The questionnaire collects demographic data for Descriptive Statistics as well. Totally, 47 items were created and assessed on a 5 point scale ranging from strongly disagree (1) to strongly agree (5). A detailed description of items is available in Appendix.

3.3. Content Validity

To ensure content readability to aid respondents to understand, items were kept to short, clear, unambiguous and brief. For the purpose of examining content validity, one scholar and three experts of F&B industry were invited to provide their suggestions. By their comments, the questionnaire was modified slightly and both of content readability and validity were confirmed.

3.4. Sampling Procedure and Sample Profile

Table 1. Descriptive Statistics of Demographic Data

Demographic Variables	Items	Numbers (*n*=197)	Percentage
Gender	Male	65	33
	Female	132	67
Age	Under 20	25	12.7
	21~30	150	76.1
	31~40	14	7.1
	41~50	7	3.6
	over 50	1	5
Education	Senior high school	27	13.7
	Under graduate	168	85.3
	Graduate	2	1
Working Experience	Under 2years	95	48.2
	2 to 4 years	56	28.4
	4 to 6 years	20	10.2
	6 to 8 years	9	4.6
	over 8 years	17	8.8
Position	Part-time	82	41.6
	Full-time	97	49.2
	Supervisor of the restaurant	11	5.6
	Assistant management	6	3.0
	Director or higher	1	0.5

The sampling process was conducted by mailing questionnaires to the research objects — those stuffs whose work relevant to customer relationship in those well-known firms listed in Market Observation Post System of Taiwan Stock Exchange Corporation. Finally, total numbers of 197 valid samples were gathered. A review of the sample indicates that 132 (67%) of which were female and 65 (33%) were male. Majority of age were in the range of 21~40 years old (76.1%). Most of the respondents were located in education level of undergraduate (85.3%). The detailed result of descriptive statistics is showed in Table 1.

4. Analysis and Result

The data was examined by using SPSS 12.0 to perform, firstly, exploratory factor analysis (EFA) iteratively to extract the factors. Then reliability and validity were measured by Cronbach's Alpha and construct validity.

4.1. Exploratory Factor Analysis (EFA)

In this study, data was examined repeatedly by using EFA with Principal Component Analysis and varimax rotation method to extract factors. In the first EFA, seven factors were extracted. However, the factor 6 was extracted with only one item "q1_16", so was removed. The item "q2_5" whose factor loading in factor 7 was lower than 0.5 (0.494) and factor loadings in factors 2 and 3 were high and closed to in factor 7 (0.404 and 0.443) indicated that the both convergent and discriminant were not available. "q2_7" and "q2_8" whose factor loadings were also lower than 0.5 (0.465 and 0.494) and factor loadings in other factors were high (0.436 and 0.470) and closed to the factor it belonged to that showed both convergent and discriminant were no available as well. Therefore, q2_5, q2_7 and q2_8 were deleted.

Remaining 36 items were used to employ the second EFA and six factors were extracted. Items "q1_13", "q1_14" and "q1_15" had the same results with first second EFA. So they were deleted as well. In the third EFA, with the same situation, "q1_11" was deleted also.

Finally, a 32-item scale was used to conduct fourth EFA. Firstly, KMO and Bartlett's test was utilized to determine whether the data is suitable for conducting the factor analysis. The result of KMO and Bartlett's test was showed in Table 2 indicated data was appropriate for the conduction of factor analysis.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		**.876**
Bartlett's Test of Sphericity	Approx. Chi-Square	4148.983
	df.	496
	Sig.	**.000**

According to [43] if KMO>0.8, the data was good to run factor analysis

In the final EFA, using the remaining 32 items, and varimax rotation was applied which converged in 7 iterations and five factors were extracted with factor loadings higher than 0.50 (see Table 3), eigenvalue greater than 1 and 64.157 percent of the variance was explained totally (see Table 4).

According to the reflection of items in each component, factors were renamed. Nine items in factor 1, referred to the difficulties about implementing CRM, factor 1 therefore was named as "implementing barrier". In the factor 2, nine items involved to the benefits about improving service quality to customers. Hence factor 2 was named "service quality improvement". Referring to factor 3, six questions were asked about the demand of technology infrastructure. This study therefore named factor 3 as "availability of technology requirement". Regarding to factor 4, four questions referred to the aspect of organization. We named this factor as "organization commitment". Finally, factor 5, those four items reflected on the helpfulness of business operation. So it was named "operation benefit".

4.2. Reliability and Validity Analyses

By using EFA to explore the factors, both sides of positive and negative, this paper discovers five dimensions that would impact the CRM implementation in F&B industry. The reliability and validity of this final 32-item scale have to be confirmed for ensure the credibility and measuring ability.

The reliability was examined by the concept of Cronbach's Alpha. All reliability coefficients (Cronbach's Alpha) were above the recommended 0.70 threshold [44] (i.e. for implementing barrier is 0.950, service quality is 0.898, for technology infrastructure is 0.827, for organization management is 0.841 and for business operation is 0.952). It indicates the reliability of this 32-item scale is confirmed.

The convergent and discriminant validity were examined by observing the factor loading of each item. All items' factor loadings in the same extracted factor are higher than 0.5 shows the convergent validity is available. As well as items belong to the same extracted factor, their factor loadings in other factors are lower than 0.5 indicates that discriminant validity is also available. Therefore, the construct validity is confirmed as well.

Table 3. Rotated Component Matrixa

	Component				
	1	2	3	4	5
q1_1	.015	**.745**	.194	.053	.088
q1_2	.105	**.746**	.226	.323	-.040
q1_3	.183	**.683**	.111	.252	.182
q1_4	.059	**.796**	.118	.109	.129
q1_5	-.091	**.620**	.082	.281	.258
q1_6	.001	**.625**	.172	.161	.105
q1_7	.048	**.648**	.066	.101	.333
q1_8	-.038	**.682**	.130	.005	.344
q1_9	-.025	.213	-.023	.092	**.749**
q1_10	-.016	**.547**	.147	.346	.320
q1_12	.000	.319	.138	.171	**.538**
q1_17	.094	.205	.165	.038	**.772**
q1_18	.040	.261	.111	.118	**.730**
q2_1	.043	.404	.189	**.673**	.124
q2_2	.128	.114	.165	**.675**	.254
q2_3	.041	.257	.278	**.792**	.001
q2_4	-.016	.289	.213	**.769**	.108
q2_6	.235	.281	**.534**	.216	-.116
q2_9	.048	.290	**.585**	.368	.038
q3_1	.019	.311	**.677**	.321	-.007
q3_2	.150	.209	**.772**	.167	.024
q3_3	.191	.118	**.684**	.118	.286
q3_4	.039	.037	**.659**	.032	.324
q4_1	**.690**	.091	.216	.065	-.047
q4_2	**.857**	.023	.109	.062	-.043
q4_3	**.860**	.055	.078	.103	-.089
q4_4	**.865**	.058	.047	-.014	-.067
q4_5	**.886**	.047	.016	.013	.110
q4_6	**.868**	.063	.107	.036	.081
q4_7	**.840**	-.053	.072	.034	.095
q4_8	**.857**	-.083	-.030	.005	.096
q4_9	**.828**	.048	.041	-.034	.030

Extraction method: principal component analysis.

Rotation method: varimax with Kaiser Normalization.

ª Rotation converged in 7 iterations

Table 4. Total Variance Explained

Component	Initial Eigenvalue			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.403	29.383	29.383	9.403	29.383	29.383	6.573	20.540	20.540
2	6.093	19.041	48.424	6.093	19.041	48.424	5.105	15.952	36.492
3	2.202	6.882	55.306	2.202	6.882	55.306	3.108	9.714	46.206
4	1.608	5.026	60.332	1.608	5.026	60.332	2.949	9.215	55.420
5	1.224	3.825	64.157	1.224	3.825	64.157	2.796	8.736	64.157
6	.937	2.929	67.086						
7	.917	2.865	69.951						
8	.827	2.585	72.535						
9	.756	2.361	74.897						
10	.719	2.247	77.144						
11	.602	1.881	79.025						
12	.578	1.805	80.830						
13	.548	1.712	82.541						
14	.534	1.668	84.209						
15	.510	1.595	85.804						
16	.450	1.406	87.209						
17	.434	1.357	88.566						
18	.416	1.301	89.867						
19	.407	1.271	91.139						
20	.383	1.195	92.334						
21	.317	.991	93.326						
22	.299	.934	94.260						
23	.259	.809	95.068						
24	.246	.768	95.836						
25	.236	.738	96.574						
26	.212	.662	97.236						
27	.191	.598	97.833						
28	.175	.546	98.380						
29	.154	.482	98.861						
30	.137	.430	99.291						
31	.125	.390	99.681						
32	.102	.319	100.000						

Extraction method: principal component analysis

5. Discussion and Conclusion

5.1. Discussion

The first purpose of this study is to investigate the current business situations and the problems F&B industry has faced. By an extensive survey, based on literature review, we defined, firstly, F&B industry as organizations which offer food and beverage with services out of home, but customers may consume both in and out of home for the demands of convenience, changing tastes, pleasure, celebratory and business. We dig out that the intense competition in F&B industry has led to a high rate of elimination and replacement. The decreasing customer and increasing competition cause F&B companies and stores miring the situation of dilemma. They have to make changes to survive and need implementing new tools to help themselves to connect with new customers and win customers' loyalty from both new and existing customers. Obviously,

CRM is an opportunity for them to improve their competitiveness. Seven core benefits of CRM identified by [44], those are (1) improving ability to target profitable customers; (2) integrating offerings across channels; (3) improving sales force efficiency and effectiveness; (4) individualizing marketing messages; (5) customizing products and services; (6) improving customer service efficiency and effectiveness; and (7) improving pricing. However, implementing CRM is a big challenge that is why the second purpose of this study attempts to discover those factors which would impact a successful implementation of CRM.

By using questionnaire and sampling from well-known F&B groups and employing EFA technique, five factors were extracted that containing both negative and positive sides of CRM implementation issues. Those factors are named as implementing barriers, service quality improvement, availability of technology requirement, organization commitment and Operation benefit.

5.1.1. Implementing barriers

The rate of information system project failure remains high [45], and reported as being between 50%-80% [46]. Dorsey listed ten reasons to show why systems projects fail. Reference [47] illustrated a range of critical failure factors of software system projects as in: organizational, financial, technical, human, and political factors, and the interaction among these factors. In this paper, data shows that those difficulties F&B companies faced in the procedure of implementing CRM are inadequate budgets and senior management commitment, poor communication and inter-department conflict, an absence of customer management skills, inefficient business process and culture factor. When some of these factors exist (different factors exist among different firms), the possibility of CRM implementation failure is going to occur. This study, therefore, defines implementing barriers as "those factors which prevent and obstruct the success of CRM implementation, and they differ from different firms".

5.1.2. Service quality improvement

An effective CRM strategy should encompass and integrate all activities related to customer [35]. CRM highlights on customized service and interaction with customers, high class service quality helps restaurant to build an impressive image in people's mind. This factor of service quality improvement refers to staffs are aware of implementing CRM would be helpful for improving service quality, as such companies would get benefit to better customer relationship.

5.1.3. Availability of technology requirement

Accurate customer data is essential to successful CRM performance [48]. Consequently, technology plays an important role in CRM in adding to firm intelligence [49]. The advances in IT, transform the traditional approach to customer relationship management to an integrated, web-enabled approach, and enable firms to provide greater customization with better quality at lower cost. Based on the IT construction, CRM contributes firms to collect, store, analyze and share customer information in ways that greatly enhance their ability to respond to the needs of individual customer [50]. In this study, respondents considered implementing CRM companies must possess technology requirements including integrating information systems, establishing database data warehousing and data mining technology, and creating customer-oriented website etc.

5.1.4. Organization commitment

Top management support is the most commonly identified factor when implementing a complex IS [51], and interdepartmental coordination has proven to be a major factor in effective IT implementation [52]. In this extracted factor "organization commitment", respondents suggested a success CRM implementation in their companies needs senior management commitment, coordination of interdepartmental team, clear definition of objectives and unambiguous communication of CRM strategy. If the organization commitment is stronger and more perspicuous, the possibility of CRM implementation success is going to be higher.

5.1.5. Operation benefit

CRM emphasizes on relationship management between a firm and its existing or expected customer [35], [53]. Effective implementation of CRM contributes financial and non-financial benefits to business as well as customer. If members of organization are conscious the benefit of both financial and non-financial are enhanced, it would be more like to implement CRM and get success. In this paper, operation benefit refers to cost down, benefit for sales and helpfulness for new products development.

In addition, this study suggests, based on opinions from respondent, that F&B companies who want to implement CRM system in the future they should do something as following:

5.1.6. Internal and external communication

According to the result of this study, we find the central barrier restaurateur has faced is poor communication both internal and external. The internal poor communication with top management leads to inadequate budget and the lack of management commitment and cultural readiness. As well as poor communication with employees cause to inefficiencies in business process, lack of standardization and inter-department conflicts. Therefore, companies should improve internal communication with senior management first to get coordination and consistency. Then, they should communicate with employees frequently and establish a good working environment and ambience to retain skillful and passionate employees. By internal communication, companies remove implementing barriers and design an affable CRM system to communicate with external customers and build relationship with them, even encourage them to provide valuable suggestions for improving products and services.

5.1.7. Staff training

Individual employee is the building blocks of customer relationship [54]. In Taiwan, the ages of most of service personnel in restaurant are under than 30 years old, and most of them have only less than four years working experience. Almost all respondents of this study considered that adequate and professional training for staffs working at F&B industry is essential in terms of implementing CRM. Those well-trained personnel are skillful to communicate with customers and offer better service to customers that will upgrade success rate of CRM implementation.

5.1.8. Target future long-term benefit

Implementing CRM needs a large number of investments including both financial and non-financial. To successfully implementing CRM it is necessary to put in time and resources from top management commitment. The main purpose of top management willing to invest funds and resources is to gain benefits from investments. It is, however, difficult to quantify the benefit from CRM implementation in short-term that would lead to a lack of senior management commitment to CRM. Enterprises must recognize that the benefits brought by introducing CRM are a long-term process, not available in a short time. Therefore, top management must set their sights on the immeasurable benefit in the future and fully support the task of implementing CRM.

5.2. Conclusions

With Food and beverage industry grows steadily the competition of F&B market has become relatively fierce in recent years. Rapid progress in communication and information technology has led to the concept of customer relationship management for F&B industry to attract and retain customers. CRM technology is a key competitive strategy of business focusing on the needs of the customers and to integrate a customer-centric approach throughout the organization. By using EFA technology, this study identifies five factors, including both positive and negative dimensions, affecting the implementation of CRM in Taiwan's F&B industry. Either negative factor (implementation barriers) or positive factors (service quality, technology requirements, organization commitments and operation benefits) contribute to both managerial implication and academic research.

5.2.1. Managerial implication

In practice, it was assumed that satisfaction is a key element in the relation between customers and company [55]. In other words, there is a belief that if customers are satisfied, they are willing to stay in a relationship with particular firm. This study supports this belief, and suggests that CRM is an effective way to satisfy customers. Generally, if companies like to establish a successful CRM, they should develop CRM with complementary measures at the same time. F&B organizations in Taiwan are facing a fierce competition. They need the functions of CRM to help them building and maintaining competitive advantage. However, the rate of IS project failure is always reported high. For implementing CRM successfully companies have to understand why CRM implementation fails? And what factors hinder/urge the CRM project to be successful? These extracted factors by this study assist restaurants to evaluate their CRM implementing process to avoid falling into a dilemma (e.g. inadequate budgets, the lack of senior management commitment, poor communication and inter-department conflict). On the other hand, restaurants also can measure their CRM project if it is in line with the demands of a successful CRM implementation, such as if it could give staffs the cognition of improving service qualities to customer and gaining operation benefits through CRM.

5.2.2. Academic contribution

Excluding to accumulate academic literature of F&B industry and CRM research, this paper provided an iterative EFA analysis process to extract components that would affect CRM implementation in F&B industry. By results of this paper, that are both negative and positive factors, researchers can use these findings to perform a further positivist research in the area of CRM implementation, and even other IS introduction in the future. Moreover, this paper provide variables for future IS application research to examine IS implementation success in other industries, such as tourism, hospital.

5.2.3. Limitation

Firstly, in order to upgrade sample representation, data was collected only focused on customer service center, marketing and IT departments in F&B companies. Due to cost saving some restaurants share cross-departmental responsibilities to those service personnel that make them too busy and unable to finish questionnaire. Thus it leads to a smaller amount of sample. Further studies can try to conduct a large-scale sampling procedure to gather availability data.

Secondly, this study used EFA to classify questions into five factors. However, items come from some specific literatures, there may have other moderating variables or external factors that were not included in this study. Future studies can add other variables to extract more useful factors. In addition, future researchers can perform empirical research via CFA to verify their impact on IS implementation through hypotheses further.

Finally, this study adopted subject from the Taichung branch of listed F&B group and famous chain restaurants. We suggest future research can escape the geographical restriction and expand to other regions even cross country. Moreover, research can analyze the differentiation of CRM among small-, medium- and larger-sized restaurants.

Appendix

Details about this research remaining 32 items.

q1: Implementing CRM would assist company to
1. effectively classify sales channels.
2. offer customers better service.
3. gain new customers.

4. acquire customers with utilizing products and services

5. forecast customers' future expectations

6. build excellent business image.

7. upgrade the quality of business activities.

8. gain competitive advantage.

9. reduce operating cost.

10. retain customers.

12. communicate with staffs honestly and frequently.

17. intend to sales force automation.

18. develop new product.

q2: How to Implement CRM successfully?

1. Needs senior management commitment.

2. Establishing multidisciplinary team.

3. Clearly defining objectives.

4. Communicating the goals and task of CRM with staffs.

6. Providing pre- and post-sale service to customers.

9. Integrating information systems and offering correct and consistent customer data.

q3: The requirement of implementing CRM

1. Staffs training.

2. Technology of database, data warehousing and data mining.

3. CRM-oriented Website.

4. Flexibility in payment options

q4: Difficulties of implementing CRM

1. Inadequate supporting budgets.

2. Lack of senior management commitment.

3. Poor communication both internal and external.

4. Absence of complementary measure and customer management skills

5. Inefficiencies in business process

6. Lack of customers input at service stage

7. Lack of standardization of operation process.

8. Inter-department conflicts

9. Lack of cultural readiness

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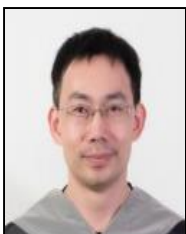
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