

## Association for Information Systems AIS Electronic Library (AISeL)

---

ICEB 2018 Proceedings

International Conference on Electronic Business  
(ICEB)

---

Winter 12-6-2018

# Developing the Ideal Profile of OCAs and IT Usage in the Foodservice Chain

Wei-Hsi Hung

*Department of Management Information Systems, National Chengchi University, Taiwan, R.O.C., fhung@nccu.edu.tw*

Tzu-Hao Wang

*Department of Industrial Engineering and Systems Management, Feng Chia University, Taiwan, R.O.C., jasonwang0719@gmail.com*

Jia-Wen Li

*Department of Information Management, National Chung Cheng University, Taiwan, R.O.C., a9237829@gmail.com*

Mei-Fang Wu

*Department of Industrial Engineering and Systems Management, Feng Chia University, Taiwan, R.O.C., mfwu@fcu.edu.tw*

Follow this and additional works at: <https://aisel.aisnet.org/iceb2018>

---

### Recommended Citation

Hung, Wei-Hsi; Wang, Tzu-Hao; Li, Jia-Wen; and Wu, Mei-Fang, "Developing the Ideal Profile of OCAs and IT Usage in the Foodservice Chain" (2018). *ICEB 2018 Proceedings*. 78.

<https://aisel.aisnet.org/iceb2018/78>

This material is brought to you by the International Conference on Electronic Business (ICEB) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ICEB 2018 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

## **Developing the Ideal Profile of OCAs and IT Usage in the Foodservice Chain** (Full Paper)

Wei-Hsi Hung\*, Department of Management Information Systems, National Chengchi University, Taiwan, R.O.C.,  
fhung@nccu.edu.tw

Tzu-Hao Wang, Department of Industrial Engineering and Systems Management, Feng Chia University, Taiwan, R.O.C.,  
jasonwang0719@gmail.com

Jia-Wen Li, Department of Information Management, National Chung Cheng University, Taiwan, R.O.C., a9237829@gmail.com

Mei-Fang Wu, Department of Industrial Engineering and Systems Management, Feng Chia University, Taiwan, R.O.C.,  
mfwu@fcu.edu.tw

### **Abstract**

In recent years, the number of the branches of the foodservice chain rapidly increases, and every branch wants to be successful. Thus, how to use information technology to support Organizational Critical Activities (OCAs) has become an important issue. This research found out ten Organizational Critical Activities (OCAs) of the foodservice chain and three types of information technology usage, Defender Type, Follower Type, and Innovator Type. Furthermore, after the revision of two experts, the ten Organizational Critical Activities (OCAs) are divided into three categories, Internal Management, External Management, and Product Service. The analytical result found out that Defender Type matches Internal Management, External Management matches Innovator Type, and Product Service matches Follower Type. Finally, this study hopes that companies in the foodservice chain can develop appropriate IT strategies according to this research result to enhance their core competitiveness.

*Keywords:* Organizational critical activities, foodservice chain, information technology usage, ideal profile and grounded theory.

\*Corresponding author

### **INTRODUCTION**

As the number of branches of the foodservice chain increases rapidly in recent years, enterprises of the foodservice chain one by one implement the uniform set of information technology (IT) to support the daily operation and management of the head office and branches. In this situation, these branches must use the uniform set of information technology (IT) to support the different strategies and operating activities when facing different environments. Therefore, "how to use the uniform set of information technology (IT) to support different daily operating activities in different branches" has become a critical issue.

The past literature about foodservice and information technology mostly emphasizes the head office and rarely discusses the branches. Oronsky and Chathoth (2007) indicated that the branches must adjust their use ways to meet actual demand when using new information technology. Thus, they suggested that future research should be conducted from the perspective of branches to have a better understanding of enterprises' actual information technology usage. This research will combine Organizational Critical Activities (OCAs) proposed by Hung (2006) and Hung, McQueen, Ku, and Chang (2012) to discuss how these branches use the uniform set of information technology to support OCAs in order to achieve the success.

Organizational Critical Activities (OCAs), proposed by Hung (2006) and Hung et al. (2012), are crucial to an organization's success, and they help the organizations achieve expected success through organizations to invest a large number of resources in them, as well as through monitoring, guidance, and continuous practice. The contents of OCAs are different in different organizational environments and strategies. In the situation of the foodservice chain, because branches are spread all over the country, OCAs adopted by each branch will be necessarily different due to the effect of the geographical location, customer characteristics, and other relevant factors. Thus, during the process of making marketing strategies, commodity combinations, promotion activities, and service types should be distinct according to the relevant features of different business circles.

The information technology usage has always been regarded as a very important factor in the field of information management (Delone & Mclean, 1992). Tajima (2007) thought that the type of information technology usage has an effect on the benefits of information technology. Relevant research also indicates that information technology has an inconsistent effect on enterprises, and this may be related to the type of information technology usage in an organization (Sanders, 2008). These inconsistent research findings have also reflected the complexity of issues of the information technology usage and the importance of in-depth research among organizations.

Under the tide of informatization, this research found very few studies on the combination of the foodservice chain and information technology in the past. On the growth of the foodservice market, relevant information is quite limited. Moreover, past literature never discussed issues on an organization's use way of the uniform set of information technology. Therefore, this research hopes to explore how branches use the uniform set of information technology in combination with OCAs to bring benefits and success to their organization and to clarify the different types of IT usage during the process of applying information technology as well as reasons from the perspective of the branches of the foodservice chain.

According to the above discussion, this research concludes research questions as follows.

1. What are OCAs of foodservice chain and the types of IT usage?
2. How and why do the branches of the foodservice chain use IT to support OCAs?
3. What is the ideal profile of OCAs and IT usage?

Through above questions, this research has the following three purposes. The first purpose is to understand OCAs of branches from the perspective of branches and to understand how branches use the uniform set of IT to support OCAs. The second purpose is to develop different types of IT usage and to classify OCAs obtained in this research. The third and most important purpose is to develop the ideal profile of OCAs and IT usage. In the end, except that this research can be a reference in the future academic research, this research mainly hopes that the research result can help the foodservice chain adjust the type of IT usage and operational strategies.

## LITERATURE REVIEW

### 2.1 OCAs (Organizational Critical Activities)

Organizational Critical Activities (OCAs), proposed by Hung (2006), refer to "some special types of organizational activities", and such activities have strategic importance as to whether organizations can achieve success. On the part of research of OCAs, Hung (2006) explained the hierarchical relationship among process, task, activity, and OCAs. The process is a set of hierarchical interaction activities, this set of activities is imbedded into a set of rules and resources and able to force and endow society. The task contains the activity (aimed at achieving a procedural goal) and resource (which is used or modified by the task). An activity is the necessary core to execute the procedure or task. OCAs are the activities crucial to an organization's success. Therefore, the scope of the activity is smaller than that of the procedure and task. Besides, the resource, power, and rule during the activity are not contained in the activity.

Hung (2006) explored OCAs in his research and defined them as "the top-priority activities in a series of organizational activities as well as the activities which are indispensable for an organization's short-term, medium-term, and long-term success and must be executed. In OCAs, a large number of resources are invested continuously and the senior manager's frequent monitoring and guidance are provided", and he also indicated that OCAs should support the organizational strategy. Based on the above-mentioned discussion, OCAs in this research are activities that are preferentially executed and regarded as organizational activities indispensable for an organization's short-term, medium-term, and long-term success. Besides, OCAs are continuously monitored and guided by senior managers. Moreover, a large number of resources are invested in OCAs to help organizations achieve success.

For the correlation between OCAs and strategy, Mintzberg (1978) defined the strategy as a series of decisions and actions, while Croteau and Bergeron (2001) defined organizational strategy as a series of organizational activities. It can be clearly understood from the above-mentioned literature that there exists a correlation between organizational strategy and organizational activity. For the correlation between OCAs and environment, their relationship is indirect and environmental change will first cause the strategy change and then affect OCAs through that strategy change. However, the developmental and making process of organizational strategy consumes lots of time (Edwards, Ward, & Bytheway, 1995). Therefore, some organizations will change their OCAs before the development of the strategy to gain competitive advantages, in order to adapt to the environmental change in a timely manner.

Shortell and Zajacym (1990) believed that the method of organizational self-evaluation can effectively find out the organizational strategy. According to past relevant research, it is found that the self-evaluation method is classified into an interview and questionnaire survey. Based on these 2 considerations - the self-evaluation method and providing or not providing possible OCAs, 4 different methods of seeking OCAs are gained. Hung (2006) sorted out 4 different methods of seeking OCAs: (I) providing possible OCAs in the questionnaire; (II) not providing possible OCAs in the questionnaire; (III) providing possible OCAs in the interview; (IV) not providing possible OCAs in the interview.

This research therefore intends to find out the list of OCAs in the foodservice chain according to the above-mentioned methodology. In addition to conducting the research, the result can also be provided to organizations as the basis of execution of strategy and operation. Besides, implementing OCAs can bring success to organizations.

### 2.2. Foodservice chain

Kotler (1991) defined a chain store as a retail store possessing or controlling 2 or more retail outlets and the same product line is sold in these retail stores with unified purchase and sales. Muller (1999) thought that a restaurant is the place where foods or beverages exchange remuneration. Ninemeier (2010) pointed out that the foodservice industry is mainly divided into Independent Operation, Chain Restaurants, and Franchises. (1) Independent Operation refers to one restaurant owned by 1 or several owners; these owners usually own one or several restaurants having no chain relationship, and the menu, purchased food materials, and operation procedure in each restaurant are different. (2) Chain Restaurants are composed of multiple foodservice business outlets that usually share the same menu, jointly purchase the food materials and equipment, and follow the same standardized operational procedure. (3) Franchises, a special type for chain operation, mean that the franchisees pay fees to the franchiser to gain the right to use the tradename, building design, and operational and managerial method from the franchiser.

As defined by Block, Scribner, and DeSalvo (2004), a fast food chain restaurant refers to a restaurant characterized by rapid supply of meals, takeout service, limited working personnel, and the consumption rule of paying the bill first. After referencing the past literature on the chain industry and foodservice industry, this research defines the foodservice chain as “a standardized, simplified, and specialized foodservice store which has 2 or more branches with a unified operating model, where each branch supplies tangible meals and beverages and intangible service and atmosphere”.

### 2.3. Information technology of the foodservice chain

Agrawal and Smith (2013) indicated that the demand items of each branch will be obviously different under the same chain system due to the differences in economic status, culture, and population in various regions as well as the different branch forms. Muller (1999) stated that information technology is an important fundamental type of investment in the foodservice chain and information technology usage not only reduces operational costs and improves management ability and production efficiency, but also accelerates the enterprise’s market reaction. The analysis result of a large amount of branch data can also expand an enterprise’s most important knowledge base system to bring success to the enterprise.

Information technology plays an important role in the foodservice industry, and it is also one of the important factors affecting an organization’s financial success (Kimes, 2008). Nevertheless, with the expansion of the foodservice chain, when each branch adopts unified information technology to coordinate with branch operation in various regions, its disadvantages also appear gradually. According to Huber, Hancer, and George (2010), there is no commonly used information system applied to all situations in organizations. As chain restaurants become prevalent, enterprises will import information technology to assist with branch operation. The import of information strategy not only strengthens the connection between an enterprise’s internal departments and branches, but also brings competitive advantages like higher efficiency, more rapid supply of service, and supply of analysis. However, it is unknown in the past literature how branches use information technology uniformly implemented by the head office to support the operational activities in organizations to bring success, which is the gap that needs to be filled.

The information technology usage emphasizes the direct use of experience (Mao & Palvia, 2008). As defined by Mishra and Agarwal (2010), the information technology usage refers to its applications in the operational procedure to complete the task. This research defines the information technology usage as “the dynamic process and actual application model where organizations use the information technology to support organizational activities and operational procedure during the dynamic process of adapting to a specific environment”.

Kearns and Lederer (2004) indicated that when an enterprise’s strategy is related to the information technology usage, competitive advantages can be gained. Trkman (2010) thought that the performance brought by information technology is measured by activity/procedure dimensions - namely, they discussed it from the perspective of the form of information technology usage. However, the method to use information technology is a complex concept, and different forms of information technology usage will bring different values, further bringing different types of benefits (Sanders, 2008).

### 2.4. Ideal profile

“Ideal type” refers to the complex structure and operational rule gradually formed in an organization to achieve a specific purpose and management effectiveness (Meyer, Tsui, & Hinings, 1993). Subsequently, Miles and Snow (1994) followed it and changed it to “ideal profile”. Using the business strategic type as the standard, Miles and Snow (1994) classified the organizational characteristics into product and market strategy, R&D direction, production, organizational structure, and planning process. Under the business strategy of Defender, Prospector, and Analyzer, the attributes and traits in different characteristics are respectively described, and contrast and comparison are conducted, as shown in Table 1.

Table 1: Ideal Profile of Miles and Snow.

	Prospector	Analyzer	Defender
Product and market strategy	Wider and changeable	Stable and changeable	Limited and stable product line

	product line The first to enter the new market	product line Follow Prospector to enter the market	
R&D direction	Product design and market survey	Adaptation of procedure and product	Process reengineering and product improvement
Production	Flexibility and adaptive equipment and procedure	Transferred into project development with low-cost production	Mass and low-cost specialized process
Organizational structure	Regional	Mixed	Functional
Planning process	Action -> evaluation -> planning	Evaluation -> action -> planning	Planning -> action -> evaluation

Source: Miles and Snow (1994); Grimmer et al. (2017).

Sabherwal and Chan (2001) constructed an ideal profile through literature review, indicated that Defender, Prospector, and Analyzer are respectively highly connected to Information System Efficiency, Information System Flexibility, and Information System Comprehensiveness (Information System Strategy), and thought that alignment between business strategy and information system strategy will bring success to an enterprise. The ideal profile is shown in Table 2.

Table 2: Ideal Profile of Business Strategy and Information System Strategy.

	Defender	Prospector	Analyzer
Information System Efficiency	High	Low	Low
Information System Flexibility	Low	High	Low
Information System Comprehensiveness	Low	Low	High

Source: Sabherwal and Chan (2001); Street et al. (2018).

In combination with past research literature, this research defines an ideal profile as “a method used to construct alignment between 2 different aspects to combine and analyze the 2 different aspects by means of inferential and ideal opinions and to establish a set of profile focusing on organizations that can help organizations find out the best combination to achieve a specific purpose and efficient management”.

An ideal profile is widely applied to research of strategy and organizational characteristics, and many previous scholars also used information technology as one aspect to align with enterprise strategy, organizational characteristics, or enterprise process to establish an ideal profile (Tallon, 2007). Through an ideal profile, a suitable pairing method between 2 aspects can be found out to enhance their degree of coordination and be used as a reference for practical application.

It can be found from the discussion above that past studies are mostly based on enterprise-level opinions to discuss but have little discussion on branches. How branches use the same set of information technology to support OCAs has become an issue that must be valued. Therefore, this research combines OCAs and information technology usage to establish an ideal profile to fill the gap in the past research.

### RESEARCH METHOD AND DESIGN

The purpose of this research is to find out how branches in the foodservice chain use the uniform set of IT to support OCAs and to understand the process and reasons from it to build an ideal profile. Therefore, the events of the discussion mainly focus on contemporaneous events. In the past, there was not much literature exploring the application situation of information technology in branches. Therefore, the type of the qualitative research is in line with the type of this research. This research adopted case study to understand the situation that each branch uses information technology to support its OCAs and conducted comparison and analysis according to the situation of each branch. This research applied the multi-case analysis and concluded one phenomenon by comparing the interview contents of each analysis unit (branch of foodservice chain). On research data collection, this research adopted the “in-depth interview method” to collect the data and combined the secondary data collection to have a multi-aspect understanding of the company and branch status as well as the relevant phenomena in the research from the company website,

annual report, news, newspapers and magazines, and relevant public materials. On the choice of interview type, this research adopted the semi-structured method to conduct in-depth interviews, as it can help the interview be conducted in an organized way and provide respondents with the space to answer the questions. Thus, relevant research data can be collected effectively without losing flexibility.

Over the past 10 years, the grounded theory has been widely applied to research related to information systems (McLaren et al., 2011; Sarker et al., 2012). McLaren et al. (2011) suggested that enterprises can find out their internal ideal profile through case interviews which combine with grounded theory to further analyze their internal difference and the reasons of their internal difference. This research adopted the multi-case study which combined with collection of relevant secondary data, as few studies in the past have discussed branches in the chain industry, causing a lack of theoretical basis. In order to establish more stable research results, this research adopted the grounded theory of Chicago School of Sociology (Robrecht, 1995) to analyze a large number of data obtained. On data analysis, open coding, axial coding, and selective coding in the grounded theory were adopted. After transforming the interview content into verbatim transcription, this research deleted related background information and paragraphed verbatim transcription to conduct open coding, and then the analytical manuscript was formed. After open coding was finished, axial coding was used to get 10 items of OCAs and 3 activity types of OCAs; besides, this research also used axial coding to get types of information technology usage and unified information technology items. Finally, selective coding was used to group the same kind of OCAs into the same activity type and develop the ideal profile of OCAs and IT usage in the foodservice chain.

This research took one of Taiwanese famous enterprises of the foodservice chain as the research object and adopted the semi-structured method to conduct the case interview. The grounded theory was used to analyze the data, and the research results and relevant findings were put forward. On the choice of branches, in order to increase the diversity of research results and findings to carry out the comparison, this research took branches in Taiwanese northern, central, and southern regions as research objects. As the research field involved OCAs, the respondents were mainly the store managers, assistant store managers, junior managers, and supervisors of each branch store and were secondarily management personnel who acted as duty manager in each branch store.

It was expected that at least 9 branches in the foodservice chain would be interviewed. Hung (2006) thought that supervisors usually have different opinions on OCAs. Therefore, this research interviewed 2-3 people, who are mainly middle and senior supervisors, in each branch and applied cross-comparison against the interview contents to improve reliability and validity of interview contents. In terms of the choice of case quantity, this case adopted the snowball sampling method, whereby the respondents introduced other respondents to gain more samples. On the interview outline, the interview outline proposed by Hung (2006) was used as a reference, and the interview outline was drawn up after past relevant literature was referenced; then the outline was submitted to experts for review and modification and interviews were conducted formally in the end. The total number of participants in the formal interview is 18. On supplementary data, a second interview was conducted, where communication software or a telephone was used for voice recording to make up for insufficient data. After the end of the interview, the interview contents were transformed into verbatim transcription to facilitate subsequent analysis.

## RESEARCH RESULT AND DISCUSSION

After interviewing 9 branches, this research found that the foodservice chain's OCAs contained 10 items: managing human resources, developing and maintaining customer relationship, communicating, monitoring and ensuring the product and service quality, carrying out advertising promotion, providing the customer service, developing new services, doing market research, establishing the branch culture, and enhancing brand image. After the 18 respondents were interviewed in the 9 cases, this research found that each branch's information technology usage differs in "intention to use". The types of information technology usage are classified into Defender Type, Follower Type, and Innovator Type according to "intention to use".

### (1) Defender Type:

In addition to the proximity among the import times of information technology in the 9 branches, the respondents also said that the company provides unified information technology items, and the information technologies uniformly allocated by the company include computer, notebook computer, point of sale (POS), mobile ordering machine, and WiFi; the computer configuration includes Enterprise Information Portal (EIP), enterprise integration system, training trace, scheduling system, E-mail, and office software.

### (2) Innovator Type:

In order to adapt to the competitive environment, each case branch also uses information technologies different from those stipulated by the company, and the difference in computer use is the greatest. The data inquiry function of the original system is used, and then the office software is used for data integration to further reach the function of rapidly reporting back on the degree of goal achievement and analyzing data. Due to customers' high variability, some case branches use the computers for data management and comparison analysis to improve service diversity. Other cases are different in information technology usage in order to provide differentiated service to customers. Based on the above contents, it can be found that the competitive

environments in different business circles will cause the change in an enterprise's operational pattern, which further causes difference in each branch's information technology usage.

### (3) Follower Type:

In innovative use, case branches' intention to use can be classified into goal orientation and innovation orientation. Innovation orientation mainly refers to attempting the method of new information technology usage to keep its leading position in turnover. The goal orientation mainly refers to taking other branches' successful experience as the goal to learn their successful innovative experiences, expecting to bring success to themselves. Therefore, through intention to use, this research classified it into Follower Type and Innovator Type. Thereinto, Follower Type belongs to the goal orientation, and Innovator Type belongs to the innovation orientation.

It can be found from the interviews that Defender is partial to the enhancement of Internal Management efficiency and cost control, helping internal information technology usage achieve high consistency through standardization - namely, the delicacy of the old model and controlling and managing product quality and service efficiency through the procedure of high controllability, so as to improve efficiency and reduce cost. As for Follower, the cost on adopting personal communication equipment is not high. Therefore, they all actively adopted it to improve internal communication efficiency and action. Follower lies between Defender and Innovator, and it follows Innovator and keeps the balance of positioning between operating efficiency and difference to try to bring benefits to the branches. Besides, those branches which belong to Innovator will actively experiment with new models and improve the variability in the method of information technology usage to try to improve the difference through developing the new method of information technology usage to bring benefits to themselves.

By referencing OCAs proposed by Hung (2006), this research concluded 3 activity types through 2 industrial experts and grounded theory and classified the 10 OCAs obtained in the interviews into these 3 activity types (Internal Management, External Management, and Product Service) in order to facilitate subsequent construction of ideal profile. Thereinto, Internal Management includes managing human resources, communicating, and establishing the branch culture; External Management includes developing and maintaining customer relationship, carrying out advertising promotion, doing market research, and enhancing brand image; Product Service includes monitoring and ensuring the product and service quality, providing the customer service, and developing new services. Besides, Internal Management, External Management, and Product Service are combined with information technology usage (Defender Type, Follower Type, and Innovator Type) to establish an ideal profile. The results find that Internal Management is suitable for Defender Type and the branches will have better management efficiency; when External Management is combined with Innovator Type, turnover will increase stably; when Product Service is combined with Follower Type, customers will increase continuously. The ideal profile of OCAs and IT Usage is shown in Table 3.

Table 3: Ideal Profile of OCAs and IT Usage.

	Defender Type	Follower Type	Innovator Type
Internal Management	<p><b>Internal Management efficiency is high (match)</b></p> <p>Internal Management attaches importance to internal efficiency and stability to make the performance objective conform to the company's stipulations. Thus, Defender Type can stabilize Internal Management system to increase Internal Management efficiency and decrease management cost at the same time.</p>	<p><b>The change in Internal Management causes management efficiency to decrease (mismatch)</b></p> <p>Internal Management aims to make the performance indicator conform to the company's requirement and attaches importance to internal efficiency and stability. Therefore, when Follower Type is used, it will cause the interior to change irregularly to result in decrease of Internal Management efficiency.</p>	<p><b>Continuous change in Internal Management causes management costs to increase (mismatch)</b></p> <p>Internal Management needs internal efficiency and stability and aims to make the performance objective conform to the company's requirement. Therefore, when Innovator Type is used, it will cause Internal Management to change continuously and the benefits produced by information technology usage are relatively weak to cause the Internal Management cost to increase.</p>
Product Service	<p><b>Product Service is fixed, and differentiated services cannot</b></p>	<p><b>Product Service difference is</b></p>	<p><b>The continuous change in Product Service causes worse</b></p>

	<p><b>be provided to the customers (mismatch)</b></p> <p>In terms of Product Service, it is necessary to keep product quality and service difference. Defender Type can keep fixed service efficiency and product quality, but it cannot provide differentiated service according to different customers. Thus, the turnover performance is worse.</p>	<p><b>improved (match)</b></p> <p>Product quality and service difference must be considered at the same time in Product Service. Therefore, coordination with Follower Type can stabilize product quality and improve the difference at the same time in Product Service to result in better turnover performance.</p>	<p><b>product quality (mismatch)</b></p> <p>In terms of Product Service, it is necessary to manage and control product quality and provide differentiated service. Therefore, Innovator Type can make the product and service change continuously and improve service diversity, but product quality is worse than that of other types.</p>
External Management	<p><b>External Management is fixed, but the market demand cannot be reflected timely (mismatch)</b></p> <p>External Management needs to face a rapidly changing diverse market. Therefore, Defender Type can reduce External Management cost, but it cannot cope with the diversity of the external market, and so market demand cannot be reflected timely.</p>	<p><b>External Management is more stable, but market change cannot completely be handled (mismatch)</b></p> <p>External Management faces a rapidly changing market. Therefore, Follower Type can increase marketing stability, but it cannot completely cope with a rapidly changing market to result in worse performance in new market development.</p>	<p><b>It supports marketing innovation (match)</b></p> <p>External Management often faces a diverse and rapidly changing market. When Innovator Type is combined, it can assist with marketing innovation, cope with a rapidly changing market context, and create new market opportunities.</p>

In the following, this research will discuss match and mismatch between different types of information technology usage and different types of OCAs and reasons about match and mismatch.

(1) Internal Management:

- (a) Defender focuses on Internal Management - match: The branches adopting Defender Type attach importance to Internal Management efficiency and the establishment of the long-term system in the organization, have more fixed information technology usage, and exhibit no significant change. Therefore, this can improve Internal Management efficiency and reduce management cost at the same time. Therefore, Internal Management matches Defender Type.
- (b) Follower focuses on Internal Management - mismatch: This research finds that the branches adopting Follower Type are characterized as following a goal orientation, but they also tend to use innovative information technology to reduce Internal Management cost. However, this will cause the Internal Management system to change irregularly, thus internal personnel will not adapt to the irregular change of management system, and then Internal Management efficiency will decrease. Therefore, Internal Management doesn't match Follower Type.
- (c) Innovator focuses on Internal Management - mismatch: The branches adopting Innovator Type attach importance to e-business. In order to keep their competitive position, they try various methods of information technology usage different from those stipulated by the company to assist with their own Internal Management. However, when they try various use forms of new technologies, they may increase the resource losses and consumption of Internal Management at the same time. Innovator Type will also involve problems concerning the time and skill possessed by personnel, so that the personnel's workload will increase at any time to cause Internal Management to continuously change. In this case, the benefits produced by information technology usage are relatively weak to cause Internal Management cost to increase. Therefore, Internal Management doesn't match Innovator Type.

(2) Product Service:

- (a) Defender focuses on Product Service - mismatch: The branches adopting Defender Type in Product Service pay attention to cost management and control and enhance product quality and service efficiency through the use method stipulated by the company. However, Defender Type cannot provide customized service to satisfy the demand of external customers, excessively consistent services may result in loss of customers, and thus turnover performance will be worse than that of Follower Type. Therefore, Product Service doesn't match Defender Type.
- (b) Follower focuses on Product Service - match: The branches adopting Follower Type are relatively conservative in developing new services, but they modify their service contents to increase diversity once they encounter more successful



services launched by their competitors, and thus product quality and service diversity must be considered simultaneously in Product Service. When Product Service cooperates with Follower Type, the branches simultaneously attach importance to product quality, service efficiency, and service quality in Product Service and choose innovative services developed by Innovator in their own competence scope to make their turnover performance better. Therefore, Product Service matches Follower Type.

- (c) Innovator focuses on Product Service - mismatch: The branches adopting Innovator Type in Product Service are featured with active innovation, which makes them be partial to customer service orientation in Product Service. In order to meet the demand of regional customers, Product Service combines Innovator Type to provide extra services. However, they may place more emphasis on customer demand when trying Innovator Type to cause product quality to be affected. Although they are devoted to the development of new customers, existing customers become fewer and fewer simultaneously. Therefore, Product Service doesn't match Innovator Type.
- (3) External Management:
- (a) Defender focuses on External Management - mismatch: The branches adopting Defender Type in External Management attach great importance to cost control and management, but their performance in maintaining customer relations is usually insignificant, and their market type are more single and centered in the urban area. External Management needs to face the rapidly changing diversified market, and so Defender Type can reduce External Management cost, but it cannot cope with diversity of the external market to result in failure to timely reflect market demand. Therefore, External Management doesn't match Defender Type.
  - (b) Follower focuses on External Management - mismatch: The branches adopting Follower Type in External Management increase their marketing innovativeness through learning Innovator Type. However, Follower Type can increase stability in external marketing and customer relations, but it cannot completely cope with the rapidly changing market to result in worse performance in new market development. Although stability in external marketing and customer relation is higher when Follower Type is adopted, new customers cannot be developed at any time to result in loss of customers gradually to further affect sales status. Therefore, External Management doesn't match Follower Type.
  - (c) Innovator focuses on External Management - match: The branches adopting Innovator Type in External Management attach importance to the marketing method and service innovation. Therefore, they apply information technology to gaining highly real-time market information and to rapidly understanding the market context. Besides, they develop customer relations, carry out advertising promotions, do market research, and improve brand image through Innovator Type. External Management often faces a diverse and rapidly changing market. The combination of External Management and Innovator Type can assist with the continuous innovation of marketing, cope with the rapidly changing market context, and create new market opportunities. Therefore, External Management matches Innovator Type.

Based on the above analysis, it can be found that Internal Management attaches importance to management efficiency and stability, and it matches Defender Type. Product Service needs to attach importance to product quality and service diversity at the same time, and so it is suitable to adopt Follower Type. External Management is suitable for Innovator Type to cope with a rapidly changing market.

### CONCLUSION

This research divided 10 OCAs obtained in this study into 3 types of OCAs (Internal Management, External Management, and Produce Service) and classified types of information technology usage into Defender Type, Follower Type, and Innovator Type to jointly establish the ideal profile of OCAs and information technology usage. The pairing reasons are explained as follows.

- (1) Concentrating on IT usage in Internal Management is best fit with Defender: This research finds that the head office invests most of its resources in Internal Management, and that established information technology and system are the most perfect; the head office synchronously integrates the information in various branches and attaches importance to the efficiency and stability of Internal Management. Therefore, information technology usage provided by the company meets the needs for cost control and management and the enhancement of internal operational efficiency, so as to reduce internal resource expenditure on trying other use methods. In comparison, the branches adopting Innovator Type pay attention to e-business. To maintain competitive status, they will try other kinds of IT usage different from that of the company to assist with Internal Management, which causes internal continuous change at the same time, and the benefit that IT usage produces is relatively weak to result in the increase of internal management cost; although Follower can reach the objective stipulated by the company, it still cause Internal Management to change irregularly to result in the decrease of degree of satisfaction of employees to further influence efficiency of Internal Management.
- (2) Concentrating on IT usage in Product Service is best fit with Follower: Follower follows Innovator to increase Product Service diversity, and the innovation risk undertaken is smaller; at the same time, it attaches importance to product quality and service diversity. Therefore, diversified information technology usage can be combined with Product Service to reach a service advantage while the advantage of product quality is kept. In comparison, Defender may cause loss of customers because it provides excessively consistent service to customers to result in worse turnover performance than that of Follower; Innovator

makes products and service change continuously, increase diversity of service, but cannot take product quality into account. Therefore, Follower is more suitable than Defender and Innovator in Product Service.

- (3) Concentrating on IT usage in External Management is best fit with Innovator: External Management attaches importance to service innovation. The branches in the foodservice chain have no power to develop new products. Therefore, the branches adopt Innovator Type to provide customized and innovative marketing service to customers to maintain and develop customer relations to further rapidly gain market direction, improve external service efficiency, pursue a leadership advantage in marketing innovation, cope with the rapidly changing market context, and create new market opportunities, so as to achieve the competitive advantage of External Management. In comparison, Defender pays less attention to external development and only adopts IT usage provided by the company to maintain customer relationship. Although it can reduce the cost of External Management, it cannot cope with diversity of external market, and so market demand cannot be satisfied in time; the branches adopting Follower Type is similar to those adopting Innovator Type in marketing methods, but they carry out maintenance of customer relationship at most time. Although Follower Type can increase stability in external marketing and customer relationship but cannot develop new customers at any time to result in loss of customers to further influence sales status. Therefore, Innovator Type matches External Management.

In conclusion, it is found that stable Internal Management can improve the efficiency of Internal Management, so Internal Management matches Defender Type; Produce Service must take good product quality and differentiated service into account at the same time, so Produce Service matches Follower Type; External Management in combination with Innovator Type is the most ideal, coping with a rapidly changing market through innovative marketing.

In terms of the contribution of this research in the industrial circle, the foodservice chain's import degree of information technology cannot be underestimated to provide more rapid service. This research hopes to develop the ideal profile of OCAs and IT usage for the foodservice chain, understand how the specific type of OCAs should use information technology, and provide one practical reference framework with the foodservice chain. Besides, OCAs proposed by Hung (2006) are indispensable activities for enterprises' success. Therefore, the ideal profile not only can be used as the basis to employ information technology in combination with OCAs, but can be used to understand the effect of different types of information technology usage on OCAs. Hence, the proper coordination between information technology usage and OCAs can bring success to enterprises.

In terms of academia, this research mainly discusses OCAs, information technology usage, and the ideal profile of OCAs and IT usage. Discussions in the past literature are conducted under the context that information technology is investible and changeable. Therefore, the main purpose of this ideal profile is to make up for the deficiency in past academic discussions in the situation that related literature in the past was lacking about branch chain stores using IT and is to help understand the differences between academic theory and practical application, so as to help with the adjustment of future relevant research.

## REFERENCES

- [1] Agrawal, N. & Smith, S. A. (2013). Optimal inventory management for a retail chain with diverse store demands. *European Journal of Operational Research*, 225(3), 393-403.
- [2] Block, J. P., Scribner, R. A., & DeSalvo, K. B. (2004). Fast food, race/ethnicity, and income: a geographic analysis. *American journal of preventive medicine*, 27(3), 211-217.
- [3] Croteau, A. M. & Bergeron, F. (2001). An information technology trilogy: business strategy, technological deployment and organizational performance. *The Journal of Strategic Information Systems*, 10(2), 77-99.
- [4] DeLone, W. H. & McLean, E. R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research*, 3(1), 60-95.
- [5] Edwards, C., Ward, J., & Bytheway, A. (1995). *The essence of information systems*. London, England: Prentice Hall.
- [6] Grimmer, L., Miles, M. P., Byrom, J., & Grimmer, M. (2017). The Impact of Resources and Strategic Orientation on Small Retail Firm Performance. *Journal of Small Business Management*, 55(S1), 7-26.
- [7] Huber, M. M., Hancer, M., & George, R. T. (2010). A comparative examination of information technology usage in the restaurant industry. *Journal of Foodservice Business Research*, 13(3), 268-281.
- [8] Hung, W. H. (2006). *Supporting organizational critical activities from Web sites: An evaluation methodology development* (Doctoral dissertation, University of Waikato, Hamilton, New Zealand).
- [9] Hung, W. H., McQueen, R. J., Ku, C. Y., & Chang, L. M. (2012). Aligning websites with enterprise success: An evaluative approach. *Journal of Computer Information Systems*, 52(4), 49-58.
- [10] Kearns, G. S. & Lederer, A. L. (2004). The impact of industry contextual factors on IT focus and the use of IT for competitive advantage. *Information & Management*, 41(7), 899-919.
- [11] Kimes, S. E. (2008). The role of technology in restaurant revenue management. *Cornell Hospitality Quarterly*, 49(3), 297-309.
- [12] Kotler, P. (1991). *Marketing Management: Analysis, Planning, and Control*. Englewood Cliffs, N.J.: Prentice-Hall.
- [13] Mao, E. & Palvia, P. (2008). Exploring the effects of direct experience on IT use: An organizational field study. *Information & Management*, 45(4), 249-256.

- [14] McLaren, T. S., Head, M. M., Yuan, Y., & Chan, Y. E. (2011). A multilevel model for measuring fit between a firm's competitive strategies and information systems capabilities. *MIS Quarterly*, 35(4), 909-930.
- [15] Meyer, A. D., Tsui, A. S., & Hinings, C. R. (1993). Configurational approaches to organizational analysis. *Academy of Management Journal*, 36(6), 1175-1195.
- [16] Miles, R. E. & Snow, C. C. (1994). *Fit, failure and the hall of fame: How companies succeed or fail*. New York, N.Y.: Free Press.
- [17] Mintzberg, H. (1978). Patterns in strategy formation. *Management Science*, 24(9), 934-948.
- [18] Mishra, A. N. & Agarwal, R. (2010). Technological frames, organizational capabilities, and IT use: An empirical investigation of electronic procurement. *Information Systems Research*, 21(2), 249-270.
- [19] Muller, C. C. (1999). The business of restaurants: 2001 and beyond. *International Journal of Hospitality Management*, 18(4), 401-413.
- [20] Ninemeier, J. D. (2010). *Management of Food and Beverage Operations*. New York, N.Y.: Educational Institute of the AHMA.
- [21] Oronsky, C. R. & Chathoth, P. K. (2007). An exploratory study examining information technology adoption and implementation in full-service restaurant firms. *International Journal of Hospitality Management*, 26(4), 941-956.
- [22] Robrecht, L. C. (1995). Grounded theory: Evolving methods. *Qualitative Health Research*, 5(2), 169-177.
- [23] Sabherwal, R. & Chan, Y. E. (2001). Alignment between business and IS strategies: A study of prospectors, analyzers, and defenders. *Information Systems Research*, 12(1), 11-33.
- [24] Sanders, N. R. (2008). Pattern of information technology use: The impact on buyer-supplier coordination and performance. *Journal of Operations Management*, 26(3), 349-367.
- [25] Sarker, S., Sahaym, A., & Bjørn-Andersen, N. (2012). Exploring Value Cocreation in Relationships Between an ERP Vendor and its Partners: A Revelatory Case Study. *MIS Quarterly*, 36(1), 317-338.
- [26] Shortell, S. M. & Zajac, E. J. (1990). Perceptual and archival measures of Miles and Snow's strategic types: A comprehensive assessment of reliability and validity. *Academy of Management Journal*, 33(4), 817-832.
- [27] Street, C., Gallupe, B., & Baker, J. (2018). The Influence of Entrepreneurial Action on Strategic Alignment in New Ventures: Searching for the Genesis of Alignment. *Journal of Strategic Information Systems*, 27(1), 59-81.
- [28] Tajima, M. (2007). Strategic value of RFID in supply chain management. *Journal of Purchasing and Supply Management*, 13(4), 261-273.
- [29] Tallon, P. P. (2007). A process-oriented perspective on the alignment of information technology and business strategy. *Journal of Management Information Systems*, 24(3), 227-268.
- [30] Trkman, P. (2010). The critical success factors of business process management. *International Journal of Information Management*, 30(2), 125-134.