

Business Model Innovation Is Using by TQM? The Case of Formosa Chang Franchises Chain Restaurant

Yung-Lung Lai, Song-Ching Fan

(College of Business, Feng-Chia University, Taichung 40274, Taiwan)

Abstract: This study aimed to explore the relationship between total quality management (TQM) and the business model, propose that TQM can affect the business model innovation for the food service industry. In order to provide persuasive data to further demonstrate that an organization could influence business model innovation using TQM, this study adopted a case study method to verify that the theoretical framework is consistent in explaining this concept. Thus, Formosa Chang restaurant was chosen for the case study which the business volume was ranked first in Taiwan by IMD 2012 reports. The case studied here belonged to the food service industry, which has a significantly low value in the supply chain. It is noteworthy that different industries value different business model elements, and may gain different results when promoting TQM. The business model innovation could be stimulated by establishing a TQM culture of benchmark learning.

Key words: business model innovation; TQM; street vendor; international chain and franchise

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1. Introduction

In recent years, the business model has been widely discussed in academic circles (Hacklin & Wallnöfer, 2012). However, research on business models has a comparatively short history. Every company has a business model, whether they articulate it or not (Chesbrough, 2007), but the construction of the business model has not been fully clarified in literature yet (Chesbrough, 2007; Al-Debei & Avison, 2010). Interestingly though, every company has long been using and exploring the best and most feasible business models for different circumstances in order to enhance their business performance (Al-Debei & Avison, 2010). Likewise, successful TQM can lead to the enhancement of business performance. According to the above deductions, a company may improve its business performance by changes to the business model caused by the successful introduction of TQM. Is it possible to develop a theoretical framework to specify how TQM should affect the business model, and hence improve business performance? Are there any practical cases to demonstrate this idea? This study tried to construct a framework to show that TQM could bring about business innovation and thus improve business performance. It carried out a case study on a street vendor who changed their business model and developed an international chain restaurant using the successful introduction of TQM.

Yung-Lung Lai, Ph.D. Candidate, Ph.D. Program in Business, College of Business, Feng-Chia University; research areas: knowledge management, strategy and technology innovations. E-mail: shamus.lai@gmail.com.

Song-Ching Fan, Ph.D. Candidate, Ph.D. Program in Business, College of Business, Feng-Chia University; research areas: strategy, marketing and consumer behavior. E-mail: fansongching@gmail.com.

Thus, this study conducted case study on Formosa Chang Restaurant, which it started from the business model of a street vendor. This business had experienced three business innovations; introduction of TQM in 1999, passing the ISO 9001 verification in 2000 and starting an international operating policy, before finally transforming into an international chain restaurant. Formosa Chang became the largest fast-Chinese-food restaurant in Taiwan and the annual business volume increased by 300 times, from USD 100,000 in the first stage to USD 30 million in the fourth stage. The reasons for selecting the Formosa Chang restaurant chain include, firstly, according to 2012 IMD World Competitiveness Yearbook issued by the International Institute for Management Development in May, 2012, the enterprise operation and management of Taiwanese companies are ranked first in the world for efficiency, which is the seal of approval for the competitiveness of Taiwanese private companies worldwide (<http://www.imd.org>). Secondly, the subject of this case study is the biggest Chinese fast food chain corporation in Taiwan.

2. Literature Review

2.1 TQM

TQM elements discussed can mainly be divided into two kinds, soft ones and hard ones (Fotopoulos & Psomas, 2009). There has been research indicating that the soft elements of TQM could improve business performance, such as improvements in customer satisfaction, employee satisfaction and operating results. Therefore, companies should pay more attention to the impact of soft elements, such as TQM culture, on the performance of the company.

Which of the TQM elements further discussed are success factors for the service industries? TQM has many parameters to work out its strength. However, for the present study, a few were chosen as success factors of TQM for manufacturing as well as service industries (Kumar et al., 2011). Researches by Kumar (2011) et al. were centered on soft factors, i.e. the enhancement of internal and external values of the person. The significant difference between soft elements and success factors was why the success factors had not been included in supplier management. This was probably caused by different features between the manufacturing industry and service industries. Among the success factors, TQM culture clearly drew more attention. Furthermore, the main barriers were found to be the lack of benchmarking and employee's resistance to change (Bhat & Rajashekhar, 2009). Consequently, to summaries, the establishment of benchmark TQM culture and values should have a significant effect on the performance of an organization as a result of TQM.

2.2 Business Model

A business model can be conceptualized as the sum of material and objective existing structures and processes. It must be honed to meet particular customer needs and more than just a good logical way of doing business (Teece, 2010). A business model can be conceptualized as the sum of different elements, indicating how an organization creates customer values from key structures, processes and resources. It demonstrates how customer values can further improve customer satisfaction, and thus be of benefit to enhancing the company's performance. The starting point of a successful business model is its value proposition: a product or service that help customers get a job done more effectively, conveniently, and affordably (Hwang, 2008). Value proposition refers to a kind of method that provides products and services to customers, creating value for both customers and the company, and satisfying the needs of customers in the target market specified by the company (Al-Debei & Avison, 2010). During this process, as time went on, experience and enterprise cultures, which created values,

were developed together, and thus a dynamic business model was shaped and perfected (Edvardsson & Enquist, 2011). Therefore, we need to define the model before determining which factors are changeable and to what extent (Cavalcante et al., 2011).

What are the necessary elements for a successful business model? Hacklin & Wallnöfer (2011) proposed ten business model elements. These elements were based on a case study in the technology industry (Hacklin & Wallnöfer, 2012). However, there are differences between the features of the manufacturing industry and the service industry, and thus their elements are different. The manufacturing industry rarely has direct contact with customers (Mittal et al., 2011), whereas the service industry pays great attention to person-to-person contact and stresses the improvement of employee values. Service industries, especially, are concerned with human resources, relating that training policies and practices are more important. Only when the management stresses the improvement of employees' values, will employees focus on problems concerning customers and pay attention to related information analysis, which has a significant influence on service quality (Ooi et al., 2011).

Moreover, Hacklin and Wallnöfer's study on business models lacks a discussion on key success factors while Johnson (2008) specifies those successful business model elements. However, a manufacturing industry may pay more attention to their value network and how to interact better with their cooperative partners as manufacturing industries belong to a closely related supply chain system (Al-Debei & Avison, 2010).

2.3 Can TQM Affect the Business Model Innovation?

Quality is about the present while innovation concerns the future. Innovation refers to the creation of new value propositions. It is important for an enterprise to optimize and design new value propositions, including new products, new technologies and new methods of business operation, i.e., new business models (Dervitsiotis, 2010). Improvements in more than four business model elements are regarded as an improvement to the business model. If products and service provided were unprecedented, it would be considered as a business model innovation (Mitchell & Coles, 2004). Please refer to Table 1 for the comparison between business models, as proposed by Johnson (2008) et al. and the TQM proposed by Fotopoulos and Psomas (2009). With the same focus on customers, a business model stresses the enhancement of customer value proposition, while TQM stresses customer satisfaction. A business model pays attention to resolving problems and fulfilling needs for customers, while TQM is not only concerned with problem resolutions for customers, but also considers customer satisfaction as the core of the quality. Leading companies also need to improve continuously to enhance customer satisfaction (Kanji & Moura, 2002). Therefore, ideas for the business model and TQM are consistent.

Table 1 Comparison of Business Model and TQM

Similar Element	Business Model	TQM
Customer	Customer value proposition	Customer focus
What to do	Job to be done	Continuous improvement
People	People	Employee management and involvement
Technology	Technology	Quality management tools and techniques
Products	Products	Quality
Information	Information	Information and analysis
Cooper active partner	Partnerships	Supplier management
Process	Key processes	Process management
Performance	Profit formula	Performance

Johnson et al. (2008) proposed that key resources were the key elements for creating value. It was only when

elements, such as employee skills, multicultural training and customer evaluation, were taken into consideration when designing TQM that TQM could be promoted to achieve customer satisfaction, and thus enhance the performance of the organization (Mehra & Ranganathan, 2008). Therefore, TQM emphasized a management culture based on human, and hence pointed out the most important key resource, a human, for a company to make key decisions during resource management.

With respect to key processes, business models emphasize the operation of processes and rules. The process control of TQM focuses on customer satisfaction and continuous improvement. TQM not only clearly illustrates the purposes of the key processes, but also discusses in detail how to implement the key processes.

The most significant difference is that business models specify the profit formula, including the cost structure, the profit structure and the profit distribution method. TQM rarely shows information on this field. However, TQM pays more attention to leadership, quality policies and knowledge training. In addition, during the implementation of TQM, benchmarking management, policy planning were important policy factors, without which it was difficult to implement TQM and achieve success.

Consequently, it is possible to make a preliminary conclusion that TQM can be used as a policy tool for constructing business models. An organization can find out clearer implementation methods using TQM, which provides an approach for business model construction. According to the above information, it can be deduced that Figure 1 will enable a clearer understanding of the relationship between TQM and a business model.

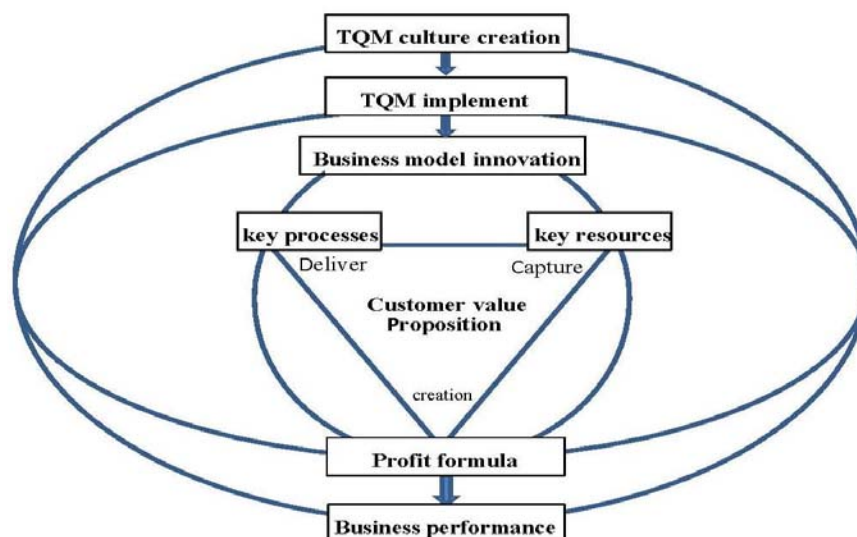


Figure 1 Business Model Innovation and TQM

To sum up, business models need a policy as a starting point, and TQM is a good policy tool to use to develop business models. Figure 1 shows that, in order to create customer values, a company should start from the establishment of a TQM culture. It can select a benchmark company to learn from, which will provide employees with a direction to aim for, and form a consistent goal to pursue and improve upon. The successful implementation of TQM depends on the prevailing culture of the company (Green, 2012). Therefore, the TQM culture should be established before the TQM implementation. The implementation is included in the culture. As the continuously improved TQM system has been deep rooted in the minds of the employees, the company can carry out the activities of improvement and innovation in accordance with the environmental changes and the development of

the company. By delivering key processes and capturing key resources, improvement and innovation activities reflect customer value propositions and then create profit formulas. Business model innovation is included in the TQM implementation and, finally, is reflected by financial and non-financial business performances.

3. Methodology

Academically, the function of the concept of the business model still remains at the theoretical stage for testing. In practice, currently, there is little existing research on how to create value using a business model (Al-Debei & Avison, 2010; Chesbrough, 2007; Hacklin & Wallnöfer, 2012). This study further illustrates how a company carries out business model innovation using TQM, and provides hard data for the connection and explanation of this idea. Based on this idea, the study carried out a detailed case study to better explain the complicated phenomena observed, in order to explain why they occur, which will increase our knowledge in this field (Altinay & Brookes, 2012; Al-Debei & Avison, 2010; Battistella et al., 2012; Doherty, 2009).

3.1 Subjects and Data Collection

The sources of data collection could be divided into three parts: interviews, secondary data and primary data. Data from interviews included over 12 intensive interviews with the management team of the firm case studied. The interviews lasted for two to three hours, including four interviews with the Chairman, one with the Deputy Chairman, four with the General Manager, and three with department managers. The collection of secondary data included newspaper articles about the company studied, special reports by magazines, and chapters from the company books, videos and news on the Internet. With respect to the primary data collection, the researchers sorted various scattered secondary data as well as the data gained during the in-depth interviews, drew up an outline for the writing, integrated the factual evidence, and finally got the study results. In order to guarantee the accuracy of the data, similar questions were delivered to different interviewees to obtain evidence for the cross verification of the data. Therefore, the verification could be carried out by practical observation and data retrieval and an evidence chain could be established, which would increase the validity of the construction.

4. Results and Analysis

FORMOSA CHANG was chosen for the case study as it started from the business model of a street vendor. This business had experienced three business innovations; introduction of TQM in 1999, passing the ISO 9001 verification in 2000 and starting an international operating policy, before finally transforming into an international chain restaurant.

4.1 Four Stages of FORMOSA CHANG's Business Model

The business model changes of the case studied under the influence of TQM can be divided into four stages. See Figure 2. Firstly, before 1978, the business was a street vendor; the second stage began from 1979 when it became a store; the third stage began from 1994 when a franchise chain was introduced; and, since 2000, it has been transformed into an international chain and franchise.

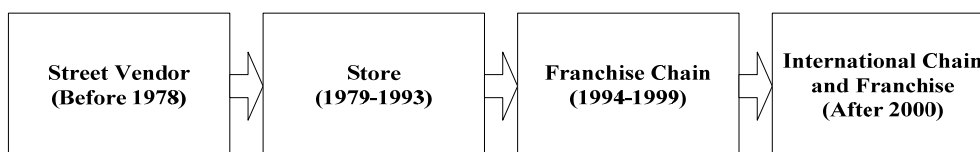


Figure 2 Four Stages of FORMOSA CHANG's Business Model

Stage 1: Street vendor model

The street vendor model requires low capital, and high skills are not necessary to enter this industry. Although street vendors add vitality when promoting economic activities and services, we generally consider a street vendor to be a marginal existence in modern society. There were different phenomena, such as health and safety risks, tax evasion and the sale of shoddy products (Bromley, 2000; Cross, 2000). This stage is the start of the business. The main products were steamed rice with red-cooked pork and different soups, all of which had a low technical demand, and competitors could easily copy them. Therefore, the business operators were willing to listen to customers' advice at this stage and to change the quality of food materials and the processing methods, continuously improving the flavor of the products and increasing the trust from the customers.

Stage 2: Store model

The key point at this stage is the change in the business model influenced by the impact of the TQM culture. In 1984, McDonalds started to trade in Taiwan. The chairman of Formosa Chang paid a visit, and was shocked by the operating pattern of cleanliness, brightness, speediness and standards. McDonalds takes quality as its cornerstone, and is considered by many companies as their benchmark for promoting TQM. The chairman also took McDonalds as the benchmark for promoting the TQM of their own. They insisted on refining the products by using good quality food. When the product quality was unstable, they would not serve it to the customer, but asked for the customer's forgiveness, and made another one regardless of the cost. Only products of a high quality would be served to customers, and thus they won the approval of their customers. Changing from a street vendor to a store depended on the chairman's effective communication with the founders. The chairman thought that, although renting a storefront would increase the operating costs, it could save time, mind and energy when setting up and taking down the stand and carrying things, and would also guarantee more energy to serve the customers. It took the chairman two years to persuade the founders to change from being street vendors to a store model and provide a comfortable and clean dining environment for customers.

Stage 3: Franchise chain model

Since the sales of hamburgers could fast develop into a franchise chain, the operators thought the sales of steamed rice with red-cooked pork would also develop into a franchise system. Franchising is one of the most popular and successful strategies for businesses to enter new markets and expand operations. Franchising enables the franchisor to enter a new market with very low risk and initial investment (Saleh & Kleiner, 2005). Therefore, they began to introduce quality, delicacy, cleanliness and value, the core ideas of McDonalds, into their business, and established the TQM culture of quality, cuisines, services and cleanliness. During this stage, the quality planning was carried out. Quality planning assisted the company to determine its strategic goals, and the company implanted the idea of quality into the minds of its employees. Many innovative proposals were raised to maintain continuous improvement. The chairman thought it was necessary to open branch stores to enlarge the operation scale. As a consequence, 50 franchises were opened within two years.

Stage 4: International chain and franchise model

The franchise chain model enabled the company to develop a unique TQM culture of their own, stressing the consistency of speaking, writing and doing, and the pursuit of excellence. After introducing TQM, the company started its organizational reconstruction, product reconstruction and service reconstruction, and confirmed its international development goal of selling steamed rice with red-cooked pork all over the world. The company successively obtained approval from ISO, GSP (Good Service Practice), HACCP (Hazard Analysis and Critical Control Point), ISO22000 and the Golden Benchmarking Award of TTQS (Taiwan Train Quality System). Each

department of the company would make their own annual plan to implement the ideas of TQM.

Some dishes and cuisines failed to make the transition altogether, whereas others were modified to appeal to different palates. However, a powerful standardization was also an index to determine whether a dish would be accepted by different groups (Buettner, 2008). FORMOSA CHANG is on its way to internationalization. Considering that rice was also the staple food in Japan and was highly accepted by the local citizens, the chain expansion in Japan was considered as the primary target of its internationalization. Therefore, the company successively cooperated with the FIT group and BUSSI-EN in Japan to export its brand overseas by regional franchising. The company authorizes its franchisors in Japan with the right to adjust dishes and service to achieve the combination of global standardization and customized service of core products, and to create advantages to attract local customers.

4.2 Business Model Innovation Using TQM

The following shows the changes in the business model elements of the four stages of Formosa Chang using TQM.

(1) Customer value proposition change

Street vendor model: The Street vendor model enabled the operators to listen to advice from customers, and carry out continuous improvements to food materials and recipes in order to meet customers' requirement on flavors.

Store model: The store model provided customers with clean dishes, and a clean and bright dining environment. Honest service with invoices issued changed the public's impression of tax evasion and bad hygiene towards the street vendor.

Franchise chain model: The franchise chain model was mainly aimed at customers from the age of 30 to 50, and also made franchisees their indirect customers. Intensive franchising made the consuming environment convenient for customers, and the model promoted 33% new products to be served every year, providing customers with various products to meet their requirements. It proposed the operational principle of creating customer value and the pursuit of excellence.

International chain and franchise model: The international chain and franchise model proposed the quality policy of "voices from customers are voices from angels". It introduced a younger target for main customers aged from 20 to 40. Using the Internet, short message system, 0800 hotline, customer opinion survey, and secretly interviewing complaining customers and complaining customers' re-experiences, the company effectively collected opinions from customers, and adopted commonly used seven measures of quality management of TQM to achieve continuous improvements and enhance customer satisfaction, shown as Figure 3.

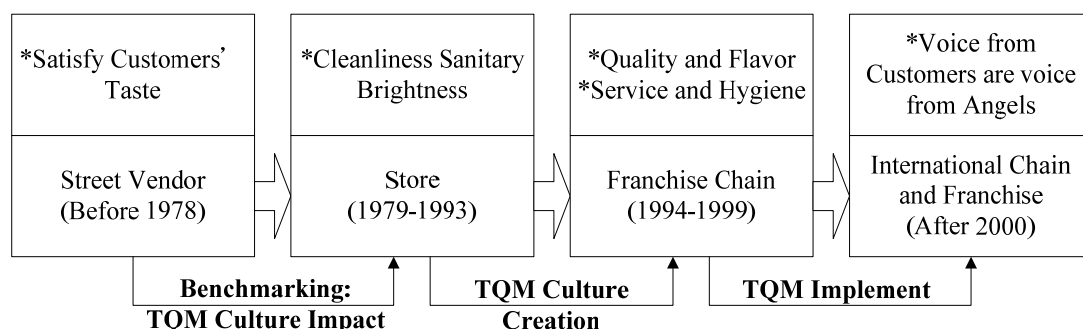


Figure 3 Customer Value Proposition Change

(2) Key resources change

People: The street vendor was a family business operated by the boss, his wife and their son. The store operation added advisors and employees for assistance. The franchise chain operation added management advisors and franchisees. The international chain and franchise introduced employee stock ownership, considered personnel to be the most important factor, and established an authorization system of accountability.

Technology: The street vendor applied no technology. The store was the first one to apply an ultrasonic wave dishwashing machine and fully automatic air conditioner. The franchise chain introduced the company website. The international chain and franchise innovatively introduced wireless temperature detection technology for cool foods, and launched packaged foods at 4°C.

Products: The street vendor used high-quality food materials to make steamed rice with red-cooked pork and made soup portion by portion. Although it took effort and time, customers considered the dishes to be delicious. According to the operators' idea, the store launched some new products. The franchise chain systematically promoted 3-33 product innovation strategic planning. New products should take up 33% of the total number of products offered. The international chain and franchise launched packaged food at 4°C and room temperature. In order to guarantee the product quality, scientific instruments were introduced to test the sweetness and salinity of the products.

Equipment: The street vendor applied a man-powered dining car. The store operation replaced plastic tables, chairs and tableware with high-quality galvanized iron tables, chairs and cookware which were easy to clean. 12 fluorescent lamps were installed, making the store the brightest restaurant in the area. The franchise chain set up a central kitchen. The international chain and franchise established the Formosa Chang Cuisine Culture Center to promote experiential marketing.

Information: The street vendor operated even on typhoon days to serve citizens who had to dine out and thereby gained their trust. The store was the first one in the area to post a price list, clearly indicating products and their prices to avoid bidding up the price to customers from other places. The franchise chain set up a 0800 hotline for customer service. The international chain and franchise applied a POS system to instantly send information back to the headquarters for improvement, thus enhancing the performance of the company.

Channels: The street vendor was located in the street by the market. The store had a storefront. The franchise chain established the franchise delivery system and developed over 50 stores. The international chain and franchise increased the visual and practical channels in a variety of stores, super malls, Internet, TV shopping, international airlines, and the brand of Formosa Chang was promoted in places where restaurants were not available.

Cooperative partners: The street vendor and store operations did not have partners. The franchise chain established the supplier management system and developed long-term cooperative partnerships. The international chain and franchised inherited the previous system, and carried out an assessment system on sub-contractors, one assessment each month.

Brand: The street vendor created the brand of Shuanglian Steamed Rice with Red-cooked Pork. The store operation created the brand of Formosa Chang Steamed Rice with Red-cooked Pork, applied for a trademark registration in 1987, and set up a CIS system. The franchise chain continued to use the previous brand. The international chain and franchise promoted the International Festival of Steamed Rice with Red-cooked Pork and Banquet at the Ningxia Sightseeing Night Fair, and formed the annual cultural activity of steamed rice with red-cooked pork in Taiwan. The above information is shown as Figure 4.

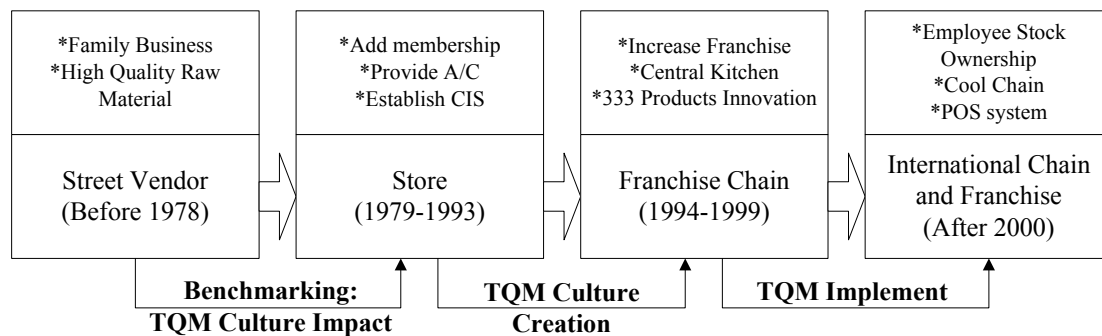


Figure 4 Key Resources Change

(3) Key processes change

Street vendor model: The cooking techniques used during the street vendor period were directed by a customer who was a chef at a grand hotel, and thus the material quality and the cooking techniques were improved.

Store model: During the store period, standard operating procedure was established, and each process was consistent with simplification, standardization and specialization, and was in the charge of a specially-assigned person. It was the first restaurant in the business circle to set up a cash register and issue invoices, buy insurance for its employees, make annual plans, implement a central accountability system and manage by objectives. It generated an HR policy and regulations, and employed professional business management counselors to assist with the establishment of a management system

Franchise chain model: At the beginning of the franchise chain period, it promoted the management system of the franchise, and rapidly copied the operating processes. In the later period, it established a direct marketing system.

International chain and franchise model: Hazard Analysis Critical Control Point (HACCP) was introduced into the central kitchen, and the central kitchen was enhanced to the level of a food factory. It also obtained international and domestic quality accreditation. Each year, it proposed a golden ten-year challenge plan, shown as Figure 5.

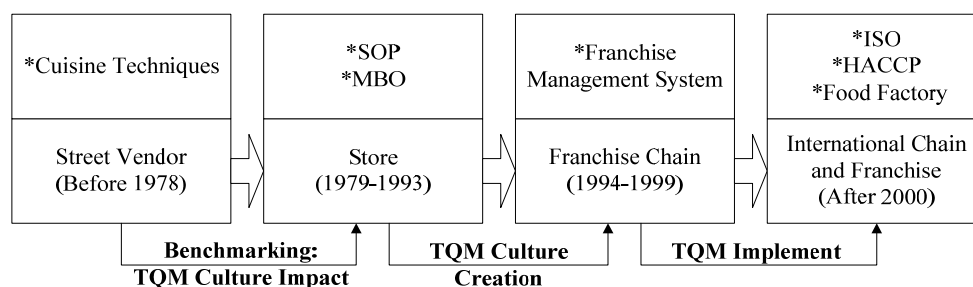


Figure 5 Key Processes Change

(4) Profit formula change

Street vendor model: During the period as a street vendor, the income model was simple. 240 to 360 dishes of steamed rice with red-cooked pork were sold every day. There was no comparative accurate profit formula.

Store model: During the period of the store model, 480 to 720 dishes were sold every day. The profit was doubled compared to that of the street vendor model. The counselors assisted in establishing an accounting system.

The financial statement was no longer supervised only by family members but also by other personnel.

Franchise chain model: During the period of the franchise chain, the franchise system was set up, franchise fees and technology licensing fees charged, and sales revenue obtained from different product mixes at direct sales stores.

International chain and franchise model: During the period of international chain and franchise, an income model was developed that integrated virtual and practical parts. The practical part included income from storefronts and franchises, and the virtual part included the income from online orders. The annual business volume of 2011 reached USD 30,000,000. The cost structure refers to the actual monthly cost for product manufacturing at the factory, calculated by salary information and the ERP cost system. The profit formula refers to the related materials provided by accountants in accordance with the cost accountant. The profit and loss statement of the company is provided on the second day of each month for operational decision making. Refer to Figure 6.

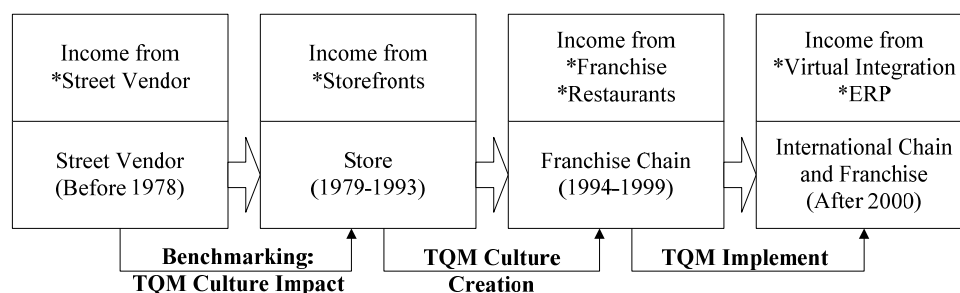


Figure 6 Profit Formula Change

(5) Business performance change

According to Kumar (2009), performance was measured by the four indices of employment relationship, operating procedures, customer satisfaction and financial performance. With respect to employment relationships, during the second stage, non-family members joined the business, and employees participated in the cashiering work. During the third stage, the number of employees continued to increase, and non-family member employees also became shareholders. During the fourth stage, the number of employees exceeded 1000, and the number of non-family member shareholders exceeded 100. During these three stages, employee morale was increasing continuously. With respect to operating procedure, from the first stage to the fourth stage, the quality of the products and service, techniques and productivity continued to increase, and the error rate continued to decrease. With respect to customer satisfaction, the number of customers continued to increase, and the amount of complaints remained at less than two cases each month after the implementation of TQM. The above information is shown as Figure 7.

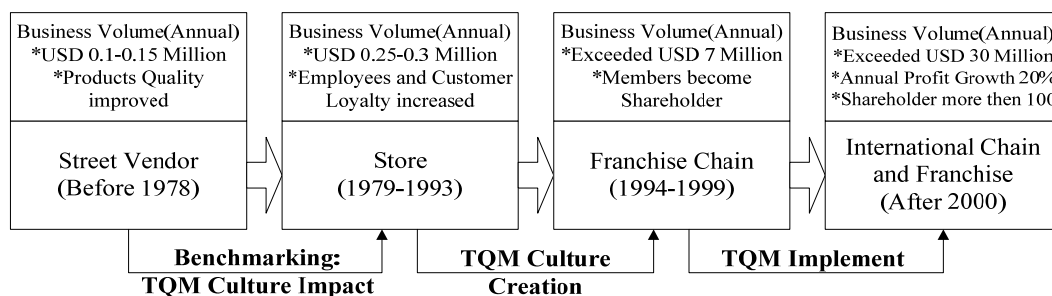


Figure 7 Profit Formula Change

5. Conclusion

The case studied experienced three business model innovations. The first business model innovation was a result of the impact of the TQM culture. The operators took McDonalds as the benchmark for learning the TQM culture. The business model transformed the business from a street vendor to a store, and the service provided was new. This was the first innovation. During the second innovation, operators not only took McDonalds as the benchmark for establishing the TQM culture, but also started to implement TQM. The business model at this stage featured the promotion of a franchise model. The third innovation happened after the introduction of TQM; the company started organizational reform, and confirmed the international business model. These three business model innovations have improved the business performance.

Therefore, leading companies need to upgrade their business models to fight against the threats from their competitors, and continue to create value for their shareholders and capture value for themselves (Sosna et al., 2010). The business operators of the case studied took McDonalds as a benchmark business, and after introducing TQM, they put employee promotion at the top of the list. They paid attention to the values of their employees, and adopted management by objectives to make sure that employees would work hard to make their contribution. A TQM culture for full quality management was shaped, and employee satisfaction was increased, which further stimulated the emergence of new ideas. The business model was innovated, and developed into the international chain model. The case supported the idea that the success of TQM was closely related to the determination of the senior management to implement TQM and promote quality improvement (Psomas & Fotopoulos, 2010).

The study results support the theoretical framework developed in Figure 1, i.e., the establishment of a benchmark for learning TQM culture. In addition, the determination of operators to promote TQM and increase employees' values can stimulate an organization to carry out business model innovation, and further improve business performance. With respect to the business model of the fourth stage of the international chain and franchise, according to Table 2, the element of partnership with key resources did not exist in the first business model innovation. During the second business model innovation, the company started to establish a supplier management system which continued to be in effect in the third innovation with few changes. Consequently, the case studied here belongs to the food service industry, which has a significantly low value in the supply chain. The study results are consistent with ideas proposed by scholars, such as Al-Debei & Avison (2010) and Mehra & Ranganathan (2008). It is noteworthy that different industries value different business model factors, and may gain different results.

With respect to the profit formula, the element of resource velocity was established in the business model of the fourth stage. The first business model innovation changed the street vendor into a store. Considering the rent of the storefront and the cost of air conditioners, tables and chairs, the cost of production did increase. However, how to assess the business volume increase that resulted from the comfortable dining environment? Was this decision consistent with the idea of return on investment? It was actually difficult to decide at that time, especially when the chairman and the founder, from two different generations, had different values. Deductions might be available, but as there was no explicit method to calculate the resource velocity, it took the two generations two years to communicate. However, a bold deduction can be made that it was because there was no calculating method for resource velocity and so this element was not able to be changed at the same time. The information acquired was insufficient compared to other elements. This is probably because financial information is a sensitive issue, and thus the business operators are reluctant to reveal too much in case their competitors gain too much key information. This is a limitation of this case study.

Table 2 FORMOSA CHANG Business Model Innovation (original elements: ○ ; Elements of change: √)

Element / Business Model	Street Vendor (Before 1978)	Store (1979-1993)	Franchise Chain (1994-1999)	International Chain and Franchise (After 2000)
TQM Culture Creation		√	√	√
TQM Implement			√	√
Business Model Innovation		√	√	√
Customer Value Proposition				
Target Customer		○	√	√
Job to be done	○	√	√	√
Offering	○	√	√	√
Key Resources				
People	○	√	√	√
Technology		√	√	√
Products	○	○	√	√
Equipments	○		√	√
Information	○	√	√	√
Channels	○	√	√	√
Partnerships		○	○	○
Brand	○	√	○	√
Key Process				
Process	○	√	√	√
Rules and Metrics	○	√	√	√
Norms		○	√	√
Profit Formula				
Revenue Model	○	○	√	√
Cost Structure		○	√	√
Margin Model		○	○	√
Resource Velocity				○
Business Performance	○	√	√	√

According to Siggelkow (2007), case studies are often a great way to motivate a research question as at least there might be something missing in the theory, motivating further research and justifying a more refined conceptualization. This study revealed the preliminary relationship between TQM and the business model, and constructed a theoretical framework for TQM to guide an enterprise towards business model innovation. By verifying the business performance of the case studies, it was proved that this theoretical framework was feasible. Future study can include the dynamic business model proposed by Cavalcant et al. (2011), and discuss the influences of TQM on each dynamic business model. The value of this theory needs to be further examined by more quantitative studies.

References:

- Abeliotis K., Koniari C. and Sardanou E. (2010). "The profile of the green consumers in Greece", *International Journal of Consumer Studies*, Vol. 34, No. 2, pp. 153-160.
- Altinay L. and Brookes M. (2012). "Factors influencing relationship development in franchise partnerships", *Journal of Services Marketing*, Vol. 26, No. 4, pp. 278-292.
- Battistella C., Biotto G. and De Toni A. F. (2012). "From design driven innovation to meaning strategy", *Management Decision*, Vol.

50, No. 4, pp. 718-743.

- Bhat K. S. and Rajashekhar J. (2009). "An empirical study of barriers to TQM implementation in Indian industries", *The TQM Journal*, Vol. 21, No. 3, pp. 261-272.
- Bromley R. (2000). "Street vending and public policy: A global review", *International Journal of Sociology and Social Policy*, Vol. 20, 1, pp. 1-28.
- Buettner E. (2009). "Going for an Indian: South Asian restaurants and the limits of multiculturalism in Britain", *The Journal of Modern History*, Vol. 80, No. 4, pp. 865-901.
- Cavalcante S., Kesting P. and Ulhøi J. (2011). "Business model dynamics and innovation: (Re)establishing the missing linkages", *Management Decision*, Vol. 49, No. 8, pp. 1327-1342.
- Chesbrough H. (2007). "Business model innovation: It's not just about technology anymore", *Strategy & Leadership*, Vol. 35, No. 6, pp. 12-17.
- Cross J. (2000). "Street vendors, and postmodernity: Conflict and compromise in the global economy", *International Journal of Sociology and Social Policy*, Vol. 20, No. 1, pp. 29-51.
- Dervitsiotis K. N. (2010). "A framework for the assessment of an organisation's innovation excellence", *Total Quality Management & Business Excellence*, Vol. 21, No. 9, pp. 903-918.
- Doherty A. M. (2009). "Market and partner selection processes in international retail franchising", *Journal of Business Research*, Vol. 62, No. 5, pp. 528-534.
- Edvardsson B. and Enquist B. (2011). "The service excellence and innovation model: Lessons from IKEA and other service frontiers", *Total Quality Management & Business Excellence*, Vol. 22, No. 5, pp. 535-551.
- Fotopoulos C. V. and Psomas E. L. (2010). "The structural relationships between TQM factors and organizational performance", *The TQM Journal*, Vol. 22, No. 5, pp. 539-552.
- Fotopoulos C. B. and Psomas E. L. (2009). "The impact of 'soft' and 'hard' TQM elements on quality management results", *International Journal of Quality & Reliability Management*, Vol. 26, No. 2, pp. 150-163.
- Green T. J. (2012). "TQM and organizational culture: How do they link?", *Total Quality Management & Business Excellence*, Vol. 23, No. 2, pp. 141-157.
- Hacklin F. and Wallnöfer M. (2012). "The business model in the practice of strategic decision making: Insights from a case study", *Management Decision*, Vol. 50, No. 2, pp. 166-188.
- Hwang J. and Christensen C. M. (2008). "Innovation disruptive innovation in health care delivery: A framework for business-model health affairs", *Health Affairs*, Vol. 27, No. 5, pp. 1329-1335.
- Johnson M. W., Christensen C. M. and Kagermann H. (2008). "Reinventing your business model", *Harvard Business Review*, Vol. 86, No. 12, pp. 50-59.
- Kanji G. K. and Moura P. (2002). "Kanji's business scorecard", *Total Quality Management*, Vol. 13, No. 1, pp. 13-27.
- Kumar V., Choinsne F., de Grosbois D. and Kumar U. (2009). "Impact of TQM on company's performance", *International Journal of Quality & Reliability Management*, Vol. 26, No. 1, pp. 23-37.
- Kumar R., Garg D. and Garg T. K. (2011). "TQM success factors in North Indian manufacturing and service industries", *The TQM Journal*, Vol. 23, No. 1, pp. 36-46.
- Li J. M., Yang J. S. and Wu H. H. (2008). "Improving service quality and organization performance through human resource practices. A case study", *Total Quality Management & Business Excellence*, Vol. 19, No. 9, pp. 969-985.
- Mehra S. and Ranganathan S. (2008). "Implementing total quality management with a focus on enhancing customer satisfaction", *International Journal of Quality & Reliability Management*, Vol. 25, No. 9, pp. 913-927.
- Mittal D., Singla V. and Goyal A. (2011). "Comparison of TQM success factors in Northern Indian manufacturing and service industries: A survey", *International Journal of Engineering Science and Technology*, Vol. 3, No. 2, pp. 1368-1377.
- Mitchell D. W. and Coles C. B. (2004). "Establishing a continuing business model innovation process", *Journal of Business Strategy*, Vol. 25, No. 3, pp. 39-49.
- Ooi K. B., Lin B., Tan B. I. and Chong A. Y. L. (2011). "Are TQM practices supporting customer satisfaction and service quality?", *Journal of Services Marketing*, Vol. 25, No. 6, pp. 410-419.
- Siggelkow N. (2007). "Persuasion with case studies", *Academy of Management Journal*, Vol. 50, No. 1, pp. 20-24.
- Sosna M., Treviño-Rodríguez R. N. and Velamuri R. S. (2010). "Business model innovation through trial-and-error learning", *Long Range Planning*, Vol. 43, No. 2, pp. 383-407.
- Saleh S. and Kleiner B. H. (2005). "Effective franchise management", *Management Research News*, Vol. 28, No. 2, pp. 74-79.
- Teece D. J. (2010). "Business models, business strategy and innovation", *Long Range Planning*, Vol. 43, No. 2, pp. 172-194.