Investigating the Factors Affecting Restaurant Performance During Covid-19: Future Direction for Restaurant Entrepreneurs

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ABSTRACT

The world has faced some extraordinary health threats through COVID-19, which has specifically impacted the global economy, global supply chains, and nations at large. COVID-19 has transformed the overall industrial paradigms; resultantly the entrepreneurs around the globe have tried to utilize different factors as innovative tools so that they can retain as well as enhance the organizational performance. Having a major blow to the global economy, concerns for business performance during the pandemic have increased. Using quantitative analysis technique, this study aims at studying the impact of entrepreneurial proactiveness (EP), creative self-efficacy (CSE), explorative marketing capability (EMC) and, food service technology (FST) on restaurant performance (RP) through the lens of service innovation (SI) within the context of COVID-19. Data was collected from a total of 200 top and middle level employees of 30 fine dining restaurants located in Karachi, Lahore and Islamabad and analyzed through Amos by conducting structural equation modeling. Findings show that SI fully mediates the relationship between, EP and RP and partially mediates the relationship between FST and RP and EMC and RP. Results for CSE were found to be insignificant. The findings of the study have industrial implications especially for the restaurant industry which is more vulnerable during sudden pandemics.

Keywords: Entrepreneurial Proactiveness (EP), Creative Self Efficacy (CSE), Explorative Marketing Capability (EMC), Food Service Technology (FST), Service Innovation (SI), Restaurant Performance (RP).

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CHAPTER 1 - INTRODUCTION

1.1 Research Background

Epidemics have hit the world previously as well; however, the extraordinary scope of COVID-19's influence on every component of human society has led to different repercussions for the global health and economy (Gössling et al., 2020). The global spread of COVID-19 was so quick that World Health Organization (WHO) had to label it a global pandemic (Sohrabi et al., 2020). Since COVID-19 casing virus transmits through respiratory droplets of nose and mouth, which made the operations of restaurants a matter of concern during the epidemic (CDC, 2020). As a matter of fact, any indoor activities, such as dining at restaurants, provided a risk of quick spread of virus. Local and provincial governments in Pakistan banned the face-to-face activities in March 2020, and by April 2020 all provinces had imposed the social distancing policy otherwise the pandemic could have more disastrous repercussions (Waseem, 2021).

Restaurant industry of Pakistan is ranked the eighth largest market in the world and considered as among the top growing industries of Pakistan (Anwar et al., 2018). However, as COVID-19 started to emerge, it was imperative that restaurants should consider rethinking their existing models of doing businesses (Seetharaman, 2020; Richards & Rickard, 2020; Bakers et al., 2020). Due to the recent happening of event, there is little research conducted that indicates how restaurant entrepreneurs improved their performance during COVID-19. Therefore, based on the uncertainty reduction theory, this study examines how the pandemic impacted performance of restaurants in Pakistan.

Recently, with the availability of vaccination, implementations of social distancing efforts have been decreased and businesses are also looking forward to assisting their economic and social

recovery. Businesses, especially restaurants can improve their performance through the product and service innovation, and they have to improve their existing offerings and develop new options if they have to survive in situations like pandemics. Although. traditionally service innovation is regarded as a strategic instrument for competitiveness and a sole discretion of managers (Helkkula et al., 2018; Feng et al., 2020; Kowalkowski & Witell, 2020), but the pandemic has created a necessity to innovate in the restaurant industry to maintain the firm's preservation, adaptability, and improved performance (Edvardsson et al., 2018; Heinonen & Strandvik, 2021).

It was anticipated that this mandated service innovation would lessen negative repercussions by triggering a paradigm shift and novel economic prospects (Batat, 2020; Nenonen & Storbacka, 2020). In this context, restaurants are adopting the use of digital technologies, such as digital payment, enhanced systems of cleaning, QR code-based menus, elevators containing touch-less system, applications for food delivery, etc., and applying uncertainty-reduction approaches through service innovation. It is further anticipated that digital technology would reduce visitor and employees' face to face interactions and enhance restaurant cleanliness (Shin & Kang, 2020) and that is what is required during pandemics just like COVID-19.

The performance of restaurants has been analyzed by seeking out explorative marketing capabilities (Nicola et al., 2019), entrepreneurial proactiveness (Segarra-Ona et al., 2018), food service technology (Sltten & Mehmetoglu, 2015) and creative self-efficacy (Presenza et al., 2019). Even though previous studies have investigated these factors in the restaurant industry, none of these studies have researched their role through the lens of service innovation on restaurant performance during the pandemic. The main aim is to help businesses apply the findings of this study during testing and uncertain times.

While there have been previous studies that have regarded the same variables, none talk about their impact and revival during times like COVID-19. With the pandemic hitting the worldwide economy with new variants every year since its inception, it still needs to be cleared to businesses on how they can survive the consequences after the pandemic has ended for once and for all and even during it in the future. Knowingly, this is among the initial studies aiming to investigate restaurant performance based on the current pandemic related issues of the restaurants operating in the Pakistani cities of Karachi, Lahore, and Islamabad.

In recent years, the service industry in Pakistan saw tremendous growth in the country's economy (Yousuf et al., 2019). Between 2015 and 2018, there was an average growth of 5.55 % and the service sector's entire contribution to Pakistan's gross domestic product (GDP) reached 60.2 % (Nadeem et al., 2019). However, these figures started to shake during the pandemic which has potentially made this study more interesting to be conducted (Courtemanche et al., 2020).

Moreover, various studies related to risk management have introduced interesting theories that act as a fundamental bedrock for the determinants of restaurant performance (Kim et al., 2021). Nowadays, people are looking for additional important indications to reduce the risk-taking behavior and healthy lifestyle patterns in the consumption process, especially after knowing the huge risks and innumerable unpredictability caused by this pandemic in terms of health safety and the quality of food consumption (Yost et al., 2021). From this mind frame, this study is keen to look for various aspects of the restaurant performance which contribute to the success of restaurant sector keeping in view the mounting constraints on businesses because of the pandemic.

With theoretical point of view, this study aims to assess findings from the perspective of uncertainty reduction theory, which holds that people require a variety of characteristics, facts, and tactics to lessen their level of ambiguity regarding the current situation (Turner & West, 2010; Berger & Calabrese, 1974). People use a variety of information sources to establish their outcome expectations on the risks associated with uncertainty. With this variety of information collected from the market, employees may explore diverse marketing capabilities to attract customers (Weber & Schweiger, 2017). Moreover, to minimize the uncertainty risks associated with the quality and safety of restaurant items, entrepreneurial proactiveness may be required to make informed decisions quickly (Dwi et al., 2020).

Creative self-efficacy might also be needed to think out of the box and come up with the unique solutions to the problems (Tantawy et al., 2021). Explorative marketing capabilities can be used cleverly to explore the market for opportunities to survive and do well (Walker et al. 2015). Food service technology, on the other hand, may be required to implement different technological advancements for better services (Jeong, 2010). This results with the need for restaurants to look for effective strategies so that they can respond to the sudden pandemics responsibly.

1.2 Research Gap

The COVID-19 pandemic began to garner research interest around the middle of the year 2020. The novelty, unpredictability, and destructiveness of the pandemic compel academics from a variety of disciplines to investigate its effects. There is a considerable chance that, in the past five years, no other subject has gotten such immediate attention from not only researchers but also all sectors of society. Literature reveals that studies base on forecasting related to COVID-19 became prevalent recently (Zhang et al., 2021; Qiu et al., 2021) and impact-based studies are

also not uncommon, though the tourism industry is the major focus of these studies (Hall et al., 2020; Karabulut et al., 2020; Fotiadis et al., 2021). But most of the prior research (Foo et al., 2020; Zhang et al., 2021) was conducted in developed nations. Meanwhile, COVID-19 has a greater impact on underdeveloped or rising countries like Pakistan (Karabulut et al., 2020). Thus, studies should also concentrate on one of the least developed countries (LDC) i.e., Pakistan.

In addition, COVID-19's 2nd wave proved to be more critical. As of the end of March 2022, the wave's impacts on the hospitality industry are still unknown. The industry is viewed as an umbrella concept (Walker, 2012), and sectors such as lodging, hotels, restaurants, etc., are directly connected. COVID-19 has a substantial impact on each of these connected industries. Therefore, it is essential to analyze the phenomenon in question as it is hurting most of the restaurant industry, effecting employment and especially developing countries, with lesser facilities are getting more negatively affected. Consequently, this research will offer the opportunities to fill the glaring research gaps by investigating the effects and offer solutions for adjusting to the new norm for the restaurant entrepreneurs.

1.3 Problem Statement

COVID-19 has affected the performance of many restaurants, and some were even forced to shut down permanently. However, few restaurants survived the consequences of the pandemic by enhancing their restaurant performance (Niestadt, 2020). While there are still some restaurant entrepreneurs struggling to revive their performance through innovative techniques, this research will investigate the factors which have resulted in improving restaurant performance through innovative techniques during the pandemic.

1.4 Research Aim

This research aims at understanding restaurant performance based on entrepreneurial proactiveness, creative self-efficacy, explorative marketing capability, and food service technology from the lens of service innovation during COVID-19.

The main aim also revolves around helping the restaurant entrepreneurs fight the uncertain times such as COVODI-19 by enhancing performance through innovative means.

1.5 Research Objectives

This study mainly looks into the following objectives:

1. To assess the impact of entrepreneurial proactiveness, creative self-efficacy, explorative marketing capability, and food service technology on the performance of restaurants during COVID-19.
2. To investigate the mediating role of service innovation on the relationship between restaurant performance and entrepreneurial proactiveness, creative self-efficacy, explorative marketing capability, and food service technology in restaurants during COVID-19.

1.6 Research Questions

1.5.1. Primary Question

What are the factors affecting performance of fine dining restaurants during COVID-19?

1.5.2. Secondary Questions

1. How does service innovation affect the relationship between entrepreneurial proactiveness and restaurant performance during COVID-19?
2. How does service innovation affect the relationship between creative self-efficacy and restaurant performance during COVID-19?
3. How does service innovation affect the relationship between explorative marketing capability and restaurant performance during COVID-19?
4. How does service innovation affect the relationship between food service technology and restaurant performance during COVID-19?

1.7 Justification for the Research Topic

According to Jones et al. (2021) since COVID-19 is a relatively new concept, the factors affecting restaurant performance during this time is also a fresh idea. Even though restaurant performance has been studied previously keeping in view the suggested variables however, their impact on the performance of restaurants during COVID-19 and the mediating effect of service innovation on them has not yet been explored.

Moreover Wambugu et al., (2015) investigated that amongst the many factors, entrepreneurial proactiveness and creative self-efficacy are the best measures to evaluate the restaurant performance. Whereas Huang et al., (2016) has regarded explorative marketing capability as an integral tool for evaluating the performance and customer purchase from a restaurant. Nicolau (2013) considered food service technology as an integral factor to evaluate the performance of a restaurant. Therefore, this research has built upon the existing literature to further investigate the impact of these variables on restaurant performance during COVID-19.

CHAPTER 2 - LITERATURE REVIEW

Over the past three decades, several research pathways related to restaurant management have emerged, covering everything from restaurant operations to restaurant marketing. However, there is a limited focus on the studies that explored the impact of restaurant performance for the selected variables in this research. This study uses an integrated framework to evaluate the factors affecting restaurant performance, drawing from the existing literature. Theoretical framework and hypothesis are proposed based on literature review and uncertainty reduction theory.

2.1.Restaurant Performance

2.1.1. Definition and Description

Restaurant performance is essentially determined by the production and delivery of value to external and internal customers and both of them have good outcomes for businesses (Bhattacharyya & Antony, 2010). The performance of an organization is reliant on its ability to gather required resources from external contexts, including reciprocal interactions with other organizations (Taljaard et al., 2015). An organization could be considered as a well performing organization if it's meeting the expectations of majority of its key stakeholders.

Restaurant performance can be measured in a variety of ways, two of which are financial measures and measures based on non-financial parameters. Researchers like Martinez-Martinez et al. (2019) used productivity rates, sales growth, profit growth rates, and asset profitability rates to measure organizational performance. It can also be evaluated in terms of sales growth and net income, which are compared to competitors over the previous three years (Sampaio et al., 2019).

Restaurant performance can also be specifically measured through the volume of sales, sales growth, profitability, overall success and meeting the already developed goals (Hallah et al., 2012). According to Carter et al., (2003) performance has primarily been researched from a financial standpoint utilizing quantitative evaluation measures like sales and revenue. This study will measure restaurant performance on the basis of market share, growth rate and profitability as reported by the key employees of the restaurant.

2.1.2. Restaurant Performance and Uncertainty Reduction Theory

Amid the COVID-19 pandemic, social distancing was used as a critical preventive practice which has potentially decreased the working capacity of majority of the restaurants resulting in a reduction in the financial performance. Limitations like social distancing, has decreased the visitors to the restaurants resulting in closure of several ventures and causing loss of billions of dollars (Ozili & Arun, 2020).

Given the reasons, uncertainty risks cause financial distress to restaurants with reduced customer influx. An uncertain situation brings in more doubts for the businesses and becomes difficult to take decisions. During the uncertain condition of COVID-19, although restaurants were allowed to remain open for take-away as an operational alternative for customers, only a few staff members were required to serve decreased customers, while people performed self-preventive practices that mitigate fear of infection. Along with government restrictions, this self-preventive behavior directly affected employment and the operation of restaurant firms (Lund et al., 2020). In this regard, the study aims to research how the restaurants combat uncertainty reduction and measures that they took for it.

2.1.3. Relationship of Restaurant Performance with Other Variables

Restaurant performance, being the major focus of this study, could have various antecedents. A study conducted by Mahmoud et al. (2020) stated that a good performing restaurant is also an indicator of how the entrepreneur's personality aligns with being proactive. The study investigates that if an entrepreneur is proactive with the situations at hand and takes the necessary steps to implement strategic actions at the right time, then they may attain competitive advantage in the market resulting in a higher performance.

Moreover, performance can also be an antecedent of creative self-efficacy of the organization's management (Tantawy et al., 2021). When an organization's workforce unveil creativity at work, they are more likely to produce and implement innovative and unique ideas and responses that are valuable in handling tasks (Williams et al., 2021).

Furthermore, restaurant performance can also be related to explorative marketing capabilities of an organization (Kim & Atuahene, 2010) because exploration of new ideas definitely brings in more innovation. The more an organization explores various marketing opportunities and capabilities, the more it is likely to come up with innovative ideas, which in turn can enhance its performance and stance in the marketplace (Liao, 2018).

Food service technology, on the other hand, can also serve its due role in the performance of a restaurant. According to research by Kim et al. (2010) food service technology helps restaurants come up with new ways of serving the customers thus helping them to stand out in the market, enhancing their operations, defeating competition, and facilitating them to improve their performance as a result.

2.2.Entrepreneurial Proactiveness

2.2.1. Definition and Description

Entrepreneurial proactiveness, according to Dwi et al. (2020) is the capability of the entrepreneurs to adjust to the changes in the environment that will have an impact on the activities of the organization they manage. According to their research, businesses that can adjust with the changing environments, always strive to introduce high-quality items that meet consumer demand and are not fearful of potential mistakes that might occur in the process.

2.2.2. Entrepreneurial Proactiveness and Uncertainty Reduction Theory

In this regard, entrepreneurial proactiveness refers to the degree of an entrepreneur reacting quickly and correctly encountering uncertain situations. Berenbaum et al. (2007) found that people with a high level of proactiveness can face uncertain situations more easily as opposed to those who are non-proactive. As a result, people with low proactiveness may fail to cope with the environment when they perceive that it is highly dynamic or uncertain.

2.2.3. Relationship of Entrepreneurial Proactiveness with Restaurant Performance

According to Crant (2000), the proactive trait of an entrepreneur is a key component of a successful restaurant. Proactive entrepreneurs are more successful when dealing with changing environmental conditions (Thomas et al., 2010). Therefore, entrepreneurial proactiveness is a quality of entrepreneurs that could have been used in the times of COVID-19 and will be tested in this research as well. According to the research conducted by Wambugu et al., (2015), Ashad et al., (2013) and Oni (2012) it was found that proactive attitude among entrepreneurs' effects

positively the performance of an organizational. Entrepreneurial proactiveness reveals how businesses respond to market developments that may inspire them to reinvent their offerings (Lumpkin & Dess 1996). Entrepreneurial proactiveness further helps organizations to maintain their leadership position by acting independently, launching novel goods and services, and utilizing cutting-edge technology (Antoncic & Hisrich 2000).

Restaurants may employ various technological skills in the present business environment, which is characterized by rapid technological development, to comprehend rising prospects and capitalize on attractive trends, encouraging proactiveness (Hussinger, 2010). Advancement in new processes that utilize innovative strategic concepts to gain a competitive advantage might help resolve conflicts with a proactive entrepreneurial mindset (Kazanjian et al., 2000). Even in the situations when they are looking for complementary knowledge or collaborate through internal operations of the organization, businesses with proactive entrepreneurs are equipped to foresee consciously and adjust within the organizations. It helps them to look for a superior spot to get more customers and growth in the market share via rapidly responding to the updates that happen and assembling their organizational resources before their competitors do (Hughes & Mortgan, 2007).

Entrepreneurial proactive attitude involves taking initiatives for enhancing present circumstances or to creating new circumstances (Melander & Tell, 2014). Stam and Elfring (2008) studied that to gain an advantage over rivals, strategic orientation and changes are essential. In a similar manner, proactiveness is seen by Dess and Lumpkin (2005) and Antoncic and Hisrich (2000) as a facilitator or promoter of entrepreneurial activity, encouraging restaurants to undertake continuous improvements. By promoting new opportunities, proactiveness facilitates the creation

of deliberate changes in the social environment of the organization and thereby help organizations in self-renewal.

Individuals having a proactive trait in their personality; will always look for constructivism in their ideas (Williams et al., 2021). Innovation and proactiveness is considered as a safety wall against the risk-based situations just like COVID-19 and work together to play a vital role in the society (Liñán & Jaén, 2020; Griffith, 2020). Entrepreneurial proactiveness is a behavioral characteristic which should be present at organizational level to create innovations in the markets, promote behavioral innovation, and contribute to the overall restaurant/organizational performance. Entrepreneurs are needed to look for a modernized view of entrepreneurial proactiveness by integrating social, lifestyle and cultural elements as a source of handling the crises just like COVID-19 (Ratten, 2020). Kooli (2021) and Björklund et al. (2020) also found that the changes in the organizational environment due to pandemic has also forced entrepreneurs to build up adaptive strategies and have a complete awareness of the existing available opportunities.

Björklund et al. (2020) found the importance of teamwork, knowledge and experience sharing during crises times as it helps entrepreneurs to analyze the current situation and anticipate the changes needed to be made. This knowledge and experience sharing also help organizations to quickly adopt the changes and can have a deep focus on the upcoming trends and customer needs and how to fulfill those needs in a better and innovative way during critical times (Cortez & Johnston, 2020; Thorgren & Williams, 2020; Ratten, 2020). In-fact there is a need of long-term cooperation between company and its employees s well so that the strategic objectives of the company could be measured and achieved. More precisely, it allows an organization to develop

up-to-date norms and values so that company can perform well during crises (Cortez & Johnston, 2020).

Researchers like Doern (2016) noted that during hard times, organizations should focus on managing the crises and emphasize on prevention of crises and proactively respond to the changes. During the times of crisis, it is very much pertinent to be reactive and illuminate the development of the situation through various means of service innovation (Cortez & Johnston, 2020; Al-Omoush et al., 2020) so that it cod effect organizational performance positively. Based on the above discussion, following could be hypothesized:

Hypothesis 1: Entrepreneurial proactiveness has a positive effect on the restaurant performance during Covid-19.

2.3.Creative Self-Efficacy

2.3.1. Definition and Description

The idea of creative self-efficacy is revolves around the imaginations of Tierney and Farmer (2002) which is based on the conceptual framework of Gist and Mitchell (1992) intended for work-related self-efficacy and expands on Bandura's (1991) construct of self-efficacy. Since creative self-efficacy promotes intrinsic motivation through enhancing self-competence, it might therefore represent intrinsic motivation to participate in creative entrepreneurial activities (Tantawy et al., 2021). Creative self-efficacy is known as a belief in one's abilities to develop some beyond the imagination outcomes (Tierney & Farmer, 2002). Just like resilience, self-efficacy is also considered as a resource base on cognitive capabilities (Renko et al., 2016) except it is different from self-esteem as it mainly depends on the context and the task (Kevill et

al., 2017). Self-efficacy, according to the researchers, can bring in vibrant performance and competence – "the capacity of an organization to purposefully create, extend, or modify its resource base" (Helfat et al., 2007) - and these vibrant competencies ease out the orientational changes in the organizations (Kevill et al., 2017). According to the researchers, self-efficacy is also considered as a precursor of "creative productivity" since people with enhanced capabilities of creative self-efficacy also possess the abilities to address the tough situations (Tierney & Farmer, 2002) resulting in better organizational performance where they work.

2.3.2. Creative Self-Efficacy and Uncertainty Reduction Theory

Creative self-efficacy may help individuals in combating uncertain situations with their creative and innovative solutions. However, this may not always be the case, as shown in the results of this study as well. Sometimes, the situation is uncertain to a great degree that people are afraid to employ innovative solutions that might even back-fire them. So, it is pertinent to look into the role of creative self-efficacy in organizational performance especially when the organizations are facing extremely uncertain and volatile situations just like COVID-19.

2.3.3. Relationship between Creative Self-Efficacy with Restaurant Performance

Mainly researchers like Wang et al. (2014) and Slåtten (2011) have focused on the creative self-efficacy at restaurants keeping in view the both front-line employees and back-end employees. It was also observed that in comparison to the back-end employees, front line employees are more in need of creative self-efficacy. They further found out that even among the front-line employees, creative self-efficacy is mainly pertinent for those who are in direct and face to face contact with customers and fulfilling needs of customers require creative thinking and innovative ideas.

Bouty and Gomez (2013) further added that, with regard to the success of a business, creativity is considered as an important part of restaurants and for the achievement of acknowledgment for brilliance and superior performance. On the other hand, existing research has presented a subjective summary of the innovative processes in the fine dining restaurants (Albors Garrigos et al., 2013; Stierand & Dörfler, 2012; Bouty & Gomez, 2013) there is still a need to explore the linkage among innovation, creativity, and organizational performance.

Recent studies on the association between innovative self-efficacy and restaurant performance is limited to academic contexts (Al-Ghazali et al., 2021). This research anticipates a favorable association between creativity and restaurant performance despite a lack of concrete empirical evidence from the business world. Creativity at work leads to creative solutions that are helpful for completing tasks at hand and enhance business performance (Williams et al., 2021). Employee creativity is acknowledged as a crucial component of an organization's capacity for innovation (Amabile, 1988) and success in dynamic conditions (Tierney, 2011).

Obstacles creating obstructs in the level of a restaurant's creative self-efficacy include inadequate investments in R&D; inadequate fortification of intellectual properties, insufficient knowledgeable and experienced human resources, inadequate financial resources and a higher financial requirement for having an innovative culture within the organization (Hallak & Sardeshmukh, 2019; Lee et al., 2016; Lee). It was also found that the capabilities to handle the difficult situations and to covenant with the harsh conditions, as well as the managements' confidence in tackling the issues are positively associated with the creativity of employees and their readiness to look for more innovative solutions in the organizational operations, in response these characteristics become significant drivers of organizational performance (Bullough & Renko, 2013; Ayala & Manzano, 2014).

To be creative, one must have both inventiveness and the persistence to put ideas into practice (Edwards et al., 2022). Out of the many main objectives of this study, one of them is to analyze if those with higher levels of creative self-efficacy will feel empowered to deal with the trials and numerous uncertainties that they may encounter. Creative self-efficacy is a trait that may help restaurants to see possibilities rather than roadblocks and endure in testing circumstances (Newman et al., 2018). Based on this, we believe that creative self-efficacy might give such impetus and drive people to face difficult situations like COVID-19 more peacefully. According to Miller and Le Breton-Miller (2017), creative self-efficacy positively effects organizational performance. In the presence of above evidence, following could be hypothesized.

Hypothesis 2: Creative self-efficacy has a positive impact on restaurant performance during Covid-19.

2.4.Explorative Marketing Capability

2.4.1. Definition and Description

An organization possess several resources (internal and external e.g., knowledge, financial resources) and utilization of those resources to fulfill the needs of market and realizing and achieving the major goal of profit maximization is known as marketing capability (Kim & Atuahene, 2010). Marketing capabilities of an organization present a pertinent source of competitive advantage (Martin et al., 2017) and establish the achievements of long-term developments so that the organization can excel itself among the competitors. Vorhies (2011) divided marketing capabilities into two types including marketing exploitation capabilities and marketing exploration capabilities. Growth of fresh skills, marketing capabilities and processes by using new market knowledge refers to the explorative marketing capabilities while an

organization's abilities to attain valuable results by enhancing and improving existing technologies and marketing capabilities and establishing linkages with the existing market players is known as marketing exploitative capabilities. This research focuses on the explorative marketing capability's impact on restaurant performance from the lens of service innovation.

2.4.2. Explorative Marketing Capability and Uncertainty Reduction Theory

Since explorative marketing capabilities refer to the development of new skills, it might lead to more uncertainties as new skills are not tried and tested before and results can go either way, especially when new skills are developed and utilized in an uncertain situation just like COVID-19. According to Sarah and Bahair (2021), explorative marketing capabilities can help organizations combat uncertain and testing times as they explore the market for unique solutions and tactics. In their study, they elaborate that in this century people have expanded their ways through marketing capabilities, communication, and social business interactions. Because of this, businesses are more aware of their surroundings than before as they are always on a look out. When businesses become more aware, they develop innovative means of handling different situations which also includes fighting uncertainties that come along the way.

2.4.3. Relationship between Explorative Marketing Capability and Restaurant Performance

Researchers like Chen et al. (2015) are of the view that a company can achieve a sustainability based competitive advantage if the company has the abilities to utilize its current competencies as well as looking for new capabilities at the same time. So, a company if not going for developing its skills, is not going to excel anymore because change is inevitable in any sector of life and organizations are not an exception.

An organization can use explorative marketing capability to enhance and improve its market knowledge (Kim & Atuahene, 2010). Marketing exploration produces new information while bypassing the existing products, markets, technology, and capabilities (March, 1991). This type of capability is the main source of competitive advantage because it is creative and innovative (Yalcinkaya et al., 2007). Explorative marketing capability focuses heavily on acquiring and utilizing knowledge that goes beyond what businesses already know, employing cutting-edge, inventive techniques to research market opportunities and potential clients (Huang et al., 2016).

According to Walker et al., (2015) as firms encourage the active involvement of stakeholders in sharing of information, interpersonal relationships, and co-production, the value of services can be enhanced. They further analyzed that the marketing exploration capability emphasizes the essence of research and innovation. With this skill, the restaurant can aggressively adopt innovative approaches to seize opportunities in the market (Huang et al., 2016). It has been demonstrated that the marketing exploration capability has a favorable impact on performance and innovation in the service sector (He & Wong 2004; Smith & Tushman 2005). However, this study will also research its impact during the turmoil of events faced by restaurants in COVID-19.

According to Levinthal and March (1993), to engage in exploratory market capabilities businesses must actively seek out fresh market data, outside of their existing managerial database and knowledge. They investigated that doing this will enable firms to discover innovative management techniques and procedures, fostering opportunities for business improvement and raising productivity. According to Liao (2018), exploratory market capability enables businesses to conduct thorough environmental scans and employ cutting-edge managerial tools and practices that have already been adopted by other businesses. Exploratory market learning aids

businesses in confirming the validity of innovation management. The study by Liao (2018) discovered that market exploration broadens the variety of management mechanisms and procedures, which supports the firms' decision-making processes.

Finally, the market exploration can result in the successful application of management innovation. Restaurants can go beyond their own walls to understand the experiences of rivals, customers, and professionals to effectively implement procedures (Mol & Birkinshaw, 2009). Several countermeasures and organizational adjustments are brought in as a result of studying from these outside sources of knowledge and suggestions from external stakeholders. This increases the likelihood that service innovation will be successfully implementing by allowing businesses to create modern management processes and procedures that make it easier to comprehend how external knowledge is incorporated into internal inventive efforts (Laursen & Salter, 2006).

Researchers like Peng et al. (2015) mentioned that an organization's marketing explorative capabilities form the basis for its customer-based innovation, and strong explorative capabilities of the organization can help in breaking out the status-quo and bring in the expansion opportunities for diversified business sectors. They further added that an organization's marketing explorative capabilities can also lead to an improved organizational performance as it brings in more and more innovation and help organization to excel in those areas which were not explored previously. Recently, researchers like Huang and Li (2017) and Zhou et al. (2016) found out that an organization's explorative marketing capabilities can add on to its overall performance and especially its new product development. Furthermore, Yalcinkaya et al. (2007) also added that marketing explorative capabilities widely affect the organizational performance and extent of product innovation.

In another research Ngo and O'Cass (2012) found out that service innovation is key to bring in and reinforce the organizational performance by utilizing explorative marketing capabilities through the use of different technologies and resources. More recently, Gok and Peker (2020) further indicated that explorative marketing capabilities can play an important part in bringing in innovation and performance. Although this evidence suggests the relation between explorative marketing capabilities and organizational performance exist but still this relation is not tested in the taxing situations just like COVID-19 and how restaurant industry performs in those hard times. Based on the given evidence and existing gap, following could be hypothesized:

Hypothesis 3: Explorative marketing capability has a positive impact on restaurant performance during Covid-19.

2.5.Food Service Technology

2.5.1. Definition and Description

Food service technology could be defined as the technological innovations related to the food and its allied services in the restaurant industry (Zhou, Hong & Liu, 2013). To achieve a competitive edge in the restaurant industry there is a need of innovations in the food service technology because in restaurant industry, due to its specific nature, products and services could be easily imitated by the competitors (Zhou, Hong & Liu, 2013). There are more chances of restaurant closures if they are not innovative enough in their food service technology as competitive rivalry is very high. Research findings have further shown that companies can utilize their steps for innovation in food service technology as a source of long-term sustainability (Lee, Hallak & Sardeshmukh, 2016).

2.5.2. Food Service Technology and Uncertainty Reduction Theory

With technology on the rise in the 21st century, businesses and individuals have been employing food service technology to their advantage in a much better way these days than ever before (Lee, 2019). The same is for the restaurant industry, while COVID-19 has forced businesses across the world to face repercussions; some have still managed to deal with it. Some of them did this by using technology to their best advantage as technology is one of the best mean to cope with the unavoidable uncertainties.

2.5.3. Relationship between Food Service Technology and Restaurant Performance

In a recently conducted research by Seoki and Sunny (2021) it was found that restaurants should look for different ways to understand that how they can improve their food service technology so that they can bring in the confidence of consumers towards the fine dining. Their findings further show that there are different ways to apply technology in food service so that more customers could be inclined towards fine dining as COVID-19 has restricted customers to stay at home and avoid reaching out restaurants as there are high chances of getting infected in restaurants due to their nature. These methods include but not limited to the repeated cleaning and sanitization of tables, restructuring of layout of the dining tables so that social distancing could be ensured, wearing of face mask by the employees and customers, installation of transparent plastic panels between the tables and at the counter, and reducing the interaction among human which could be implemented by use of digital menu/QR code based menu, cashless payment, and use of robots for order taking and delivery.

Food service technology, if it is coupled with the innovation, it can bring about a dramatic positive change in the organizational performance as it could help in introducing innovative ways of introducing new products and services and attracting more customers which were leaving due to the fear of infection (Burhan et al., 2021). The restaurant industry is more in need of accelerating the combination of technological innovations with food services so that it can make more progress. Due to the recent pandemics, majority of the technological innovations in food service technology, which were considered very dramatic and useful previously, have become absolute and requires modification (Yun et al., 2020).

Food service technology has revolutionized with the introduction of online applications where everything is conducted online, menus are available online on different platforms where customers can approach and make orders and food is delivered at their doorsteps. This type of restaurant model is getting more acceptance among the millennials as they are more inclined to the use of various apps and smart phones which has made it very convenient for them (Kapoor, 2018). It has benefitted the customers and also increased the profits of the restaurants as it requires lesser staff, requirements for restaurant space is nearly zero which has increased the overall profit of the restaurant owners (Jeetesh et al., 2020).

Recently, it is noticed that consumers are getting more concerned about the sustainable environment and prefer to purchase products or services which do not harm the environment (Kim et al., 2010; Jeetesh et al., 2020).). This means that if consumers prefer to purchase from restaurants that are environmentally friendly then this can have an impact on their performance. Jeong (2010) and later Marty et al. (2020) stated that restaurants are encouraged to implement service innovations that meet the regulations, values, and expectations of the consumers

regarding the environmental sustainability. COVID-19 is also an environmental concern as it could be predicted from the WHO recommendations that cleanliness is a key to curb the virus.

According to Rodgers (2007), food service technology not only comprises the equipment for service but the entire food service system. The study analyzed that service technology should not be limited to the food service only as other service industries could also benefit from the technological advancements. Technology is an instrument for the restaurant industry to extract the service innovation concepts and develop them to enhance restaurant performance (Rodgers, 2009). Food service technology in recent times could further be improved keeping in view the current needs of order taking, packaging, serving and food delivery (Byrd et al., 2021). Even some restaurants have remodeled them and brought in the concept of "virtual restaurants" by taking orders online and delivering food and giving up their stats of a real-life restaurant (Jeetesh et al., 2020).

According to Ivanović et al., (2015) since laboratories are not used for research and development by the restaurant industry; rather, they employ the design and functionality of equipment and appliances as well as innovative methods of food preparation and service that offer greater heating, temperature regulation, energy efficiency, working process sanitation, and ultimately more versatile and quicker service.

Jeong (2010) investigated that reduction time in the processes of a restaurant such as cooking time is an important aspect of food service technology. The study further analyzed that the better food service technologies implemented within, the shorter the period of processes are. According to Pantelidis (2009), convenience food or high-tech, modern labeling and other innovations have made it possible to create new, incredible business strategies. According to their research, due to

the increase in customer demands and fiercer competition, this has led to a rise in the need for improved and more effective food service technologies. Modern technologies are required to continuously enhance the performance and quality of restaurants.

In past studies the emphasis on food service technology has suggested a positive effect on restaurant quality and performance (Woon & Sunny, 2006; Lee et al., 2003), efficiency (Prasad et al., 2005), cost management (Riley, 2005), reliability (Davis et al., 2008) training of employees (Anon, 2008) and flexibility (Micros, 2008), while there is still need to explore that how food service technology plays it role in excelling the restaurant performance when restaurant industry is facing cuge crises of social distancing and major pandemics. So based on the above discussion, following could be hypothesized:

Hypothesis 4: Food service technology has a positive impact on restaurant performance during Covid-19.

2.6.Service Innovation

2.6.1. Definition and Description

Service innovation could be defined as the process of introducing innovation in the services offered by an organization (Maglio, 2017). Within past few years, it has been widely accepted by the firms that they can get a competitive edge over their rivals if they introduce the needed innovation in their products and services (Xin et al., 2006; Lee et al., 2010; Maglio, 2017). Resultantly, organizations have become more attentive towards bringing in innovation in their processes, product and services so that they have a upper hand over their rivals and gain a higher market share (Ciasullo, 2018; Helkkula et al., 2018; Mele and Russo Spena, 2018).

2.6.2. Service Innovation and Uncertainty Reduction Theory

Uncertainty reduction theory attempts to elaborate on how businesses can utilize various strategies to their advantage in order to eliminate the factor of being unsure (Charles et al., 2017). With this thought in mind, service innovation can be used to eliminate the doubt by using innovative and creative solutions that are compelling and useful to combat the uncertain times.

2.6.3. Relationship of Service Innovation with Independent Variables

Service innovation has been classified into three different types and approaches including assimilation, demarcation, and synthesis (Coombs & Miles, 2000). Assimilation approach is more related to the digital transformation and considers digital transformation as a main element of service innovation (Gallouj, 2002; Toivonen and Tuominen, 2009). On the other hand, the demarcation approach of innovation is more reliant on the specific service theories and differs from the product innovation (Drejer, 2004; Tether, 2005). The synthesis approach is more of combining of technological and non-technological innovations since it offers a more integrated perspective (Coombs and Miles, 2000; Gallouj and Savona, 2009; Wittel et al., 2016). Although these approaches to service innovation made a lot of contribution to the literature, but still there is a need of a holistic approach for the investigation of this research area.

To cater this need, a service dominant logic has emerged and this theoretical view is applied in management, economics and social research (Lusch & Vargo, 2014). The service dominant logic explains that exchange of money and goods is basically lie down on the exchange of service for service (Pels et al., 2014). So based on service dominant logic service innovation is defined in a much broader way (Edvardsson & Tronvoll, 2013). Lusch and Nambisan (2015) defined service innovation as “the re-bundling of diverse resources that create novel resources that are beneficial

(i.e., value experiencing) to some actors in a given context; this involves a network of actors, including the beneficiary (e.g. the customer)".

The foundation of service innovation comes from introducing unique services with latest features for the consumers (De Vries et al., 2016). According to Ostrom et al. (2015) service innovation activation is a strategic focus for businesses to improve their performance. They concluded that there are now more prospects for service innovation than ever before due to the structure of the services market and the rapid pace of the most recent changes in the services industry. The capacity to innovate one's resources is crucial for a company's existence and prosperity (Wang & Ahmed, 2004). Enhancing inventive skills for all businesses, especially smaller ones, is essential through utilizing knowledge acquisition from outside sources (Borch & Madsen, 2007; Volberda et al., 2010).

In the restaurant sector, service innovation intersects with acquiring knowledge to positively impact performance, bringing something fresh and distinctive to restaurants (Huang & Liu, 2019). Therefore, the most crucial component in restaurants for creating the newest services is service innovation.

When it comes to marketing capabilities, service innovation is the secret to success in the restaurant business (Bharwani & Mathews, 2016; Hussain et al., 2016; Randhawa et al., 2016), where the function of explorative marketing innovation is essential to foster service innovation. According to Chen (2011), service innovation is the creation of fresh, practical concepts to improve services in a way that benefits food service technology. Victorino et al., (2005) researched that it is favorable for restaurants to implement service innovation as it encourages creative self-efficacy. Moreover, service innovation can also be regarded as a connecting dot to

entrepreneurial proactiveness and restaurant performance. This is because the more proactive the restaurant entrepreneur is, the more likely they will look out for unique and innovative ideas as a result affecting their restaurant performance (Dwi et al., 2020).

In the restaurant sector, consumers can typically find services that are easily replaceable; therefore, to overcome this challenge, restaurant owners should provide consumers with innovative and novel services tailored to their preferences, reliability, and technological functionality to obtain a viable competitive edge for their performance (Victorino et al., 2005). Restaurants may use cutting-edge service innovations including a delightful and varied cuisine, high-speed internet access on the facilities, wireless technology, beautiful interior, special amenities, and innovative design and architectural techniques (Victorina et al., 2005).

According to the literature, assets have an impact on how well an organization performs when it has a competitive edge. The ability to innovate services is one of the assets (Hooley et al., 1998). According to Camisón et al. (2014), this phrase encapsulates an idea's novelty in terms of organizational effectiveness. This suggests that innovation is essential to raising organizational effectiveness. The relationship between innovation and organizational performance has been discussed in previous publications based on the following reasoning: 1) explanation of innovation – executives may structure innovation as prospects and cultivate a willingness to adopt rewarding innovation (Dutton et al., 1987); 2) organization performance may generate future organizational slack that is used for exploring new choices (Bowen et al., 2010); and 3) performance gap may be caused by a lack of tools, ambition, or brainpower (Staw et al., 1981). Based on the above discussion following can be hypothesized:

Hypothesis 5 (a): Service innovation mediates the relationship between entrepreneurial proactiveness and restaurant performance during Covid-19.

Hypothesis 5 (b): Service innovation mediates the relationship between creative self-efficacy and restaurant performance during Covid-19.

Hypothesis 5 (c): Service innovation mediates the relationship between explorative marketing capability and restaurant performance during Covid-19.

Hypothesis 5 (d): Service innovation mediates the relationship between food service technology and restaurant performance during Covid-19.

2.7.Theoretical Foundation and Framework

During COVID-19, restaurant performance has suffered since customers were hesitant to dine out as there was a lot of fear and anxiety about social distancing and getting infected (Niestadt, 2020). To deal with the fear and anxiety of customers, restaurants have also employed a variety of steps so that they can have a better and COVID-19 free environment resulting in better financial outcomes for the restaurant owners. Theory of uncertainty reduction can theoretically explain the level of uncertainty existing in the organizations due to the volatile situations (Berger & Calabrese, 1974). According to the uncertainty reduction theory, individuals collect detailed information to decrease their choice uncertainty, so that they can have a better prediction of the anticipated outcomes (for example changes in behaviors, strategies, and attitudes) before taking any decisions (Berger & Calabrese, 1974). In a situation where people are facing an uncertain situation, they are looking forward to relevant and useful information so that they can reduce the negative implications of uncertainty (Tidwell & Walther, 2002).

According to Chen (2020), in a volatile situation, there are chances of reduction in the consumption and restaurant owners and managers take decisions keeping in view those uncertainties and expectations. During pandemics, customers become hesitant to dine out due to the uncertainty and anxiety about the fear of getting infected which creates a health risk and uncertainty (Ivanov, 2021). In this situation, restaurant entrepreneurs must figure out what people are concerned about and how restaurants can attract the customers ultimately improving their own performance. In the event of a pandemic, restaurant entrepreneurs should communicate with their employees about the actual health risk of customers and uncertainty in the environment (i.e., COVID-19), and what are their strategic plans for improving their performance.

Therefore, this study has taken inspiration from the uncertainty reduction theory along with supporting literature and incorporated different aspects in the theoretical framework that may affect the restaurant performance. Figure 1 presents a pictorial view of the theoretical framework for this study.

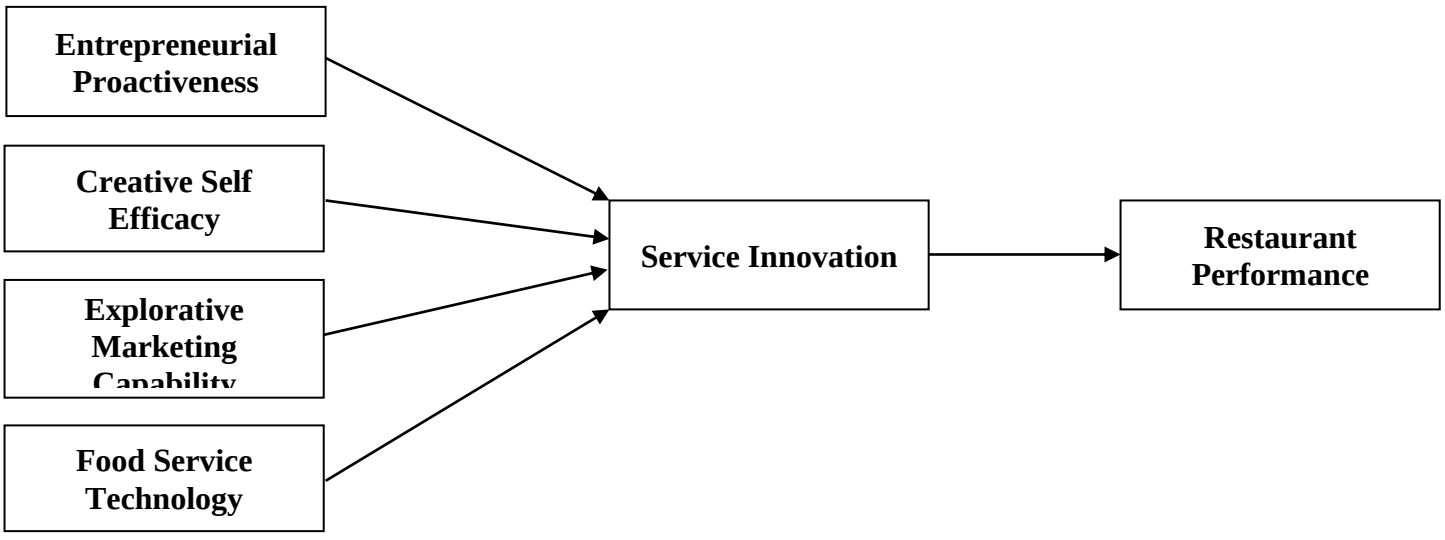

Figure 2.1: Theoretical Framework

CHAPTER 3 - METHODOLOGY

3.1. Research Philosophy, Design, and Approach

Positivism, as mentioned by Smelser (2001), is the name for the scientific study of the social world where "factual knowledge" which is obtained through the observations is considered trustworthy. The main goal of positivism is to formulate abstracts as well as universal laws on the operational dynamics of the social world. A positivist researcher believes that the finding is objective and could be measured by the researcher individually. Positivism indicates that the researcher must find the actual information and facts (Park et al., 2020). The measurement of variables and hypothesis testing are one of the phenomena of positivism. For our study, this model is selected because it will conclude more precise and accurate results for each of the hypothesis.

This research method is based on quantitative data collection for the analysis purpose. Based on the problem statement, research aims and questions, the hypotheses are created and tested by the analyzed data. The research design for this study has been restricted to questionnaires, which have been filled by employees from 30 different restaurants, to evaluate the impact of independent variables on restaurant performance and the role of service innovation therein.

3.2. Participants and Procedure

The participants of this research are the top and middle level employees who work at fine-dining restaurants based in Karachi, Lahore and Islamabad, Pakistan. These employees were more familiar with the restaurant performance and factors affecting it, so their experience provided valuable insights.

The relevance for choosing a sample from Karachi, Lahore and Islamabad is because they are the hub of all famous restaurants in Pakistan and due to the limited resources; the research can conveniently be conducted in the following cities only.

According to Sign in Pakistan (2022), out of all the cities in Pakistan; Karachi, Lahore, and Islamabad are the top three cities for major restaurants making them the hub of all eateries. So in total, top fifty restaurants operating in Karachi, Lahore, and Islamabad were contacted however, out of the top fifty restaurants contacted initially, only the thirty restaurants have agreed to participate in this research. Moreover, according to the Trip Advisor (2021), the 30 restaurants selected have been ranked among the top 50 restaurants for the year 2021 in Karachi, Lahore, and Islamabad.

The reason for choosing restaurants from the cities of Pakistan was to analyze the impact of COVID-19 on a developing country. Since Pakistan is amongst the developing countries of the world (Department of Foreign Affairs and Trade, 2015), therefore the said country was chosen.

One of the research gaps talks about how these developing countries have limited resources to fight the economic instability, thus, this study aims at analyzing the restaurant industry from a developing country to assess the performance and how these restaurants combat the uncertain times.

3.3. Sampling Technique

Convenience sampling refers to a technique used by researchers to gather market research data from a pool of respondents who are conveniently accessible (Sedgwick, 2013). It is the most often used sampling technique since it is quick, simple, and affordable. Because this research did not have sufficient funds for other sampling techniques, therefore, various fine dining restaurants

were contacted upon convenience and their rankings (as mentioned in previous section) and selected based on their agreement to participate in the study.

3.4. Sample Size

The sample size for this research is 200 whereas the total items in the questionnaire are 24. The sample size is set at 200 because of limited resources it was difficult to consider a larger sample from the population. Moreover, supporting literature for this research has a similar sample size which has been considered for the purpose of this research as well (Carter et al., 2003; Taljaard et al., 2015; Kim et al., 2010; Rodgers, 2020).

According to Stringfield (1994), outliers are instances in a study that do not follow the expected patterns. As a result, in studies attempting to find normative behavior or central tendencies in data sets, outliers are often viewed as problems to be solved rather than objects of interest. Although 224 questionnaires were filled in total, some responses were eliminated as they contained extreme biases since some participants only selected extreme options without reading the questions properly.

3.5. Measures and Instruments

The questionnaires are the only measures of this research study and were distributed to the employees of thirty fine dining restaurants in Karachi, Lahore, and Islamabad. A total of 24 questions for independent, dependent, and mediating variables are designed, and the responses were analyzed for further evaluation.

All questions were answered using a seven-point Likert-scale with responses ranging from "strongly agree" to "strongly disagree". The following table provides information related to the sources of questionnaires which were adopted from different studies:

Table 3.1: Variable Measurement Tools

Sr. No.	Variable	Number of Items	Study
1	Entrepreneurial Proactiveness	3	Dai et al. (2014)
2	Creative Self-Efficacy	4	Mathisen et al. (2011)
3	Explorative Marketing Capability	4	Vorhies et al. (2011)
4	Food Service Technology	6	Rodgers et al. (2007)
5	Service Innovation	4	Lee et al. (2020)
6	Restaurant Performance	3	Rhee et al. (2010)

3.6. Analytical Procedure

To test the proposed hypothesis, Amos and SPSS have been used for data analysis through which Structural Equation Modeling (SEM) has been conducted. To perform SEM, as suggested by Pahlevan et al., (2018), three steps were followed.

First data was cleaned by taking care of any multivariate outliers. For this purpose, standard deviation was taken for every row on the data file and any standard variation with a value of zero was eliminated. This process was in line with the process followed by Hoaglin et al. (1986).

Then Confirmatory Factor Analysis (CFA) was performed by checking the factor loadings, model fit assessment, re-specifying the model to improve the model fit and keeping a check of reliability and validity.

Finally, Structural Equation Modeling (SEM) was run by analyzing the path coefficients i.e., the hypothesis testing and estimating the squared multiple correlations (R^2).

CHAPTER 4 - ANALYSIS AND RESULTS

This chapter explores the information gathered from 200 respondents using questionnaires. It begins with a demographic analysis followed by survey analysis, factor loadings, model fit, reliability, validity, and path analysis through which we accept or reject the hypothesis formed.

4.1. Demographics

For the 200 top and middle level restaurant employees, the demographics (see Table 2) included gender, age, education, and no. of employees. Out of 200 respondents, 66% were males and 34% were female. Most were between the ages of 31 - 40 (32%) and 21 - 30 years (27.5%), and 61% respondents had a university degree. Most of the restaurants had number of employees ranging between 21 – 40 employees (53%).

Table 4.1: Demographics

Education						
Variable	**Primary Education**	**Secondary Education**	**Undergraduate Education**	**Postgraduate Education**	**Doctorate**	**Total**
Frequency	17	61	70	44	8	200
Percentage	8.5	30.5	35.0	22.0	4.0	100
Age						
Variable	**16 – 20 years**	**21 – 30 years**	**31 – 40 years**	**41 – 50 years**	**50 Above**	**Total**
Frequency	8	55	64	47	26	200
Percentage	4	27.5	32	23.5	13	100
No. of Employees						
Variable	**1 – 10 Employees**	**11 - 20 Employees**	**21 – 30 Employees**	**31 – 40 Employees**	**41 + Employees**	**Total**
Frequency	21	45	57	50	27	200
Percentage	10.5	22.5	28.5	25	13.5	100
Gender						
Variable	**Male**		**Female**			**Total**
Frequency	132		68			200
Percentage	66		34			100

4.2. Survey Analysis

The following table includes the mean and standard deviation of each measurement item for the questionnaire results. The purpose of calculating the mean of every measurement item was to analyze the average responses of each question. According to our analysis, each variable

question has a mean ranging between 5.09 – 5.8. This means participant answers were between these ranges on average.

Standard deviation for each measurement item was also measured which helped to analyze that how far the observed values were from the mean values. This means, we can analyze how spread out our data was from the mean. According to our analysis, the standard deviation lies between 1.5 – 2.08

During the analysis section, we noticed that the values were on the higher end side. The reasons for this is that when the testing of this research was carried out, COVID-19 was at its peak. This means people were suffering from all the aspects and their answers were therefore on the extreme side as well.

Table 4.2: Survey Variable Analysis

Variables	Mean	St. Dev
EP 1	5.6	1.870
EP 2	5.6	1.703
EP 3	5.8	1.635
EMC 1	5.42	1.699
EMC 2	5.35	1.787
EMC 3	5.345	1.77
EMC 4	5.505	1.704
CSE 1	5.25	2.08
CSE 2	5.09	2.01
CSE 3	5.25	1.94
CSE 4	5.35	1.95
FST 1	5.52	1.68
FST 2	5.67	1.67
FST 3	5.48	1.71
FST 4	5.56	1.65
FST 5	5.54	1.63
FST 6	5.59	1.73
SI 1	5.6	1.8
SI 2	5.6	1.7
SI 3	5.69	1.7
SI 4	5.7	1.5
RP 1	5.6	1.6
RP 2	5.59	1.6
RP 3	5.67	1.7

Food service technology (FST), Creative self-efficacy (CSE), Explorative marketing capability (EMC), Service innovation (SI) and Restaurant performance (RP)

4.3. Confirmatory Factor Analysis

4.3.1. Factor Loadings

Confirmatory factor analysis (CFA) is a multivariate statistical process to determine if the observed variables are precisely reflecting the total number of constructs (Bartik et al., 2020). Researchers can use CFA to find out the number of factors that must be included in the data as well as which measurable variable is associated to which latent variable; CFA is a technique for confirming or disproving measurement theories (Alarcón et al., 2015)

As suggested by Kaiser (1958) and Pett et al. (2003), a value of factor loading greater than 0.5 was used as a factor selection criterion. According to the selection criteria, our model has resulted in a good factor analysis as shown in Table 4.3 and Figure 4.1.

Table 4.3: Standardized Regression Weights

Entrepreneurial Proactiveness						
Measurement	**EP 1**		**EP 2**		**EP 3**	
Loading	.949		.890		.907	
Explorative Marketing Capability						
Measurement	**EMC 1**	**EMC 2**		**EMC 3**	**EMC 4**	
Loading	.917	.930		.935	.902	
Creative Self Efficacy						
Measurement	**CSE 1**	**CSE 2**		**CSE 3**	**CSE 4**	
Loading	.949	.942		.967	.941	
Food Service Technology						
Measurement	**FST 1**	**FST 2**	**FST 3**	**FST 4**	**FST 5**	**FST 6**
Loading	.909	.923	.946	.910	.917	.937
Service Innovation						
Measurement	**SI 1**	**SI 2**		**SI 3**	**SI 4**	
Loading	.913	.934		.958	.893	
Restaurant Performance						
Measurement	**RP 1**		**RP 2**		**RP 3**	
Loading	.921		.955		.926	

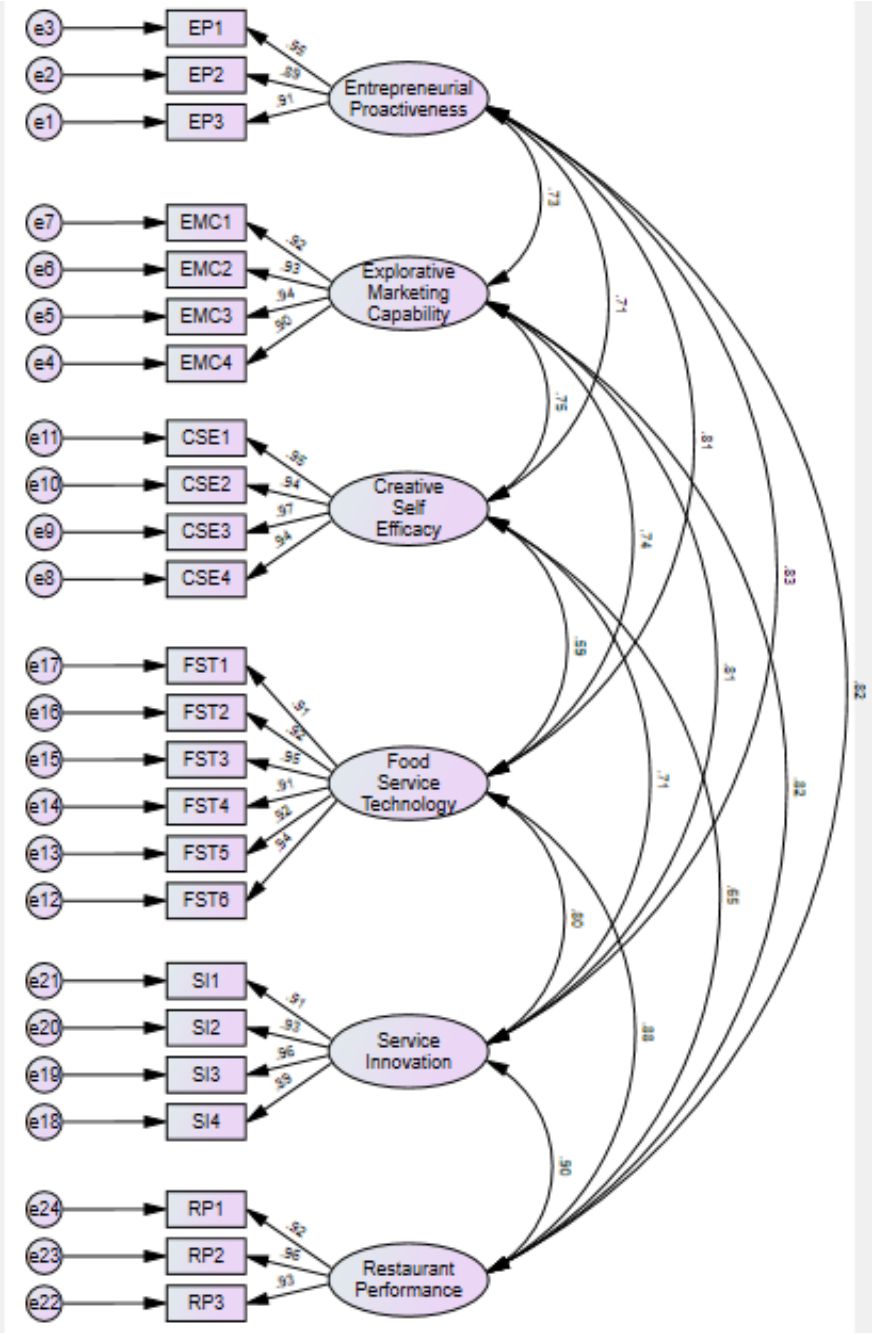

Figure 4.1: CFA Diagram

4.3.2. Structural *Model* Fit

According to Gaskin (2011), a covariance can be established within the variable measurements to generate a better model fit (see Figure 4.4). Hence e5 and e4, e7 and e6, e16 and e14, e20 and e21 have been covariate to increase the fitness of the model. The reason why covariance was formed was to improve the numbers of model fit. Even though, AMOS suggests covariance by default to improve the model fit numbers, we followed the rules laid by Gaskin (2011) for covariance (see figure 4.2).

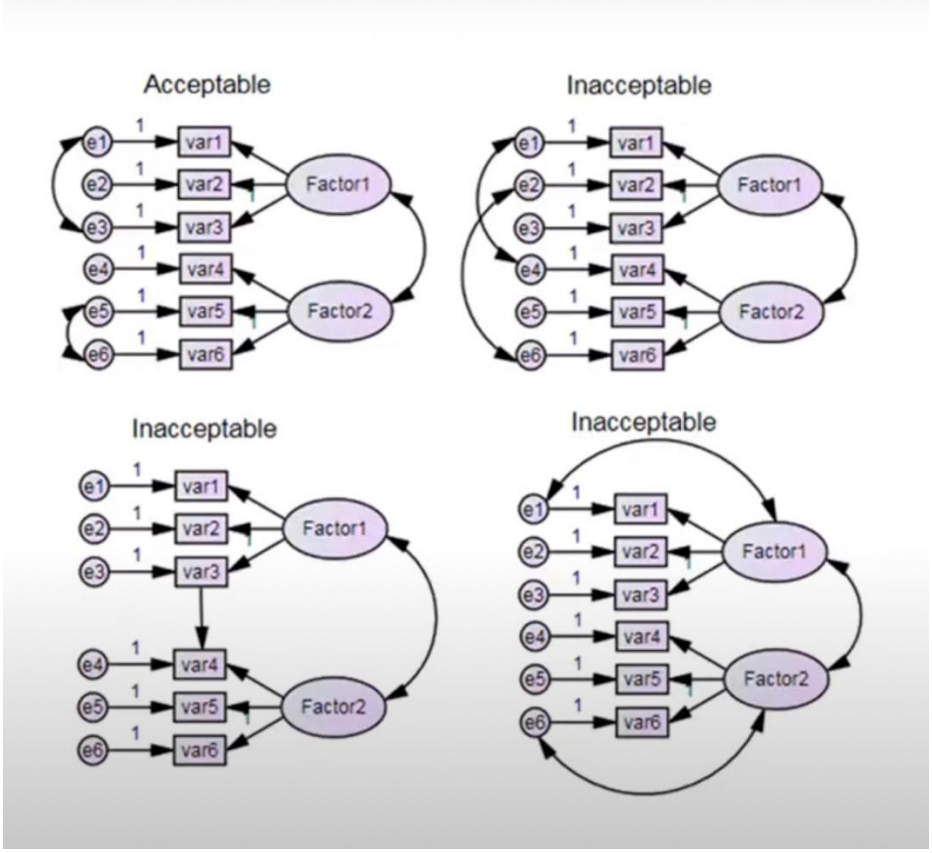

Figure 4.2: Covariance Rules for Model Fit Improvement

For the baseline comparisons, we analyzed the Normed Fit Index (NFI) which was 0.916, Relative Fit Index (RFI) was 0.901, Incremental Fit Index (IFI) was 0.946, Tucker-Lewis Index (TLI) was 0.935, and Comparative Fit Index (CFI) was 0.945 (see Table 4.4).

According to Meyers et al., (2005), if the fit indexes mentioned above are more than 0.90, they can be considered as a good model fit. To further support our model fit, the Root Mean Error of Approximation (RMSEA) was also analyzed (see Table 4.4). According to Byrne (2001), any value above 0.8 is considered a good model fit when assessing RMSEA. For this study, the value of RMSEA is reported to be 0.93.

For this research, the CMIN/DF is equal to 2.704 (Table 4.4) and the acceptable value for CMIN/DF is less than 3 (Hair et al., 2009), indicating a good fit (Marsh & Hocevar, 1985). According to Pahlevan et al., (2018), if the p-value of model fit is less than 0.05, it can still be considered as a good fit. This usually happens when the sample size is more than 150. The p-value of the model fit in this study is reported to be 0.00.

Table 4.4: Baseline Comparisons of Model Fit

Model	NFI	RFI	IFI	TLI	CFI	RMSEA	CMIN	DF	p	CMIN/DF
Default Model	.916	.901	.946	.935	.945	.093	630.034	233	.000	2.704
Saturated Model	1.000	…	1.000	…	1.000	…	.000	0	…	…
Independence Model	.000	.000	.000	.000	.000	.364	7544.012	276	.000	27.333

4.3.3. *Reliability* and Validity

Next, the reliability, discriminant validity, and convergent validity of each variable were calculated using CFA. Average variance extracted (AVE) is a metric that compares the amount of variation by a construct to the amount due to measurement error; values above 0.7 are considered excellent, while below 0.5 values are deemed acceptable (Alarcón et al., 2015). Composite reliability (CR) is a less biased indicator of reliability in which the acceptable value is 0.7 and above (Alarcón et al., 2015).

For this study, explorative marketing capability has a CR value of 0.952 and AVE equal to 0.833. Entrepreneurial proactiveness has a resulting CR equal to 0.940 while the AVE equals to 0.839. Creative self-efficacy has a CR value of 0.974 and an AVE that equals to 0.902. Food service technology has a CR value equal to 0.973 and AVE equal to 0.857. Service innovation has a CR value equal to 0.956 and AVE equal to 0.873. Lastly, restaurant performance's CR value is equal to 0.954 while AVE equals to 0.873. This means that all the variables are reliable and valid.

According to Fornell et al., (1981), for discriminate validity, AVE should be greater than Maximum Shared Variance (MSV) and the square root of AVE should be greater than the highest square correlation of the variable with any other latent construct which verifies that acceptable discriminate validity has been achieved. This indicates that the variables have no multicollinearity and are totally independent of one another. The detailed reliability and validity analysis is given in table 4.5.

Table 4.5: Model Validity and Reliability Measures

	CR	AVE	MSV	Explorative Marketing Capability	Entrepreneurial Proactiveness	Creative Self Efficacy	Food Service Technology	Service Innovation	Restaurant Performance
Explorative Marketing Capability	0.952	0.833	0.689	**0.913**					
Entrepreneurial Proactiveness	0.940	0.839	0.696	0.737***	**0.916**				
Creative Self Efficacy	0.974	0.902	0.562	0.750***	0.708***	**0.950**			
Food Service Technology	0.973	0.857	0.771	0.747***	0.807***	0.589***	**0.926**		
Service Innovation	0.956	0.845	0.822	0.815***	0.834***	0.717***	0.809***	**0.919**	
Restaurant Performance	0.954	0.873	0.822	0.830***	0.825***	0.650***	0.878***	0.906***	**0.934**

AVE stands for average variance extract. The bold number is the square root of AVE. The bold numbers listed diagonally are the square root of the variance shared between the constructs and their measures. The off-diagonal elements are the correlations among the constructs. For discriminate validity, the diagonal elements should be larger than the off-diagonal elements.

4.4. Structural Equation Modeling (SEM)

Structural models were used to evaluate the hypotheses of this study. Because the theoretical framework in this research includes a mediator, bootstrapping has recommended for obtaining reliable findings from mediation testing (Pahlevan et al., 2018). Therefore, bootstrapping of 1000 with a 95 percent bias-corrected confidence interval and a p-value for a two-tailed significance (*p < 0.05, **p < 0.01, ***p < 0.001) has been utilized for this research.

Bootstrapping testing gives a standard error estimate based on re-sampling from the observed sample. The assumption behind this method is that a subsample (generated by bootstrapping) of the observed sample (original sample of research) has a similar relationship to the observed sample as the observed sample has to the population (Cameron & Trivedi, 2010).

Furthermore, this study followed the Baron and Kenny (1986) mediation processes. To test for mediation, we first tested whether independent variable and dependent variable influence each other – this is also known as the total effect model or the "c" in the diagram below (see Figure 4.3). If they have any effect on each other, we then move on to test if independent variable influences the dependent variable through the mediator (also known as the "a" and "b" in the model). This is known as the indirect effect model. Finally, we analyzed the relationship of independent variable on the dependent variable keeping in mind any unknown external variable that may also mediate the relationship between the two. This is also known as the direct effect model.

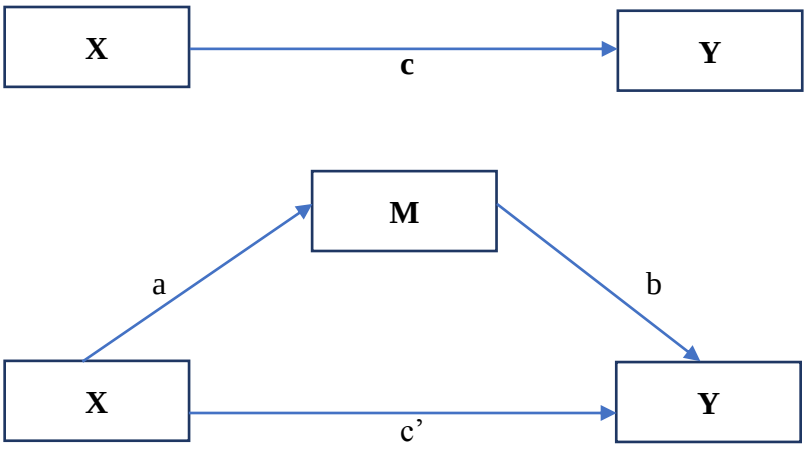

Figure 4.3: Baron and Kenny Mediation Model (1986)

The total effect, direct effect and indirect effect were analyzed after a path analysis was constructed on AMOS. This allowed us to test the hypothesis and the research model as shown in Figure 4.4.

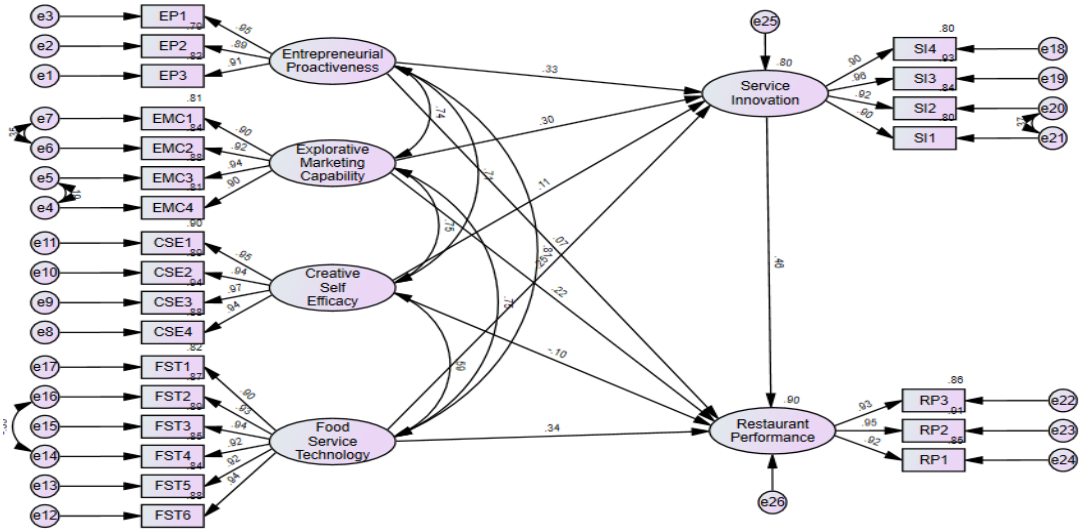

Figure 4.4: Path Analysis Diagram

Food service technology (FST), Creative self-efficacy (CSE), Explorative marketing capability (EMC), Service innovation (SI) and Restaurant performance (RP)

4.4.1. Total Effect Model (c)

The total effect model (see Table 4.6) was tested to analyze the influence of entrepreneurial proactiveness, explorative marketing capability, creative self-efficacy, and food service technology on restaurant performance. We will accept a hypothesis that has a p-value < 0.05 (significant relationship) and reject a hypothesis with a p-value > 0.05 (non-significant relationship).

Here, for entrepreneurial proactiveness p-value = 0.015 (significant relationship; hence H1 accepted), creative self-efficacy p-value = 0.236 (non-significant relationship; hence H2 rejected), explorative marketing capability p-value = 0.001 (significant relationship; hence H3 accepted), and food service technology p-value = 0.002 (significant relationship; hence H4 accepted).

Table 4.6: Total Effects - Two Tailed Significance

Variables	FST	CSE	EMC	EP	SI	RP
SI	…	…	…	…	…	…
RP	.002	.236	.001	.015	.003	…

Food service technology (FST), Creative self-efficacy (CSE), Explorative marketing capability (EMC), Service innovation (SI) and Restaurant performance (RP)

Moreover, service innovation has a R^2(see Table 4.7) of 0.804 (80%) which indicates that the independent variables have a variation in restaurant performance by 80%. Whereas the R^2 of restaurant performance is 0.896% (89%). This means that restaurant performance is affected by these independent variables by 89%.

Table 4.7: Squared Multiple Correlations (R^2)

Service Innovation	Restaurant Performance
.804	**.896**

4.4.2. Indirect Effect Model (a & b)

Indirect effect model (see Table 4.8) was tested to see the influence of entrepreneurial proactiveness, explorative marketing capability, creative self-efficacy, and food service technology on restaurant performance through the mediating effect of service innovation. We will accept hypothesis that has a p-value < 0.05 (significant relationship) and reject hypothesis with a p-value > 0.05 (non-significant relationship).

Here, for entrepreneurial proactiveness p-value = 0.007 (significant relationship; hence H5a accepted), creative self-efficacy p-value = 0.061 (non-significant relationship; hence H5b rejected), explorative marketing capability p-value = 0.013 (significant relationship; hence H5c accepted) and food service technology p-value = 0.009 (significant relationship; hence H5d accepted).

Table 4.8: Indirect Effects - Two Tailed Significance

Variables	FST	CSE	EMC	EP	SI	RP
SI	…	…	…	…	…	…
RP	.009	.061	.013	.007		

Food service technology (FST), Creative self-efficacy (CSE), Explorative marketing capability (EMC), Service innovation (SI) and Restaurant performance (RP)

4.4.3. Direct Effect Model (c')

Direct effect model (see Table 4.9) was tested to analyze the relationship between independent variables and the dependent variable keeping in mind any unknown external mediator.

Here, for entrepreneurial proactiveness p-value = 0.419 (non-significant relationship, hence full mediation exist), creative self-efficacy p-value = 0.222 (non-significant relationship, hence no relationship found), explorative marketing capability p-value = 0.031 (significant relationship, hence partial mediation exist) and food service technology p-value = 0.003 (significant relationship, hence partial mediation exist).

Table 4.9: Direct Effects - Two Tailed Significance

Variables	FST	CSE	EMC	EP	SI	RP
SI	…	…	…	…	…	…
RP	.003	.222	.013	.419	.003	

Food service technology (FST), Creative self-efficacy (CSE), Explorative marketing capability (EMC), Service innovation (SI) and Restaurant performance (RP)

4.4.3. Results

If total effect, indirect effect, and direct effect are significant then results would be categorized as partial mediation. If total effect is non-significant but indirect effect is significant then results would be categorized as having indirect relationship. If indirect effect is non-significant then results would be categorized as having no relationship. On the other hand, if total effect is non-significant then there is a direct relationship in the results. Whereas, if both total effect and indirect effects are found significant but direct effect is non-significant then results would point towards a full mediation relationship (Pahlevanet et al., 2018). Based on total effect, direct effect and indirect effect, Table 4.5 provides a detailed summary of hypotheses, whether they are accepted or rejected.

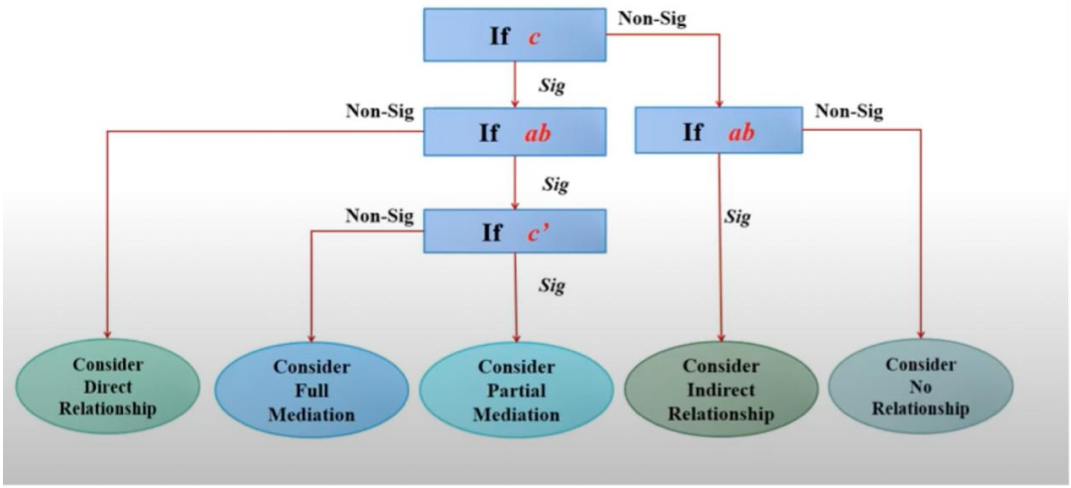

Figure 4.5: Rules of Mediation

Table 4.10: Summary of Hypothesis

Variables	Total Effect (c)		Indirect Effect (ab)		Direct Effect (c')	Results	Decision Rule	
							Accept	Reject
EP → RP	H1	+ Significant	H5a	+Significant	Non-Significant	Full Mediation	H1, H5a	
CSE → RP	H2	Non-Significant	H5b	Non-Significant	Non-Significant	No relationship		H2, H5b
EMC → RP	H3	+Significant	H5c	+ Significant	+Significant	Partial Mediation	H3, H5c	
FST → RP	H4	+Significant	H5d	+Significant	+Significant	Partial Mediation	H4, H5d	

CHAPTER 5 – DISCUSSION AND CONCLUSION

COVID-19 confronted the world with an unprecedented health threat which influenced the global economy, distribution channels, and businesses at large. Due to its impact on the economies, many business owners used a variety of managerial elements combined with innovative strategies to improve the performance of their organizations. While there is growing interest in how businesses performed and combat the effects of pandemic, this study intends to fill a gap in the existing literature by examining how entrepreneurial proactiveness, creative self-efficacy, explorative marketing capability, and food service technology influenced restaurant performance.

For this purpose, a quantitative approach was carried out by analyzing the survey data from 200 top and middle level employees of 30 fine dining restaurants in Lahore, Karachi, and Islamabad. This data was further analyzed through AMOS as structural equating model was conducted. This section discusses explanations tied to each independent variable's relationship with restaurant performance going through service innovation.

5.1. Entrepreneurial Proactiveness

Beginning with entrepreneurial proactiveness, it refers to a personality trait in an entrepreneur that indicates the capability to act quickly and wisely with different situations in the marketplace (Dwi et al., 2020). In this research, the "different situation" considered was COVID-19. According to the results shared in Table 4.10, service innovation has shown full mediation while explaining the relation between entrepreneurial proactiveness and restaurant performance as both total effect and indirect effect have a positive significant relationship while direct effect has a non-significant relationship.

Multiple reasons have been drawn for this relationship; however, one of them indicates that proactive entrepreneurs are more likely to be successful in facing challenging situations which ii apparent in the case of COVID-19. Therefore, entrepreneurial proactiveness has been regarded as an important entrepreneurial quality which can be used for making alert and accurate decisions in a constantly changing business environment.

As the COVID-19 virus made people uncomfortable and fearful to go out, many turned to learn new skills with the help of dedicated webinars. In such cases, some proactive restaurant entrepreneurs saw this as an innovative opportunity to enhance the performance through increasing revenue streams using virtual seminars. These entrepreneurs gave virtual classes on how to set up a restaurant in the most testing time and even gave cooking classes for the most popular restaurant recipes. These proactive restaurant entrepreneurs turned to online revenue by tapping into the virtual classes market resultantly keeping their overall profitability high.

Proactive restaurant entrepreneurs regularly adjust their tactics and anticipate the demands of their customers by listening to them (Thomas et al., 2010). Therefore, these restaurant businesses took measurable steps and remained calm with the panicking news of COVID-19. Another trait which was common in most proactive entrepreneurs was the ability to remain optimistic for the future. Even if things were not working out well, they were confident that their efforts will work out. This mindset made them think that things were going well even when they were going average. In psychology, this effect is called the psychological need satisfaction (Jiatong et al., 2022).

Since restaurants with a proactive entrepreneur are better prepared to anticipate and adjust to the prevailing situations, they can also easily gain market share and customers by acting swiftly when changes arise and mobilizing resources ahead of their competitors. One of the examples in

this case was that restaurants used car dine-in as an innovative measure to combat COVID-19's repercussions. This means, they served the same experience of fine dining to their customers in their cars. A portable table was set up going through one end of their window to another on which candles and food was served to adjust to the social distancing requirements and keep the revenues alive.

Proactive entrepreneurs are forward-thinking, active, and essential sources of economic vitality (Zachary & Mishra, 2011). They are assumed to have a certain set of values, opinions, and personality traits that serve as catalysts for business growth and better performance (Baron, Franklin, & Hmieleski, 2013; Rogers, Viding, & Chamorro-Premuzic, 2013; Wong & Carducci, 2016). One common thing that all the successful restaurants having proactive entrepreneurs had in common was the ability to adjust accordingly. In this case, many thought of an innovative solution which was the launch of "fine dining meal kits". This means that they provided the same restaurant meals frozen and uncooked with the special ingredients and recipes to their customers. These customers took these meal kits home and cooked them themselves with the recipe guidance attached.

So, these few examples and literature support authenticate our findings that proactive entrepreneurs, utilizing their sense of service innovation, were more detrimental for the performance of their restaurants.

5.2. Explorative Marketing Capability

Then comes explorative marketing capability which has relation with restaurant performance, but service innovation has shown partial mediation in this relationship. This is because all three elements consisting of total effect, indirect effect and direct effect have a positive significant relationship with restaurant performance. Upon analysis, it was found that restaurants were

seeking out to what their competitors were doing as well as part of exploring new yet suitable and controlled marketing opportunities.

Some of them included improved organizational structural, employee benefits, better management of external relations, employee career progression, and staff empowerment. This enabled them to generate more innovative ideas with departmental coordination, such as marketing their meals as organic food or containing ingredients that would help combat COVID-19. For example, ginger has proven qualities to improve a person's immune system and some restaurants used this information to their advantage and marketed their meals as rich in ginger (Jafarzadeh et al., 2021).

Since service innovation has showed partial mediation for explorative marketing capabilities, there could be several reasons behind it. For example, some restaurants saw an opportunity and employed web applications for the use of delivery and marketing purposes. Those who did not have an application before, now developed one and were asking customers to download it for discounts and deals. These applications had other preventive measure as well such as what food to eat to prevent and fight COVID-19. Some of the apps were only for employees that had program for employee training, employee empowerment, and implementation of effective succession planning. As part of their explorative marketing capabilities, this restructured their management for a better harmonization among employees and customers and created an internal and external environment which has brought in more creativity and innovative thinking and foster teamwork.

Some restaurants even conducted online workshops and social media campaigns for both customers and employees in the name of "brainstorming sessions". These sessions were meant

for marketing innovative ideas adopted by restaurants so that they can create awareness about the updated designs and layout plans of restaurants. These awareness and brainstorming sessions helped in drawing customer attention specifically during these testing times. Employees and customers were also involved to flip in innovative ideas and the employee or customer with the best idea got a gift card or voucher for the restaurant's meal.

Explorative marketing capabilities produce new information while bypassing the existing products, markets, technology, and capabilities (March, 1991). This type of capability is the main source of competitive advantage because it is creative and innovative (Yalcinkaya et al. 2007). For this purpose, restaurants were showcasing their entire fine dining menus through QR scans on their websites or applications. Some restaurants enabled these QR scans to lead customers for a special discount that popped up every in in 20 customers. The aim here was to excite the customers to look at the menu for a discount and in return increase restaurant sales and revenues, hence improving overall restaurant performance.

In contrary to that, there were also some restaurant entrepreneurs who wanted to try out something that was already present in the market and previously tested by other successful restaurants. Because COVID-19 was a turbulent time, restaurant owners did not want to explore new marketing opportunities with the fear of being failed. In such cases, many fine dining restaurants were marketing their deliveries as "contact-less delivery", which was another innovative idea and was first introduced by the fast-food chains. The riders left the food on the door and encouraged customers to pay online or leave the cash on the door upon delivery. This enabled zero human contact in the delivery process.

Another innovative marketing idea was when some fine dining restaurants marketed their meals to those employees who were forced to work from home and did not like the idea of remote work. They introduced "remote working meals" for such employees who included 2-in-1 coffee/tea for their tea breaks, healthy snacks, and lunch break affordable meals. In some cases, these restaurants even targeted those students who were forced to stay back in the hostels because of a ban in transport by introducing "affordable fine dining hostel meals". This really gave them a boost by exploring and tapping into a market which was much talked about during COVID-19. These examples show that how explorative marketing capabilities can positively affect the restaurant performance.

But reason for partial mediation of service innovation could be due to the reluctance of few restaurant owners in exploring new marketing tools to apply. Some restaurant entrepreneurs did not want to go for risky or bold marketing capabilities while exploring their options. They wanted to try marginalized marketing capabilities to adjust with the challenging business environments during COVID-19. Also, during COVID-19 times, restaurant owners were lacking the financial resources to explore their marketing capabilities. At this time point when their main purpose was to survive, they were hesitant to invest in explorative marketing capabilities given the risk of failure.

Explorative marketing capability requires a focus on acquiring and utilizing knowledge that goes beyond what businesses already know, employing cutting-edge, inventive techniques to research market opportunities and potential clients (Huang et al., 2016). Due to this, restaurant entrepreneurs were scared to invest their resources in new techniques given they were not even sure about the future. Restaurant owners were unable to predict the future during COVID-19, so they were reluctant to let alone try something new for the future to come.

For the restaurant industry, if explorative marketing capabilities tend to rise, they might damage the financial resources of restaurants. This means, if restaurants cultivate marketing exploration capabilities in uncertain times, then it might eat into the essential restaurant resources needed for survival during unpredictable times. Therefore, although explorative marketing is usually cited as a mean to achieve above average sustainable performance (Kim &Atuahene, 2010) restaurant owners must not blindly pursue it rather have a balanced approach to it which is shown in the findings of this study.

5.3. Food Service Technology

Foodservice technology has also shown a partial mediation as all three elements consisting of total effect, indirect effect and direct effect have concluded to be significant.

According to Kim et al. (2010), with the use of food service technology, companies can find ways to improve customer satisfaction by serving up meals of higher quality while also streamlining their operations. One of the reasons why food service technology has a partial mediation is because service innovation in this concept included new menus, new service delivery systems, and improved production methods (Hall, 2009; Ottenbacher & Harrington, 2009; Hjalager, 2010). On contrary, Ottenbacher & Harrington (2007) established that the restaurant sector can embrace innovation by simply improving the quality of products and cost reduction, resulting in increased sales and profitability. Therefore, restaurants who understood the importance of service innovation and its influence on food service technology on a restaurant's level of competitiveness also established that they were suffering from inadequate resources, for example the lack of financial resources to hire or retain trained chefs. This was affecting product quality, and product innovation could not thrive.

Moreover, restaurant entrepreneurs employed food service technology combined with service innovation through the invention of customer friendly food menus. It's very rare for fine dining restaurants to introduce "comfortable food" as their niche focuses on fancy food. However, most of them changed their menus to adjust to the current needs and employ uncertainty reduction. They did this by adding a section of comfortable food such as burgers, sandwiches, pizzas which were more in demand during COVID-19 (Norris et al., 2021).

Another way through which food service technology combined with service innovation was when restaurants introduced "Quarantine Kits", "Lockdown Lunches", "Social Distancing Desserts", and "Stay Home Hors D'oeuvres" to help distinguish themselves from competitors in a taxing time. Some other restaurants have included few more items (by products) in their menu just like face masks, hand sanitizers, paper soaps and few other basic things related to COVID-19 preventions.

Restaurants themselves took measures to combat COVID-19 within their premises as well. They made sure to vaccinate all employees at priority. They also schooled employees on how they can combat COVID-19 and fight it by thoroughly disinfecting every table, utensil, glass, and surface the guest has contacted. COVID-19 can be avoided with minimum human contact, if meals are prepared through machines, there must be a lower chance of human interaction with the meals. In some cases, those restaurants who had the budget to invest in technology even invested in conveyer belts and marketed their meals to be safe as they were mainly being cooked through machines and minimum human contact.

With the involvement of new technologies especially related to communication, restaurants are more expected to deliver value to their customers by offering them new products and services

which could help in reduction of their fear and anxiety of getting infected during pandemics. Strategies related to service innovation shows the concerns of restaurant owners and their staff towards the customers as they want to deliver best services to their customers, which will have a threefold effect i.e. restaurant owners will maximize their profits, employees will secure their jobs and customers will get an anxiety free products and services where there is minimal risk of getting infected.

During pandemic, restaurant owners and managers understood the fact that if they want to survive, they have to bring in innovative ideas so that they can retain their market share. That's why; they went for new and modern innovative strategies which were most need in the times of pandemics. These strategies include acquiring food ingredients which are high in quality, introducing applications of food delivery at the doorstep and more importantly, to uphold a competitive advantage over the competition offer better services in all possible areas.

In the Pakistani restaurant industry, food service technology is regarded as a competitive edge. Not many restaurants employ a lot of technology in the process but those who do regard it as a competitive advantage. However, every technology requires investment to install, financial assistance for maintenance and training of the employees. Since restaurant owners were lacking the required capital and financial resources during the pandemic, employing food service technology from scratch was not considered favorable by entrepreneurs.

Although, food service technology is quite a popular concept, it is still a very new idea in the restaurant industry of Pakistan. Technology is an integral part for the restaurant industry but not the only element through which they can succeed (Rodgers, 2007). As consumers are getting more concerned about sustainable environment, they prefer to purchase products which do not

harm the environment. Therefore, they prefer organic items that do not have a lot of technology involved (Ivanović et al., 2015). When food service technology comes into being, the organic nature of meals may be reduced. For example, to feed cattle proteins that are made from organic waste, the need for soybean meal may decline. A decline in soybean production, which is also used to make oil for food goods, could boost demand for palm oil. More forests may be cleared as a result for oil palm plantations (Coad et al., 2021).

5.4. Creative Self-Efficacy

Lastly, creative self-efficacy is an entrepreneurial trait that involves an entrepreneur's belief to produce creative outcomes (Edwards et al., 2022). In this study, it was found that creative self-efficacy has no relationship with restaurant performance going through service innovation as all three components consisting of total effect, indirect effect and direct effect were resultant to be non-significant.

There exist several hindrances which create a stoppage in the self-efficacy level of a restaurant. These barriers include insufficient spending on R&D, very low or no parameters to protect the intellectual property, insufficient resources including human resources and financial resources, and more importantly high cost of introducing innovation in the restaurant business (Lee, Hallak & Sardeshmukh, 2019; Lee et al., 2016). For example, in restaurant industry, if we talk about taste and food presentation, head chef is considered as a sole source of creativity. A well certified and experienced chef might take high cost, but if he/she is removed to save financial resources, the whole creativity and innovative circle of the restaurant will be badly affected.

Research by Rob et al., (2018) found an interesting reason to why creative self-efficacy is not one of the major elements in increasing restaurant performance going through service

innovation. Based on a model of three priori groups, they distinguish the role of self-efficacy in restaurant industry with regard to the years of experience. For group 1, owners having 11 and more years of experience of hospitality are more effected from the creative self-efficacy and for group 2, owners with 10 and less than 10 years of experience of hospitality are lesser effected from the creative self-efficacy and its effect on innovation and performance is considered non-significant and for group 3, they also observed that creative self-efficacy significantly affects the restaurant performance for the owners with more than 20 years of hospitality experience.

As the experience in restaurant industry increases, restaurant owners and managers gain more insight which is twofold i.e., process specific and content specific. Process specific experience is related to the experience running the business while content specific experience is related to the experience of working in the restaurant industry (West and Noel, 2002). A higher level of the latter type of experience helps in increasing customer knowledge, knowledge about the products, knowledge about the suppliers, and knowledge about the services within the restaurant industry (Gimeno et al., 1997). Furthermore, higher level of experience in the restaurant industry also exposes owners and managers to widen their views about the challenges faced as well as it increases the capabilities of owners and managers to bounce back swiftly and smoothly if they face any setback (Hayward et al., 2010).

Creative self-efficacy is regarded as an integral part for an organization's success (Al-Ghazali et al., 2021), however, this is more likely to be true in normal business environments. Because this research has been conducted to analyze results from the times of COVID-19, creative self-efficacy is not an entrepreneurial trait which was seen to effect restaurant performance positively in any way. One of the many reasons for this is because entrepreneurs were not looking for something completely new and unique. With the panic in place, they wanted to try something

that was already tried and tested to help save them in this challenging situation. Furthermore, creative self-efficacy is led by the intrinsic motivation (Tantawy et al., 2021) which motivates a person to do things without pressure from any external forces (Thomas et al., 2009). Because COVID-19 has been a great external pressure for entrepreneurs to face, there was not much intrinsic motivation left for them here.

Choi (2004) emphasized the importance of a person's past creative behaviors and argued that creative self-efficacy is a person's assessment of the complexity of the creative undertakings they are undertaking based on their past creative successes. Considering this, since COVID-19 was a fresh concept and businesses did not face something like this previously, they could not tell what creative ideas would work in these hard and taxing times. It was hard to predict the future for them and make creative judgments accordingly.

With the results generated, we can conclude that restaurant owners should focus on entrepreneurial proactiveness as an integral component to their success. Apart from this, they should also regard explorative marketing and food service technology but should keep an eye on any external variables that may affect restaurant performance as well since these variables do have an impact on restaurant performance but partially.

5.5. CONCLUSION

The main aim of this research was to understand restaurant performance based on entrepreneurial proactiveness, creative self-efficacy, explorative marketing capability, and food service technology from the lens of service innovation during COVID-19.

With this aim and objective, the study conducted concludes that while entrepreneurial proactiveness is an important component that goes through service innovation and affects restaurant performance positively. Therefore, restaurant entrepreneurs should focus on developing this trait in their personality as it will drive them to be successful. Moreover, we also concluded that explorative marketing capability and food service technology will affect the performance of restaurants but partially. There may be external variables that can have a greater impact on restaurant performance which is making this relationship weaker. Although, it must be kept in mind that because all these results are concluded with the context of COVID-19, these variables might also have a stronger relationship when the study is conducted in normal times. This can be studied further and analyzed by researchers outside of COVID-19 context. Lastly, creative self-efficacy has no effect on restaurant performance during the times of COVID-19 and can also be explored in normal times to see its effect.

The entire research was conducted using quantitative research techniques by letting the top and middle level restaurant employees fill out the questionnaires. Most questionnaires were filled online via Google Forms while some of them were filled in person. The three major cities for conducting this research were Karachi, Lahore, and Islamabad in which 30 fine dining restaurants participated in this research.

The purpose of this research was to aid and educate mainly the restaurant entrepreneurs on improving their performance through a means of several elements and test what might or might not work. However, the results of this research do not aim to shut doors for other service industries as it can still be utilized by all service business industries as they learn on how to react towards an uncertain business situation. In future, further research can be carried out in with different countries having different service industries in the loop.

5.6.Theoretical Contributions

The results of this study have significant contribution on the development and backing of uncertainty reduction theory. In this study, the considerable enhancing impacts of entrepreneurial proactiveness were examined in relation to the restaurant performance, and the influencing mechanism (i.e., pathway) between the two was explained. We explored that entrepreneurial proactiveness will have a positive impact on the performance of restaurants during uncertain and testing times for businesses.

Additionally, the mechanisms by which food service technology and explorative marketing capabilities influence performance can be conceptualized as distinct, with the former primarily boosting performance as these two partially affect the performance of a restaurant. Despite the vital effects of these variables on restaurant performance, research on them during uncertain times is limited. It can be concluded that these variables can be focused on but should not be the primary focus during uncertain times.

Creative self-efficacy, on the other hand, has shown to have no relationship with the performance of a restaurant during uncertain times. While this is an important variable and is backed by scholars for having a positive impact on restaurant performance (Tantawy et al., 2021), it can be

argued that creative self-efficacy is not supporting in the COVID-19 context as it is not a suitable condition to use the resources related to creative self-efficacy during uncertain times.

In a unique way, this research incorporated entrepreneurial proactiveness, explorative marketing capability, food service technology and creative self-efficacy to look at a broader perspective of restaurant performance going through service innovation. Additionally, it has suggested some additional avenues for future research on the connection between an organization's performance and other variables. It has also cast different light on the innovation performance research stream.

5.7.Practical Implications

In turbulent times such as COVID-19, it is important that management knows which factors make signification contribution towards enhancing performance and surviving in competitive markets. Owners and managers of restaurants spend lot of time on different resources to avoid failure and to gain higher performance and competitive position. For the purpose, this study provides some significant insights to restaurant entrepreneurs in terms of improving their performance in an effective manner to achieve their objectives.

Based on the results of the study discussed earlier, several managerial implications were identified and suggestions for promoting performance in the restaurant industry. This study suggests that restaurant entrepreneurs with a proactiveness quality can better enhance the performance of their restaurants. For example, responding to market needs, competitive strategies or turbulent times in an effective proactive manner can help improve their performance. Moreover, they should focus on incorporating food service technology such as

reducing carbon emissions, but also not overdo it and may use organic ingredients as consumers are more health and environment conscious now-a-days.

Apart from this, explorative marketing capabilities can be used when providing new products and services and explore the marketing capabilities at hand. However, in challenging times, restaurant managers should try to comprehend the level of customer acceptability and be familiar with the operations in the kitchen.

Furthermore, each restaurant has different environmental conditions and faces different problems, including the need to may or may not integrate the creativity to solve environmental problems in the restaurant service process. Therefore, this study suggests that in turbulent scenarios, entrepreneurs should try something less risky as the main purpose with such times is to survive.

5.8.Limitations and Future Research Directions

No research could be categorized as complete by all means. There are certain limitations in this research as well that can be figured out in future research. The first limitation of this study is that the study's findings are limited to the specific cities of Pakistan as data was collected only from three major cities of Pakistan. Secondly, because geographical coverage is restricted, generalization of the results should be considered carefully.

A larger sample drawn from a broader range of Pakistani cities could yield more useful and generalized results. This research only examined four different types of independent variables and one mediating variable and moderating variables were missing, however, other variables can also be studied that can affect restaurant performance, such as entrepreneurial resources and search breadth as moderators which could also be considered in future studies.

APPENDIX

Questionnaire

Instructions:

1. Questions are divided into 6 main categories. Each category is defined for your understanding.
2. Please provide following information keeping in mind the times of COVID-19.

Note: This survey is entirely for academic purposes and respondent information will be kept confidential. Thank you for your cooperation.

Gender:

☐ Male

☐ Female

Age:

☐ 16 years - 20 years

☐ 21 years - 30 years

☐ 31 years - 40 years

☐ 41 years - 50 years

☐ Above 51 years

Education:

☐ Primary Education

☐ Secondary Education

☐ Undergraduate

☐ Postgraduate

☐ Doctorate

How many employees are working at your restaurant?

☐ 1-10 employees

☐ 11-20 employees

☐ 21-30 employees

☐ 31-40 employees

☐ 41+ employees

Entrepreneurial Proactiveness	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
It refers to entrepreneur's active tendency to act in the face of various situations.							
1. Our restaurant is always very quick to respond to market needs.	1	2	3	4	5	6	7
2. Our restaurant is always the first to introduce new products or services.	1	2	3	4	5	6	7
3. Our restaurant actively responds to competitor's actions.	1	2	3	4	5	6	7
Explorative Marketing Capability	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
It extends from existing products, market skills and technology to generate unique knowledge and can be viewed as a source of competitive advantage.							
4. Our restaurant continually develops new marketing procedures that are very different from others developed in the past.	1	2	3	4	5	6	7
5. Our restaurant routinely introduces new marketing procedures which are daring, risky, or bold.	1	2	3	4	5	6	7
6. Our restaurant consistently uses market knowledge to develop new marketing processes which deliver different outputs from existing processes.	1	2	3	4	5	6	7
7. Our restaurant uses marketing knowledge to "break the mold" and create new marketing processes not used before.	1	2	3	4	5	6	7
Creative Self-Efficacy	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
It is your opinion of yourself as to whether you can produce creative work and complete tasks in an innovative manner.							
8. In my restaurant, it is required that we find new ways of doing things.	1	2	3	4	5	6	7
9. For my restaurant to be successful, we must think of new or alternative ways of doing things.	1	2	3	4	5	6	7
10. The projects or tasks in this restaurant are such that they require us to be creative.	1	2	3	4	5	6	7

11. In my restaurant, we are always moving towards the development of new solutions.	1	2	3	4	5	6	7
Food Service Technology	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
It is the technology related to improved payments, preparation equipment and business management tools like marketing and operations.							
12. Our restaurant experienced a reduction of cooking time.	1	2	3	4	5	6	7
13. Our restaurant incorporated the use of internet to develop service offerings.	1	2	3	4	5	6	7
14. Our restaurant has experienced a superior process control over time.	1	2	3	4	5	6	7
15. Our restaurant has developed a unique cooking method.	1	2	3	4	5	6	7
16. Our restaurant has maintained the freshness of ingredients.	1	2	3	4	5	6	7
17. Our restaurant has developed a speed and accuracy of service.	1	2	3	4	5	6	7
Service Innovation	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**
It is a practice or idea that can be considered as unique by the societal members.							
18. Service innovation results developed by our restaurant provide satisfactory benefits to customers.	1	2	3	4	5	6	7
19. Our restaurant provides customers with better solutions when compared to existing services.	1	2	3	4	5	6	7
20. The results of our restaurant's service innovation enable our customers to have an excellent service experience.	1	2	3	4	5	6	7
21. Our restaurant provides customers with highly innovative service outcomes that can replace existing services.	1	2	3	4	5	6	7
Restaurant Performance	**Strongly Disagree**	**Disagree**	**Somewhat Disagree**	**Neutral**	**Somewhat Agree**	**Agree**	**Strongly Agree**

It is the production and delivery of value to external and internal customers, both of whom have good outcomes for businesses.							
22. In comparison with our major competitors over the past 3 years, our company has more *market share*.	1	2	3	4	5	6	7
23. In comparison with our major competitors over the past 3 years, our company has more *growth rate*.	1	2	3	4	5	6	7
24. In comparison with our major competitors over the past 3 years, our company has more *profitability*.	1	2	3	4	5	6	7

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