



**DEVELOPMENT OF A SELF-ADMINISTERED MENU MANAGEMENT AND  
PRICING FRAMEWORK FOR SMALL AND MICRO RESTAURANT  
ESTABLISHMENTS**

By

**JACK LAI HAO BIN**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,  
in Fulfilment of the Requirements for the Degree of Doctor Philosophy**

**April 2022**

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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**April 2022**

**Chairman : Professor Muhammad Shahrin bin Abdul Karim, PhD**  
**Faculty : Food Science and Technology**

Food service businesses in Malaysia recorded an average gross output growth of 11.7% annually, amounting to RM 82.8 billion in 2017. The number of food service businesses increased about 5.1% annually from 130,570 to 167,490 establishments in this recent decade. However, unexpected circumstances, such as the COVID-19 pandemic, have disrupted many economical activities, resulting in many failing restaurants. This has created a highly competitive environment for the restaurant operators. Small and micro restaurant establishments are unquestionably at a disadvantage in terms of the business environment, expertise, capabilities, and resources compared to established franchise and chained restaurants. As the saying goes, a profitable restaurant is a successful restaurant. The mismanagement of menu costing and pricing has put many small and micro restaurant establishments at high risk of failure. Existing menu management approaches, such as menu analysis and revenue management, are deemed impractical to be implemented in small and micro restaurant establishments due to their limited access to resources and high learning curve. With that, the current study aimed to develop a practical framework that can help small and micro restaurant decision makers to manage their menu using a pragmatic qualitative approach. The current study adapted a constructive approach to identify critical aspects to achieve a profitable menu from the practical perspectives. This study also comprehensively reviewed the practicality of existing menu management concepts as well as the potential to integrate several prominent theoretical concepts to form a dynamic framework that can holistically assess menu item specifications. In particular, this study focused on simplifying and adapting the existing menu analysis and revenue management concepts to the current work practices of small and micro restaurant establishments. The constructive research approach split this study into four key phases. Firstly, the preparatory phase involved conducting interviews with medium, small and micro restaurant practitioners to identify the key activities of menu management. The findings revealed the significance of considering internal and external conditions of both people and environmental aspects. Following that, the development phase focused on the development of a dynamic

practical framework based on the key activities of menu management according to the varying skills and resource accessibility of restaurant decision makers. Meanwhile, the fieldwork phase implemented the developed framework in eight restaurants to determine the ideal implementation conditions. The findings revealed that knowledge of restaurant decision makers and the degree of control over menu development and pricing restrict the effectiveness of the self-administered framework. Finally, the theorising phase revealed that the developed framework was not feasible for daily routine operations, but more suited for strategic planning, considering the roles and responsibilities of small and micro restaurant decision makers in various non-management tasks. In essence, the MMP framework components were developed through embedding practical menu analysis and revenue management concepts with considerations of the small and micro restaurant's business environment. Most importantly, this study demonstrated the significance of the developed framework in guiding restaurant decision makers to devise actionable decisions for their menu items. The development of a practical framework on menu management and pricing for small and micro restaurant establishments in this study was expected to benefit the restaurant industry and lower the risk of restaurant failure as well as to support the sustainability of small and micro restaurant businesses.

**Keywords:** Menu Management, Menu Analysis, Revenue Management, Cost Control, Restaurant Management, Menu Development



Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PEMBANGUNAN KERANGKA PENGURUSAN MENU DAN PENETAPAN HARGA KENDALIAN SENDIRI UNTUK PERUSAHAAN RESTORAN KECIL DAN MIKRO**

Oleh

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Perniagaan perkhidmatan makanan di Malaysia mencatatkan purata pertumbuhan keluaran kasar sebanyak 12.2% setiap tahun, iaitu berjumlah RM 66.4 bilion. Bilangan perniagaan perkhidmatan makanan juga telah meningkat sebanyak 5.1% setiap tahun, daripada 130,570 kepada 167,490 unit perniagaan dalam dekad kebelakangan ini. Walau bagaimanapun, situasi yang tidak dijangka seperti pandemik COVID-19 yang melanda kini telah menjejaskan aktiviti ekonomi dan menyebabkan banyak restoran terpaksa ditutup. Situasi ini telah mewujudkan persekitaran yang kompetitif dalam kalangan para pengusaha restoran. Berbeza daripada restoran rangkaian dan francais, perusahaan restoran kecil dan mikro jelas berada dalam keadaan yang kurang baik dari segi persekitaran perniagaan, pengetahuan, keupayaan, dan sumber. Seperti kata pepatah, restoran yang menguntungkan dianggap sebagai restoran yang berjaya. Kesilapan dalam pengurusan dari segi penetapan kos dan harga menu di restoran telah mendedahkan banyak restoran kecil dan mikro kepada risiko kegagalan yang tinggi. Pendekatan pengurusan menu sedia ada, seperti analisis menu dan pengurusan hasil dilihat tidak praktikal untuk dilaksanakan di restoran kecil dan mikro ini. Hal ini kerana mereka mempunyai capaian yang terhad kepada sumber dan keluk pembelajaran yang tinggi. Oleh itu, kajian ini bertujuan untuk membina kerangka yang praktikal bagi membantu pihak pembuat keputusan di restoran kecil dan mikro dalam menguruskan menu mereka menggunakan pendekatan kualitatif pragmatik. Berlainan daripada kajian terdahulu, kajian ini menerapkan pendekatan konstruktif untuk mengenal pasti aspek-aspek penting dalam mencapai menu yang menguntungkan dari sudut praktikal. Kajian ini turut melakukan kajian komprehensif terhadap kebolehlaksanaan konsep pengurusan menu sedia ada serta potensi dalam menyatukan beberapa konsep teoretikal utama untuk membina kerangka dinamik yang dapat menilai perincian item menu secara holistik. Secara khususnya, kajian ini memfokuskan proses mempermudah dan menerapkan analisis menu sedia ada dan konsep pengurusan hasil kepada amalan kerja semasa di perusahaan restoran kecil dan mikro. Pendekatan konstruktif membahagikan kajian ini kepada empat fasa utama. Fasa pertama ialah fasa persediaan yang melibatkan proses

temu bual bersama pengamal restoran sederhana, kecil dan mikro bagi mengenal pasti aktiviti utama pengurusan menu. Dapatan kajian menunjukkan terdapatnya kepentingan dalam mengambil kira keadaan dalaman dan luaran dari aspek persekitaran dan juga manusia. Sehubungan dengan itu, fasa pembangunan tertumpu kepada pembinaan kerangka praktikal dinamik mengikut aktiviti utama pengurusan menu berdasarkan pelbagai kemahiran dan kebolehcapaian sumber oleh pihak pembuat keputusan restoran. Fasa ini melibatkan dua restoran kes secara khusus. Sementara itu, fasa kajian lapangan melaksanakan kerangka yang telah dibangunkan dalam lapan restoran kes instrumental bagi menentukan situasi pelaksanaan yang ideal. Dapatan kajian menunjukkan bahawa pengetahuan pembuat keputusan restoran dan darjah kawalan terhadap pembinaan menu dan penetapan harga telah menghalang keberkesanan kerangka kendalian sendiri ini. Akhirnya, fasa teori membuktikan bahawa kerangka yang dibina adalah tidak sesuai untuk dilaksanakan dalam operasi rutin harian, namun lebih sesuai bagi tujuan perancangan strategik dengan mengambil kira peranan dan tanggungjawab pembuat keputusan restoran kecil dan mikro dalam pelbagai tugas di luar bidang pengurusan. Pembangunan kerangka praktikal mengenai pengurusan menu dan penetapan harga di perusahaan restoran kecil dan mikro dalam kajian ini juga dijangka dapat membantu industri restoran untuk mengurangkan risiko kegagalan restoran serta menyokong keberlangsungan perniagaan restoran kecil dan mikro ini.

Kata kunci: Pengurusan Menu, Analisis Menu, Pengurusan Hasil, Kawalan Kos, Pengurusan Restoran, Pentadbiran Menu

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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## LIST OF ABBREVIATIONS

ABC	Activity Based Costing
BAT	Business Action Theory
BOH	Back of House
CDMA	Customer Driven Menu Analysis
COGS	Cost of Goods Sold
CRA	Constructive Research Approach
CVP	Cost Volume Profit
DEA	Data Envelopment Analysis
ERP	Enterprise Resource Planning
F&B	Food and Beverage
FOH	Front of House
GDP	Gross Domestic Product
GVA	Goal Value Analysis
KT	Knowledge Translation
KTA	Knowledge to Action
MA	Menu Analysis
MCDM	Multi-Criteria Decision Making
MEM	Menu Engineering Model
MFMA	Multi Factor Menu Analysis
MMP	Menu Management and Pricing
MPQV	Menu Planning using Qualitative Approach
MTO	Make to Order
MTS	Make to Stock
POS	Point of Sale



RevPASH	Revenue Per Available Seat Hour
RevPASM	Revenue Per Available Square Meter
RM	Revenue Management
RO	Research Objective
RQ	Research Question
RRM	Restaurant Revenue Management
SME	Small and Medium Enterprise
SOP	Standard Operating Procedure
UGC	User Generated Content
WMT	Weak Market Test
WPT	Work Practice Theory
WST	Work Systems Theory

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

The restaurant industry of the economy involves preparing food and drinks that are then served to customers either directly or through curb side pick-up services, catering, or banquets (Dube, Nhamo, & Chikodzi, 2021; Kumar & Shah, 2021). It refers to a sector of the economy that specializes in providing food services in cafes, restaurants, bars, and other similar establishments. According to Forbes, sales in the restaurant industry are expected to rise to \$898 billion this year from \$864 billion in 2019 (Kumar et al., 2021).

Despite the stable annual growth of 2.0% in food service establishments in the United States (US) from 1992 to 2010, nearly 50% of the restaurants failed within 4.5 years, and 79.0% of small start-ups went under within 15 years (Luo & Stark, 2015). A similar trend was found in Ireland from 2008 to 2014, where 47.0% of the restaurants failed within five years (Healy & Iomaire, 2018). Meanwhile, in India, about 40.0% of popular franchise outlets, such as Dunkin Donuts and Domino's Pizza, were unprofitable and had to be closed; such circumstances were attributed to inflation, high rental rate, and intense competition (Bhushan & Bailay, 2018). Similarly, high overheads and rental rate pushed fine dining restaurants in Singapore to sustain their operation at a single digit margin percentage, resulting in the closure of four fine dining restaurants across the country within five months in 2018 (Goh, 2018). Moreover, the trend of eating out has been put off due to the global outbreak of coronavirus disease (COVID-19); about 57.0% of restaurants in Singapore had been projected to experience revenue loss of up to 50.0% during this unprecedented time (Singapore Business Review, 2020) (refer to Appendix A for additional information).

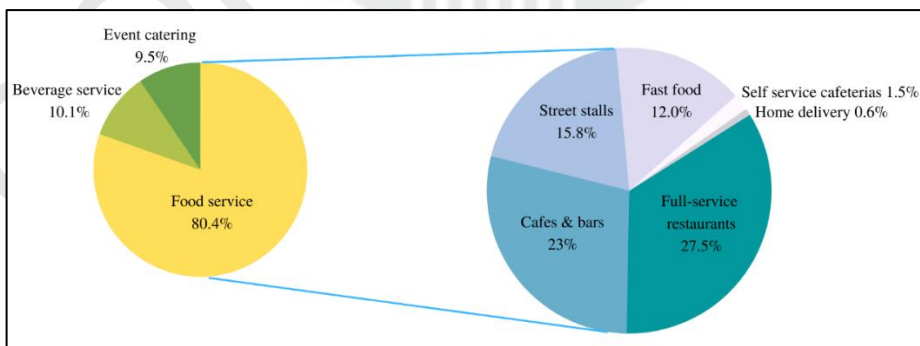
The recent coronavirus pandemic has proven to be devastating towards Malaysia's restaurant industry. Despite the current gradual recovery in 2021, the GDP has not returned to pre-pandemic performance. Prior to the pandemic, the food and beverage services industry contributed about RM 82.5 billion in 2018 with an annual growth rate of 11.7% per annum, constituting 5.5% of the total GDP in Malaysia (Department of Statistics Malaysia, 2019). During the coronavirus pandemic from 2019 to 2020, the small and medium enterprises services sector faced a 9.2% decline in GDP contribution (Department of Statistics Malaysia, 2021). Nevertheless, the food service sector is expected to rebound from RM 64.9 billion in year 2020, to achieving RM109.08 billion gross output by the year 2025 with an annual growth rate of 10.9% (Global Data, 2021).

Based upon this scenario, it is possible to derive that the food service industry is very volatile to unexpected circumstances. Not only that, the services producer price index (SPPI) for accommodations and F&B service activities were known to constitute the highest inflation rate (hovering around 2% to 3% year-on-year) among other categories of the services industry (Department of Statistics Malaysia, 2022). This meant that the cost of eating out has always been inflating much quicker than the cost of purchasing other types of services. Considering Malaysia's inflation rate stagnating also at 2.48% to 3.05% from year 2021 to 2022 (Statista, 2022), Malaysians have become more conservative in their food and beverage (F&B) expenditures. This scenario may discourage consumers to dine out at food establishments which creates a very competitive food service sector.

Considering the constant growth of competition as well as the rising cost of eating out, these statistics have reflected the significant need to identify feasible solutions to sustain the operation of F&B sector in Malaysia. Even international bakeries and restaurants (e.g. Tous Les Jours, Bulgogi Brothers, and Tim Ho Wan) had to face closure due to the intense market competition and economic uncertainty (Free Malaysia Today, 2017). For instance, Tim Ho Wan with two Michelin-star brand experienced losses amounting to RM 895,642 during the financial year of 2016 (Azman, 2017). In this highly competitive market, restaurant operators, especially Small and Medium Enterprises (SMEs), struggle even more to stay afloat.

## 1.2 Challenges of SME Restaurant Establishments in Malaysia

Despite the lack of food service industry data in Malaysia, drawing reference from CRCG's (2017) industry report helped to provide context for understanding the types of establishments that are operated (refer to Figure 1.1). The Malaysian food and beverage sector can be broken down into food services, beverage services and events catering. Amongst the food services sector, the market is mostly dominated by full-service restaurants followed by cafés and bars.



**Figure 1.1 : The Subsectors of Food and Beverage (F&B) Sector in Malaysia**  
(Source: CRCG , 2017)

There are various external and internal challenges that affect the operation of SMEs in the F&B sector in Malaysia. Externally, SMEs encounter lack of infrastructure, knowledge transmission, and government incentives, putting them in a less favourable position in the local business environment (Saleh et al., 2008). Internally, SMEs have limited capacity to maximise the productivity of human resources due to unperceivable demand (Wahab et al., 2017). SMEs often experience these unfavourable circumstances due to their limited resources to gather insightful business intelligence (Radam et al., 2008). Consequently, SMEs are less capable and efficient to compete with established F&B franchises and chains. Besides that, the location, management style, competitive advantage, and branding strategy of SMEs influence their sustainability in Malaysia (Foo, Bajuri, & Wong, 2013).

The Implementation of digital mobile payment services (e.g. Fave) back in 2018 put SMEs at greater disadvantage after large F&B franchises started to adopt such technologies (Benjamin, 2018). Digitalisation for restaurants may be an innovative and efficient approach, but this creates an even more competitive market for SMEs that often encounter limited resources or knowledge to execute these digitalisation efforts (Lee, 2018). The Malaysian government put forward various initiatives to encourage SMEs to implement automation and digitalisation for their existing payment and delivery functions. SME Corporation Malaysia has made various efforts to improve the SME landscape, such as promoting more SME development programmes, especially for the F&B sector in this country. For instance, SME Corporation Malaysia (2017) published business management guidebooks to set up food trucks with the purpose of educating SMEs and aspiring entrepreneurs. To maintain the competitiveness of medium, small and micro restaurants, large corporations also introduced various initiatives to digitalise payment, marketing, and financial services for 100,000 offline food businesses in the country (Sivalingam, 2019). Digital platforms like Fave, Grab, and even Maybank led an initiative known as Growth Malaysia with the goal of helping 100,000 restaurants in Malaysia to expand their business activities online (Sivalingam, 2019; Tan, 2019). Despite the implementation of these initiatives to help small and micro restaurants to compete with other established F&B franchises and chains, they still face menu management and pricing challenges in creating demand, controlling overheads and monitoring food costs due to the inability to adapt to the constantly evolving business environment (Bernama, 2019).

For example, Grunebaum (2020) reported that during the COVID-19 movement control order (MCO) in Malaysia, some small businesses could not adapt quickly enough, especially for businesses that rely on walk-in customers to generate sales. It was further emphasized by Liu (2020), stating that food businesses require high volume to sustain, because the nature of this business have high fixed costs such as rental, salaries, inventory and perishable products. Due to the lack of available data on restaurant failures in Malaysia, it is possible to draw inferences from the US market to provide further context to understand the challenges that restaurants are facing.

According to IBIS World Study on US independent restaurants, restaurants typically achieve 6.2% of profit margins during normal economies and a recession will reduce it even more (Elliott, 2022). To provide further context, during the COVID-19 pandemic, McKinsey & Company reported that US cafes, casual dining restaurants and fine dining restaurants have suffered 60% to 80% sales deprivation due to their inability to adapt to unexpected pandemic restrictions (Haas, 2020). Observations conducted in the US suggested that small businesses are easily impacted by recessions due to their access to fewer resources. Because large businesses are more properly leveraged, large businesses possess an unfair advantage against smaller businesses. During a recessive period, small businesses will see a decrease in sales and increment in bad debt to upkeep their business (Parsa et al., 2021).

The inability to adapt to unforeseen circumstances lead to retarding profits and eventually closure of the establishment. Drawing examples from the most recent COVID-19 pandemic, it was reported by Durai (2021) during July 2021 that 30% of F&B establishments in Malaysia closed since the start of the pandemic, while most operators have suspended their operations because of high overhead costs, and low volume of transactions.

On the other hand, there were also existing F&B establishments who excelled during the pandemic in sales. New F&B start-up businesses that were conceived amidst the pandemic sustained its business through devising creative ways to sell meals and drinks despite the perceived unfavourable circumstances (Daniele, 2021).

It all comes down to the business owner's ability to be adaptive towards the constant change of business environment especially pricing challenges and menu management. For businesses who were unable to catch up to trends such rapidly changes the prices or modify business practices to suit new requirements, these businesses will be deemed to deteriorate in the long run. And essentially, the COVID-19 pandemic fast forwarded this phenomenon to show what happens if a restaurant was unable to adapt and constantly change in accordance with their business environment. Therefore, the following section has illustrated the menu management and pricing challenges towards restaurant industry.

### **1.3 Business Environment of Small, Medium and Micro Restaurant Establishments in Malaysia**

This section describes the business environment of Small, Medium and Micro small and micro restaurants in Malaysia. It is important to properly define the characteristics of SMEs. As previously shown in Figure 3.5, SMEs in Malaysia are categorized by revenue or number of full-time employees (SME Corp, 2016). Accordingly, medium enterprises in Malaysia earn not more RM 20 million or have not more than 75 full-time employees, while small enterprises earn not more than RM 3 million or have not more than 30 full-time employees. There are also microenterprises that earn not more than RM 300,000 or have not more than five full-time employees. However, the constant changes made to the definition of SMEs appear to have negatively affect the long-term strategies



for the growth and development of SMEs in Malaysia (Muhammad, Char, Yaso'a, & Hassan, 2010; Chin & Lim, 2018; Hanifah, Halim, Ahmad, & Vafaei-Zadeh, 2019; Nor-Aishah, Ahmad, & Thurasamy, 2020). This may have contributed to the substantial challenges encountered by SMEs to achieve business viability in this highly competitive business environment.

Based on the review of literature, SMEs in Malaysia mainly encounter problems pertaining to financing and managerial capabilities due to inadequate credit access and limited business networks (Teoh & Chong, 2008; Chin & Lim, 2018; Hanifah et al., 2019; Nor-Aishah et al., 2020). Studies on SMEs in other Asian countries have also identified limited financial access, poor information infrastructure resources, inadequate R&D, and lack of information technology exposure as common factors that contribute to the slow growth of SMEs (Yoshino & Taghizadeh-Hesary, 2016). The limited financial leverage and resources of SMEs are typically linked to the lack of government initiatives. Apart from the Ministry of Entrepreneur Development and Cooperatives (MEDAC), there are a few coordinating government agencies in Malaysia, namely SME Corporation Malaysia, SME Info, and I am SME (imSME) platform, which mainly provide updated information and knowledge of operating SME businesses. However, the lack of government enforcement in monitoring the performance and conditions of these businesses has led to numerous challenges faced by SMEs.

Focusing on the restaurant industry, from the operational perspective, restaurant operators must undergo compulsory food handling training courses. Their business premise must be inspected by the health and local authorities before they can acquire the license to operate the restaurant. This makes sure that the restaurant operators acquire and understand the basics of food handling. However, there are no strict measures with no regular inspection on the conditions of these restaurant establishments, resulting in poor food safety practices in numerous restaurants (S. Lee, Lee, Chua, & Han, 2018).

Similarly, from the financial perspective, the government focuses on providing financial assistance for SMEs, but has placed less emphasis on educating and enforcing SMEs on financial management (Lai, Zainal Abidin, et al., 2020). This suggests the susceptibility of small and micro restaurants to failure due to limited measures to track capital expenditure by the government despite the availability of financial access.

Meanwhile, from the practical perspective, SMEs do not have adequate capacity to manage their finances and resources efficiently and effectively. Most of the restaurants in Malaysia are SMEs that serve their local community, which are operated by family members. For the sustainability of SMEs in this highly competitive economy, it is pertinent to explore their management capabilities from an independent capacity without any government support or institutional influence. Based upon preliminary observations and field notes collected throughout the preparatory phase interviews, the researcher was able to portray and contextualise both the internal and external business environment of the small and micro restaurant industry.

#### **1.4 Menu Management and Pricing Challenges (inadaptability) in Restaurants**

As discussed previously, the food service sector in Malaysia faces strong competitiveness especially towards small and micro restaurants who compete against internationally renowned chains and franchises. Henceforth, restaurant decision makers must constantly be flexible to adapt their menu and pricing to maintain relevancy in their business environment to be successful and profitable considering the uncertainties of the market conditions.

A successful restaurant typically has good managerial, marketing, and economic competencies (Parsa et al., 2005). These competencies are executed according to a menu, which guides all decisions of procurement, production, and services (Taylor, Reynolds, & Brown, 2009). A restaurant manager can make use of menu analysis (MA) and revenue management (RM) to monitor and optimise the performance and profitability of the restaurant. Proper execution of MA and RM can lead to more effective planning, decision making, and strategy formulation (Burgess & Bryant, 2001; Kimes & Beard, 2013; Noone & Griffin, 1997).

MA is a conceptual tool which helps restaurant owners to evaluate the performance of each menu item against other menu items being sold within the restaurant business (Taylor & Brown, 2007). To do so, restaurant owners must gather all necessary data and information for all menu items. The most fundamental data include food costs, contribution margin, sales revenue and quantity sold over time. The food costs and contribution margin are usually determined by the chef. The sales revenue and quantity sold over time can usually be generated by modern point-of-sale (POS) systems. With this information, restaurant owners are then able to determine which menu items are most profitable through triangulating multiple data across each other. As a result, decisions can be made to further improve the performance of depriving menu items. Examples of applying MA concepts in restaurants can include reducing food costs, increasing menu pricing, reducing time of preparation, and even improving the visibility of the menu item within the menu. These evaluations are to be performed periodically to ensure that menu items are consistently profitable and popular.

RM on the other hand, was developed based on marketing concepts. RM is known as a strategy is to sell a product at the right place, at the right time, at the right price to the right customer (Kimes et al., 1999). Its sole purpose within a restaurant, is to maximize the revenue per available seat hour (RevPASH) by manipulating meal consumption duration and prices (Kimes et al., 1998). Examples of RM in restaurants are the implementation of happy hours and set meals to drive more demand and create more sales volume during slow days. Conversely, create special Valentine's day menus and thanksgiving tasting menus at a premium price during peak holidays to take advantage of the high demand.

Through understanding both concepts of MA and RM, it is possible to denote that both concepts aim to increase the popularity and profitability for menus. MA is more focused on fine-tuning the food cost and pricing for each menu item to increase the contribution margin, while RM is more focused on creating demand and sales volume through restructuring menu item offering to make it more appealing.

Studies have demonstrated the inadequacy of the implementation of MA and RM in restaurants due to numerous challenges (Etemad-Sajadi, 2018; Heo, 2013; Heo, Lee, Mattila, & Hu, 2013; S. E. Kimes, 2010; McMahon-Beattie, 2011; Pavesic, 2004; Reynolds & Taylor, 2011). Prior contemporary studies on these approaches mainly focused on improving the accuracy of measurement and advancement of functions, but overlooked the practicality of the implementation of MA and RM as well as the experiences and competencies of practitioners (Kimes & Beard, 2013; Raab & Zemke, 2016; Taylor & Brown, 2007). Despite the growing number of studies on the development of more comprehensive MA and RM, restaurant operators still face challenges to actually implement these approaches, resulting in the operation of restaurants based on their experiences and intuition instead (Rowson et al., 2016). This is particularly true for small and micro restaurants with limited access to resources. Consequently, restaurants encounter problems like inefficient management, unstructured cost control, and potential revenue loss.

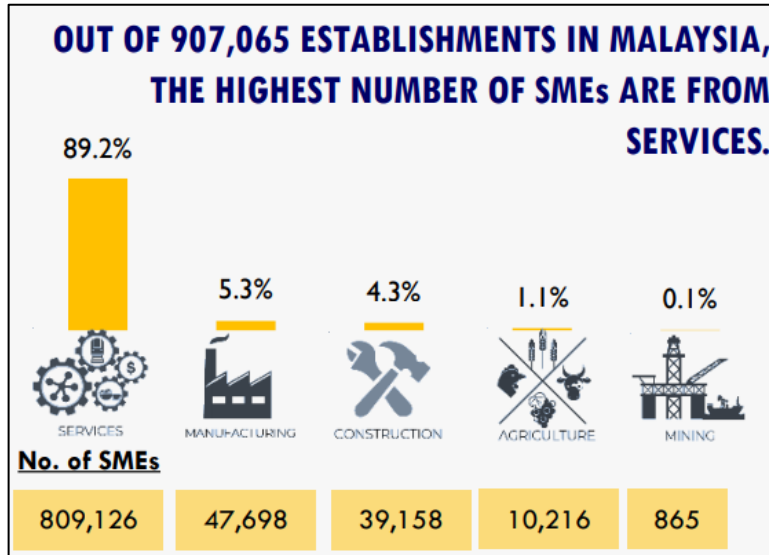
Susskind & Spies (2011) stressed the importance of proper financial management for the sustainability of restaurants. There are numerous hidden costs in the operation of a restaurant; any mismanagement of resources may lead to revenue loss, even for a thriving and award-winning restaurant. Johnson, Surlemont, Nicod, & Revaz, (2005) revealed that only eight out of 15 independent Michelin-starred restaurants in the study were actually profitable. Restaurant operators often encounter problems from their suboptimal menu pricing due to their lack of awareness of the actual profitability (or potential loss) of operating according to their desired menu items. This scenario was evident two decades ago, as Becker (1991) highlighted that a successful restaurant rarely increase their menu pricing despite excess consumer demand. Henceforth, it is vital for restaurants to implement proper menu pricing to support business continuity and minimise the risk of restaurant failure.

## **1.5 Problem Statement**

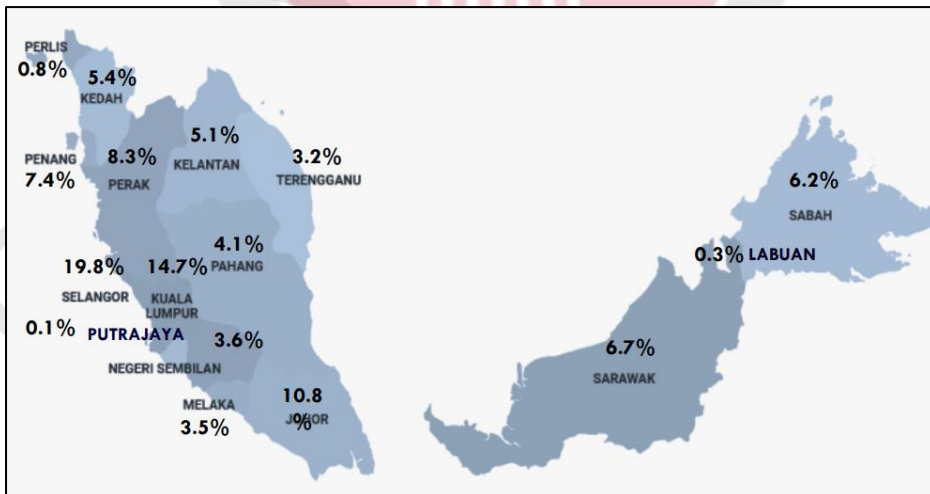
The main problem of this research is that lowest annual revenue growth in F&B industry in Malaysia. This issue has been brought into public by the official statistics of Malaysia in 2020. Despite having the biggest workforce increase, SMEs in the hospitality, retail, and food & beverage industries experienced the lowest annual revenue growth (Department of Statistics Malaysia, 2020). Given the growing growth of the services industry's workforce, it has become increasingly important to maintain enterprises in this sector, which is why the present study's focus is on small and micro restaurant outlets in Malaysia, notably in Klang Valley, Selangor. The statistical data from 2020 and 2021 are excluded from this consideration, though, as the world was dealing with a pandemic, which actually generates more volatile statistics at F&B sector in Malaysia.



SMEs in Malaysia have dominated the business market (98.5%) and employment market (66.2%), but only contributed 38.3% of the country's GDP ((SME Corporation Malaysia, 2019). In particular, 89.2% of total SME establishments in this country were reported to be in the services sector (Figure 1.2), with 34.5% of them concentrated in Kuala Lumpur and Selangor (Figure 1.3).



**Figure 1.2 : Number of SMEs in Malaysia**  
(Source: Department of Statistics Malaysia, 2017)



**Figure 1.3 : Concentration of SMEs in Malaysia**  
(Source: Department of Statistics Malaysia, 2017)

Although SMEs in the F&B, accommodation, and retail sectors achieved the highest workforce growth, these SMEs had the lowest annual revenue growth (Department of Statistics Malaysia, 2020). It has become increasingly pivotal to sustain businesses in the services sector considering the rapid expansion of their workforce, which justified the focus of the current study on small and micro restaurant establishments in Malaysia, particularly in Klang Valley, Selangor.

When there are more restaurants than there are customers, there is a higher supply of restaurants than there are, which creates a highly competitive atmosphere (Lee, Hallak, & Sardeshmukh, 2019; Rajput & Gahfoor, 2020). Due to this competitive economic climate, small and micro restaurants in the Klang Valley in particular face a significant risk of failure. No practical solution has been put forth to assist small and micro restaurants in having to carry out better menu management and pricing, despite the fact that the Malaysian government has introduced numerous initiatives to stimulate the economic activities for small and micro restaurants (such as the promotion of online food delivery and payment platforms). In most cases, an unprofitable restaurant has a mismanaged menu with suboptimal pricing. Large F&B franchises and chains often implement proven concepts such as MA and RM to mitigate such risk. However, small and micro restaurants do not have adequate resources and knowledge to execute such approaches (Raab & Mayer, 2007; Raab & Zemke, 2011). Besides that, most prior studies on MA and RM concepts focused on improving the accuracy and effectiveness of frameworks that may not be feasible for actual operation. Studies by Noone and Griffin (1997) have first suggested integrating both revenue and cost data to achieve a clearer picture about customer preferences and menu mix with the goal of enhancing profit potential. Furthermore, Huefner & Largay (2008) looked into developing pricing strategies with an emphasis on cost data, while Bryant (2001) accentuated that identifying cost data is essential for achieving. Raab & Zemke (2004) previously surveyed 100 restaurants in the United States and respondents expressed that they were aware of such frameworks but, did not know how to apply it. Sadderman (2015) supported this claim by revealing that only top 100 revenue producing restaurants utilize advanced MA approach such as ABC to capture true costs of their operations. Noone and Maier (2015) have also developed a decision framework for restaurant revenue management and concluded their study emphasizing that:

“ It should be recognized that the proposed approach requires commitment (both time and resources) to capture relevant data to be synthesized into actionable results, and a management team with sufficient analytical skills to interpret and act upon those results.”

Finally, a survey done by Vieveen (2017) sums it all up, concluding that “not all revenue management techniques can be implemented because the technology is not available yet”.

Taking the case of MA, recent studies on the development of this approach mainly focused on the application of manufacturing-based approaches to evaluate the performance of menu items. Apart from the meta-frontier efficiency models, the

discussed methods included activity-based costing (ABC) and data envelopment analysis (DEA). Taking the case of ABC method, the application of this method involves creating a bill of all associated costs for each menu item, where the costs are calculated based on the amount of time required by an employee to perform the task related to the menu item (Raab, 2003; Kaplan & Anderson, 2007; Raab & Mayer, 2007; Raab, Mayer, & Shoemaker, 2009; Raab et al., 2010; Linassi et al., 2016; Salem-Mhamdia & Ghadhab, 2012). This further extended the issue of allocating specific costs. Meanwhile, the DEA method involves sophisticated formulae to normalise specific data for each menu item. These normalised data are used to compare its input (cost-related data) and output (performance and profit-related data) to identify any inefficient menu item (O'Donnell, Rao, & Battese, 2008; Taylor et al., 2009; Fang, Hsu, & Rubin, 2012; Alberca & Parte, 2018). Both ABC and DEA methods require intensive data collection and analytical knowledge, which may not be practical for daily implementation.

As for the RM concept, restaurants encounter challenges of implementing RM practices and managing fairness perceptions due to their different nature of business as compared to the airline and hotel industries. It is not feasible for restaurant operators to optimise their daily revenue by changing their menu pricing for the same menu items based on the demands. This calls for a different perspective. Prior studies on the application of RM for restaurants mainly focused on improving efficiency to speed up their service, shifting demand through reservation management, and promoting upselling performance (Kimes, 1999; Kimes & Wirtz, 2003; Kimes, 2004). As there have been no development of a comprehensive RM system for restaurants, customers' dining patterns had to be manually recorded (Kimes & Beard, 2013). Moreover, customer satisfaction is often overlooked in the implementation of RM practices in order to optimise the short-term profitability of restaurants (Etemad-Sajadi & Durand, 2009; Etemad-Sajadi, 2018;). It is imperative to acknowledge right away how much less practicable, applicable, and adaptable these current procedures are for small and micro restaurants. Due to their inability to maximize menu profitability, small and micro eateries are collapsing more frequently. Additionally, the majority of these small and micro restaurants use traditional financial reporting to determine their revenue and losses. It can sometimes be too premature for these organizations to take action on the reported data since conventional accounting does not focus on strategy and problems.

Through reviewing existing MA and RM concepts, it was constantly identified that previous solutions and frameworks were developed with the ideology of achieving more accuracy and effectiveness in revenue management and menu analysis. The drawback from this ideology yielded solutions that were less applicable for day-to-day operations, which required additional researcher supervision for smooth implementation. Therefore, there pose to be also several theoretical gaps in developing solutions that are more practically implementable.

Firstly, the Work Practice Theory which is used for describing a work process or practice posed to lack a component that suggests constant improvement. The absence of a component which endorses the constant review and improvement of existing work

practices would result in no progress or increment in output. For that reason, there pose to be a gap in knowledge translation among the Work Practice Theory.

Secondly, there was no structure to help portray and understand the challenges observed in the practical setting when using the Constructive Research Approach (CRA). Although the existing CRA is split into three distinctive phases and carried out across 7 mindful steps, This approach still lacked a component that help researchers gather structured data when observing work practices in the field during the exploratory phase.

Thirdly, the CRA lacked components to support its theorizing phase to describe and assess implementation outcomes. This gap will yield less comparable results and unstructured data findings. More in-depth guidance from implementation science theories is required to help improve the description of findings when utilizing the CRA.

## **1.6 Research Questions**

Adequate competency on menu management and pricing can help restaurant operators to sustain their business and profitability (Billi, 2020; Sawert, 2020; Lai et al., 2021). Considering the challenges and discrepancies highlighted in the prior sections, the competitiveness of the operating small and micro restaurants is clearly one of the main causes of restaurant failure. Thus, the concepts of MA and RM within the context of small and micro restaurants were deemed noteworthy for the current study to explore, particularly on the adequacy of resources and knowledge of small and micro restaurants in the Klang Valley to optimise menu profitability and mitigate uncertainties through the concepts of MA and RM. With that, the current study addressed the following research questions:

- i) How does the existing business environment in terms of key activities, barriers, and enablers influence menu management and pricing decisions of small and micro restaurants?
- ii) What are the most practical and effective MA and RM concepts for small and micro restaurant establishments?
- iii) What are the ideal implementation conditions for the application of a self-administered menu management and pricing framework?
- iv) What are the strengths and limitations of a self-administered menu management and pricing framework?

## **1.7 Research Objectives**

In general, the current study aimed to develop a practical menu management and pricing framework that can evaluate the adequacy of menu pricing for small and micro restaurant establishments in the Klang Valley. For this study, the following specific objectives were

developed with reference to the constructive research approach (CRA) developed by (Kasanen, Lukka, & Siitonen, 1993) to construct managerial solutions to practical problems:

- 1) To determine key activities, barriers, and enablers pertaining to menu management and pricing of small and micro restaurants in the Klang Valley
- 2) To examine the integration of MA and RM concepts for the development of a practical menu management and pricing framework
- 3) To determine the ideal implementation conditions for the application of developed self-administered menu management and pricing framework in small and micro restaurant establishments
- 4) To examine the applicability of the developed self-administered menu management and pricing framework

### **1.8 Scope of Study**

The implementation of practical and theoretical training for small and micro restaurants on the menu management concepts requires the endorsement of government agencies and corporate support. Therefore, examining the compliance and effectiveness of the menu management concepts was deemed beyond the scope of the current study. The scope of the study was limited to the development of a practical framework to achieve optimal menu pricing for small and micro restaurants in the Klang Valley.

Besides that, examining the existing business conditions and menu management methods in small and micro restaurants as well as the attempt to evaluate the existing menu pricing methods performed by the operating small and micro restaurants were not part of the current study's objectives. Furthermore, this study was not conducted to describe or compare the developed framework with the existing frameworks of MA and RM found in previous studies that emphasised method accuracy and menu profitability. The current study was specifically conducted to obtain better understanding on the challenges and measures taken by small and micro restaurant operators to make menu pricing decisions. Ultimately, this study aimed to develop a practical menu management and pricing framework through the integration of MA and RM concepts for small and micro restaurants to self-administer with minor guidance.

The application of this paradigm was not intended to be universal for all restaurant businesses. The effectiveness of the created framework was not evaluated in this study using a wide sample of restaurants due to the exploratory character of the current investigation. In instance, just a portion of the menus from the participating restaurants in this study were subjected to the proposed framework. Responses from the participating restaurants validated the applicability of the created framework and supported the modifications.



## **1.9 Ontological and Epistemological Perspectives**

The government and large companies have taken a top-down approach to support the growth and stimulate economic activities for small and micro restaurants through a one-size-fits-all campaign. Despite that, small and micro restaurants still struggle to sustain their business and profitability. Moreover, numerous studies on MA and RM overlooked the lack of resources and knowledge of these restaurant operators in applying such complex and technical concepts for their business. Furthermore, identifying practical solutions for underperforming small and micro restaurants has remained underexplored. In view of the above, this study employed a subjective ontological perspective to develop a practical menu management and pricing (MMP) framework through the lens of small and micro restaurants. As different small and micro restaurants encounter varying challenges, the developed framework was developed with dynamic components that conform to the conditions of different small and micro restaurants.

Prior studies formulated solutions from the theoretical perspectives, but the recently developed solutions were deemed too complicated—the implementation of these solutions requires intensive resources. Consequently, this study followed a pragmatic epistemology perspective to focus on the development of a practical framework for day-to-day application. Every component of the developed framework serves a specific purpose. In addition, restaurant operators should be able to self-administer the developed framework without prerequisite knowledge and guidance on the MA and RM concepts.

## **1.10 Significance of Study**

The MA concept is very good at tracking data and reporting menu item performance. This strategy, however, does not take into account the methods used to alter the prices of menu items. Recent MA research have thought about accounting for the effectiveness of managing menu items and distributing expenditures, but they seem to have missed the restaurant's dynamics. To put it another way, the notion of MA might not be as all-encompassing as the concept of RM on its own. Most research on MA did not incorporate and analyze consumer behavior data, such as restaurant occupancy, meal length, and reservation-related statistics, in contrast to other studies on RM. On the other hand, most studies on RM rarely considered using data on menu items to formulate strategies for restaurant operators. In doing so, these restaurant operators optimise profit by changing the production specifications of their menu items, such as ingredients and preparation methods, as well as human resources. In view of the above, the re-engineering of menu items through the integration of MA and RM concepts can help restaurant operators to simultaneously manage their profit margins and maintain fair meal pricing for customers as well as to minimise meal duration, control meal portion, and even determine dining behaviour. Despite the notable findings on the integration of MA and RM concepts, such as better decision making and strategy development for menu-related aspects (Kimes, Chase, Choi, Lee, & Ngonzi, 1998; McGuire & Pinchuk, 2009; Noone & Maier, 2015), findings on the practicality of a functional framework that integrates both MA and RM concepts have remained scarce, which was addressed in the current study.

The current study developed a practical framework that can provide a strategic overview of the strengths and weaknesses of the positioning of every menu item in a competitive business environment. Considering the highly conceptual nature of MA and RM and the complexity to implement these approaches in actual settings, the proposed framework in this study was developed to be self-administrable with minimal guidance. The developed framework includes simplistic format of evaluation for different qualities and peculiarities of menu items through the use of Likert scales, which can be translated into actionable data for menu pricing and strategy development purposes. Through this proposed framework, informed managerial decisions and price of every menu items with respect to the recipe cost can be established. The developed menu management and pricing framework was expected to particularly help small and micro restaurants in the Klang Valley to identify menu item operating constraints and justify menu pricing decisions. They can evaluate their menu items according to the capabilities and popularity of the restaurant. After identifying the sources of constraints, restaurant operators can identify the appropriate responsive actions on potentially unprofitable and unproductive menu items.

### **1.11 Theoretical Significance**

From a theoretical perspective, this study developed a theoretical framework which combined the Work Practice Theory (WPT) and Knowledge to Action (KTA) framework coupled with implementation science theories to permit explaining a constantly improving and self-evaluating work practice. Previous studies applied WPT to help develop business processes and information systems to help make sense out of high amounts of data (Lind, 2005). Goldkuhl & Rostlinger (2006) have highlighted that during the application of WPT, there was confusion when interpreting where knowledge is received to carry out the work practice. As a result, they have then relabelled the WPT to use terminologies such as “descriptions” and “guidelines” to signify knowledge. Furthermore, the WPT has been criticized by Goldkuhl & Rostlinger (1999, 2003) emphasizing that the generic WPT does not “tell the full story”. As a result, in Goldkuhl & Rostlinger’s (2016) paper, one of the propositions made to improve the WPT was to use “workpractice performance to create more experience which provides learning opportunity and a basis for capability evolution”.

Henceforth, this study introduced the Knowledge to Action (KTA) framework to help drive more capability evolution within the WPT. The KTA framework is has been categorized by Sudsawad (2007) as a context-focused model, which takes into consideration the business conditions, situations, and circumstances. Graham et al. (2006) developed the knowledge to action framework with the purpose of constantly identifying issues in clinical practices. Its unique knowledge funnel helped qualify the necessary knowledge that can be applied in practical settings with constant improvement. As suggested by Sudsawad (2007), the KTA framework does not provide additional information on the knowledge action process. In deduction, the KTA focused more on knowledge creation, and lacked description on knowledge application (action cycle). A study conducted by Field et al. (2014) concluded that the “KTA framework was practically applied with varying degrees of completeness”. Through surveying 146

papers, the KTA framework has shown to be utilized as a practical guide to apply research findings in practical settings, but the usage of KTA for real world implementation of solutions seemed limited (Field et al., 2014). For this reason, through combining the WPT and KTA framework, businesses can better depict their work practice contextually with a constant potential for improvement and knowledge creation.

To further enhance the trustworthiness of solutions developed through the KTA framework, this study sought to involve implementation science theories. Klein & Sorra (1996) have long endorsed the need to incorporate implementation science into the evaluation of solutions developed by the KTA framework. Implementation science helps evaluate the entire work practices with new and existing knowledge to improve implementation outcomes of potentially new work practices. Knowledge translation theories focuses on the solution development while implementation science theories focus on the reception and resistance of the proposed solution from the practitioner's point of view (Moir, 2018). This study involved the model of absorption capacity by Zahra & George (2002), determinants and outcomes of organizational readiness for change by Weiner (2009), integrative model of implementation climate by Klein & Sorra (1996), and Proctor et al.'s (2011) evaluation framework. The involvement of these models and frameworks helps support the developed theoretical framework further in data evaluation, descriptions and trustworthiness.

The absorption capacity model focuses on a restaurant's capability in exploiting newly acquired knowledge, but there is no guarantee that the newly acquired knowledge will help improve the organization's performance or productivity (Kamal & Flanagan, 2014). Henceforth in this context, this model prequalifies the new knowledge for a particular work practice within a restaurant. Consequently, the determinants and outcomes of organizational readiness for change evaluates the preparedness of an organisation or establishment to execute the changes required to address the identified shortcomings (Lalic & Marjanovic, 2010). This model ensures that the restaurant's transactional and infrastructural conditions are appropriate for solution execution.

Next, the integrative model of implementation climate gauges the cognitive perceptions of decision makers in mindset and perceived value towards the new knowledge or proposed solution (Klein & Sorra, 1996). Weiner et al. (2011) highlighted that this model would help ensure the long-term utilization of the solution within their work practice. Finally, the evaluation framework by Proctor et al. (2011) supports in the appraising the implemented solution, which further endorses credibility of the evaluation action cycle of the KTA framework. In conclusion, the theoretical aim of this study was to devise a rigid theoretical framework for developing solutions that can be practical and consistently improved.



## **1.12 Methodological Significance**

According to the research questions and the research, the CRA method, created by Kasanen et al. in 1993, was modified in order to promote the creation of a workable MMP framework for small and micro eateries in the Klang Valley. The four phases of CRA—preparatory phase, development phase, fieldwork phase, and theorizing phase—incorporate seven essential elements (Labro & Tuomela, 2003). The present study's preliminary phase concentrated on the practical difficulties faced by small and micro restaurants while building rapport with potential eateries through semi-structured interviews. In order to better understand how to enhance menu price decisions, the research went on to analyze the practical difficulties and menu management principles during the creation phase.

The study identified key components that can be self-administered by small and micro restaurants in order to develop a practical MMP framework. Instrumental case studies were then conducted during the fieldwork phase, where the study implemented the framework among the selected small and micro restaurant establishments of different classifications. In the final phase, the study examined the scope and applicability of the practical framework and concluded the gathered findings with emerging theoretical contributions.

The study focused on proposing a practical solution that must be convenient and self-applicable and does not require specific knowledge for implementation. Besides that, the study presented a practical solution that does not depend on past records or need information collection. A consensus from the case studies in this study portrayed the conceptual use of MA and RM concepts, rather than the explicit use of these concepts. Fundamentally, the chefs, regardless of their position in the restaurants, ensure the effective implementation of the developed framework. The current business performance of a restaurant also has substantial influence on the willingness of the restaurant operator to implement this proposed framework. Nevertheless, this self-administered MMP framework in this study was found to fully benefit owner chefs who are heavily involved in the daily operations. In reality, the MMP framework was more frequently used for expansion, planning, contingency, and benchmarking than for daily operational decisions.

## **1.13 Thesis Organisation**

Overall, this thesis consists of five chapters, which are organised as follows: Chapter 1 introduced the pressing issue of menu management and pricing in restaurants, particularly small and micro restaurants. A pragmatic paradigm was selected to address the research questions and specific objectives of the current study. This chapter also elaborated the significance of sustaining the operation of small and micro restaurants through the integration of MA and RM concepts. The constructive approach helped to give structure to the overall study, which yielded both theoretical and practical contributions.

Chapter 2 focuses on reviewing the existing literature in regard to the problem statement highlighted in the prior chapter. This chapter elaborates the importance of menu management for small and micro restaurant establishments as well as the challenges of implementing menu management. In this chapter, several theories are also presented to explain work practice implementation within small and micro restaurant establishments. A theoretical framework is presented at the end of this chapter.

Chapter 3 describes the research paradigm and selected methodology and procedures for the current study. This chapter also presents the researcher's justifications for trustworthiness and ethical considerations.

Chapter 4 discusses the study's findings with respect to the specific objectives. The chapter presents the discussion according to each phase.

Apart from the conclusions and contributions of study, the concluding chapter presents the limitations of the current study and recommendations for future research.

#### **1.14 Operational Definition**

**Business Environment** – This describes the operational conditions of a business. It portrays a holistic view of all internal and external factors that influences the success and failure of any business.

**Constructive Research Approach** – The constructive research approach is a methodology which follows a pragmatic rational in developing solutions for practical problems. It is a progressive approach, in which it advocates to first understand the problem, then identifying a potential solution, followed by implementing and evaluating the devised solution.

**Environmental Consideration** – Considers the non-human beings involved in the success or failure of operating the business (e.g. Tools, Cleanliness, Ambience, Security, Accessibility)

**External Environment** – Comprise of factors that cannot be influenced by the business decision maker. (e.g. Politics, Weather, Parking Availability, Technological innovation, Inflation)

**Internal Environment** – Comprise of factors that can be influenced by the business decision maker. (e.g. Human resources, Equipment, Capital investment, Seating Capacity)

Knowledge to Action – A framework which displays the process of translating knowledge into action, highlighting the potential enablers and barriers of applying theory into practice. This framework is meant to help practitioners better understand the opportunities and challenges when trying to apply theoretical knowledge in real operational scenarios.

Menu Analysis – A cost focused analysis of all ingredients and processing methods of producing a menu item from scratch. This analysis is carried out with the final goal of identifying the least efficient menu item, followed by taking corrective actions to further improve the business's bottom line.

Menu Management – Covers the managerial tasks and responsibilities related to developing, operating and reiterating a profitable menu.

People Consideration – Considers the human beings involved in the success or failure of operating the business (e.g. Customers, Employees, Investors, Partners, Leaders)

Revenue Management – A strategic approach to find opportunities within the existing business environment to increase potential revenue generated. This approach takes into account existing menu items, and attempts to repackage, re-bundle and remarket to different market segments at different meal periods. This is also done with the goal of increasing the business's bottom line.

Small Medium Enterprise – Describes the small, medium, and micro category of businesses based on number of employees or turnover amount.

Work Practice Theory – Depicts that in any workplace, in order to carry out a work practice correctly and efficiently, managers must consider the capabilities and knowledge of team members, and at the same time consider the available tools, conditions and facilities of the workplace. Otherwise, the work practice will not be efficiently carried out.

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