YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF APPLIED ECONOMICS

MASTER OF PUBLIC ADMINISTRATION PROGRAMME

A STUDY ON THE FACTORS INFLUENCING

THE DEVELOPMENT OF FOOD AND BEVERAGE INDUSTRY

IN MYANMAR

(CASE STUDY: HLAING THARYAR INDUSTRIAL ZONE)

ZIN MIN MAUNG

EMPA II – 29/ 19 (R), 19th BATCH

May, 2024

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This thesis submitted as a partial fulfillment towards the requirement for the degree of Master of Public Administration (MPA)

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This is to certify that this thesis entitled **"A Study on The Factors Influencing the Development of Food and Beverage Industry in Myanmar (Case Study: Hlaing Tharyar Industrial Zone)"** submitted as the requirements for the Degree of Master of Public Administration.

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ABSTRACT

The food and beverage industry are a part of the manufacturing sector in 14 main economic sectors in Myanmar and its growth is the crucial part of Myanmar economy. This study investigates the factors influencing the development of the food and beverage industry in Myanmar, with a specific focus on the Hlaing Tharyar Industrial Zone. This study aims to examine the current status of the food and beverage industry in Yangon Region and identify the factors that influence the development of these industries. To achieve the objectives of this study, demographic data are described and factors influencing the model are analyzed by utilizing both qualitative and quantitative data. Data are collected from 72 respondents including owners, managers, and leaders selected by using the simple random sampling method from the total 251 food and beverage industries within the Hlaing Tharyar Industrial Zone. According to the study, it is found that economic, technological, regulatory and competitive factors have positive effects on the development of food and beverage industry. Socio-cultural factor has negatively insignificant and regulatory factors has positively insignificant in this study.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

ANRT	Anawratar
ASEAN	Association of South East Asian Nations
COVID-19	Coronavirus Disease 2019
DISI	Directorate of Industrial Supervision and Inspection
EG	Emerald Green
F&B	Food and Beverage
FDA	Food and Drug Administration
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ILO	International Labour Organization
MAP	Management Accounting Practices
MFPEA	Myanmar Food Industry and Exporters Association
MMR	Mway Myauu Rayy
MOH	Ministry of Health
MSME	Micro, Small and Medium Enterprises
NPL	Ngwe Pin Lae
PPP	Public–Private Partnership
SLB	Shwe Lin Ban
SME	Small and Medium-Sized Enterprises
STL	Shwe Thanlyin
UMFCCI	Union of Myanmar Federation of Commerce and Industry
WG	Working Groups
Z1	Zone-1
Z2	Zone-2
Z3	Zone-3
Z4	Zone-4
Z5	Zone-5
Z6	Zone-6
Z7	Zone-7

CHAPTER I
INTRODUCTION

1.1 Rationale of the Study

Myanmar has made numerous reforms to the economy since the open economy system was implemented. These changes have brought many new opportunities to further develop the country's economy. The national government has invited many foreign investments to further develop the national economic sector and has especially encouraged local entrepreneurs by establishing plans to enable them to operate small and medium-sized enterprises (SME).

According to the Myanmar Information Management Unit, 89 industrial zones and 3 special economic zones have opened throughout Myanmar, attracting both local and foreign investors. As the business capital, Yangon is the area with the highest population density and the biggest industrial zone. Through Yangon, considerable changes in population density and way of life have spread to neighboring states and areas. Eating habits and lifestyle modifications have also resulted from these changes.

Myanmar's basic diet consists of rice and curry as the main food, but in the past decade, due to the widespread use of the Internet and social media, the eating habits of some countries, such as fast food, snacks, and ready-to-eat foods, have been affected. The modern lifestyle with long working hours and less free time has made it difficult to find time to cook. Therefore, the majority of people today have changed the way they mainly consume ready meals, snacks, fast foods, and beverages produced by factories. Domestic and foreign businessmen have begun to produce and sell food in order to adapt to this change.

Humans can only build a better society if they eat clean, fresh, and nutritious foods, so the national government has established the Food and Drug Administration Department to inspect and supervise the food and beverage industries. Despite this scrutiny, as Myanmar is a developing country, there is a shortage of management professionals to adopt new technologies and provide effective corporate management. Therefore, Myanmar's food and beverage industry has the potential to develop, but it is

found to be stagnant. In addition, the national government and businessmen need to accurately understand the factors influencing the development of the local food and beverage industry. By understanding these factors, the challenges and opportunities facing the food and beverage industry will become clearer, as will potential government interventions. However, there is a lack of research on factors influencing the development of the domestic food and beverage industry in Myanmar. Therefore, this study will examine the factors influencing the development of the food and beverage industries in Myanmar using the Hlaing Tharyar Industrial Zone in the Yangon Region as a case study.

Since Yangon Region is the business capital of Myanmar and a region with convenient transportation, using the industrial zones in this region as a case study can provide a better understanding of the local food and beverage industries. Understanding the factors that influence these industries in the Yangon Region will provide a better understanding of the challenges and opportunities facing the local catering sector. In addition, using the findings of this study, food and beverage companies are able to develop appropriate strategies to penetrate not only domestic but also foreign markets, which may contribute to the nation's economic growth.

This study discovers the strengths and weaknesses of the food and beverage industry. By adjusting these points accordingly, businessmen are able to export and distribute quality food and beverages not only domestically but also to foreign countries. By eating quality food, people can save time and focus on their work, so human resources will improve. Good human resources are able to help the country's development from all sides, as experts and professionals are needed for various sectors of the country. Therefore, this study not only contribute to the development of the local food and beverage industry but also provide positive benefits to all residents of the country.

Therefore, using the food and beverage industry in Hlaing Tharyar Industrial Zone as a case study, it is justified to study the factors influencing the food and beverage industry in Myanmar due to the need for research in this area. This study provides potential investors with effective strategies for sustainable growth and contribute to the development of the food and beverage industry in Myanmar.

1.2   Objectives of the Study

This study examines the current status of the food and beverage industry in Yangon Region and identifies the factors that influence the development of these industries.

1.3   Method of Study

This study selected 72 food and beverage industries in the Hlaing Tharyar Industrial Zone using a simple random sampling method. The analytical analysis method is used by applying a quantitative and qualitative approach in order to gain a broad understanding of the research. A structured questionnaire was used to obtain primary data. To make the analysis of this study more accurate, interviews were also conducted with officials from the Myanmar Food and Drug Administration and the Directorate of Industrial Supervision and Inspection. Secondary data were used from reports of the Union of Myanmar Chamber of Commerce and Industry (UMFCCI), the Myanmar Food Industry and Exporters Association (MFPEA), directives of the Food and Drug Administration, previous studies, literature, and websites.

1.4   Scope and Limitations of the Study

The study will mainly focus on food and beverage industries in Hlaing Tharyar Industrial Zone. Among the 251 food and beverage industries registered as members of DISI in Hlaing Tharyar Industrial Zone, 72 food and beverage industries are selected as sample industries for this study. Questionnaire are distributed to owner, manager and leader of F&B industry, thus, who may be the respondent of this study. This study conducted between December 2023 and March 2024. This study is limited to only those businesses that are 5 years old or older. Secondary data uses data published between 2011 and 2023.

1.5   Organization of the Study

This study has been presented in five parts. Chapter I introduces this study in order to understand it. This chapter includes rationale, objectives, methodology, scope, and organization. Chapter II reviews the literature relating to the theoretical concepts of socio-cultural factors, economic factors, technological factors, regulatory factors, and competitive factors that affect the development of the food and beverage industries with previous studies. Chapter III provides an overview of the history and current status

of the food and beverage industries in Myanmar's industrial sector using secondary data. Chapter IV uses primary data to analyze the factors influencing the development of the food and beverage industries. Chapter V presents findings and suggestions for this area based on data from previous chapters.

CHAPTER II
LITERATURE REVIEW

2.1   SMEs in Economic Development

Small and Medium-sized Enterprises (SMEs) are pivotal to economic development, particularly in emerging economies like Myanmar. SMEs are not only major employers but also key drivers of innovation and competition, significantly contributing to gross domestic product (GDP) and industrial diversification.

SMEs' role in economic development is multifaceted. They provide employment opportunities for a significant portion of the workforce, including underserved and rural populations. This widespread employment capability is crucial as it helps to alleviate poverty and elevate household incomes, thereby improving overall economic conditions. In ASEAN countries, SMEs contribute to between 30% and 53% of GDP and account for 50-95% of total employment, underscoring their importance in regional economic frameworks (Charltons Myanmar, 2021).

In Myanmar, SMEs are particularly influential in the food and beverage sector, where they leverage local agricultural produce and traditional culinary practices to meet both local and international market demands. This sector benefits from the agility of SMEs to adapt quickly to consumer preferences and market changes, which is crucial given the rapid shifts in consumer tastes (UNU-WIDER, 2019). The sector not only enhances food security by improving food production and distribution networks but also supports rural development by providing market outlets for agricultural produce.

Innovation is a standout feature within these enterprises, with many SMEs moving towards organic production and sustainable practices. This shift is supported by the introduction of new technologies and innovative packaging solutions that extend product shelf life, thereby improving efficiency and meeting global health and environmental standards (FoodNavigator-Asia, 2018).

However, the growth and sustainability of SMEs face significant challenges, such as limited access to finance, inadequate infrastructure, and regulatory hurdles. These challenges necessitate robust government policies and initiatives that aim to

improve access to finance, enhance business education, and streamline regulatory procedures to support the growth and sustainability of SMEs (World Bank, 2020).

Government policies have been instrumental in nurturing the growth of SMEs, especially in the food and beverage sector. These policies include financial incentives, training programs to enhance technical and business skills, and infrastructure improvements that facilitate market access (ASEAN SME Agency, 2020). Such support is vital for Small and Medium-sized Enterprises (SMEs) to overcome the challenges encountered and to maximize their potential as pivotal drivers of economic development in Myanmar.

2.2   Food and Beverage Sector

The food and beverage sector are a type of business that includes all the processes of producing, processing, packaging, and distributing food and beverages for human consumption using raw materials. This business includes factory prepared foods as well as freshly prepared foods, alcoholic and non-alcoholic beverages. Therefore, the food and beverage industry include all products manufactured for human consumption, except pharmaceuticals.

The food and beverage industry can be divided into two sectors: production and distribution. In the production phase, cooking (or processing) raw food materials is used to create food and beverages that consumers can enjoy. The distribution section is the section where the finished products from the production section are delivered to the consumer. Both of these sectors are important segments for the growth of the food and beverage industry.

In order to further develop the production and distribution sectors, it is important for entrepreneurs to understand the nature of consumers in relation to the food they produce. Only then can we create and produce food that consumers will like. In order to make the production easier and faster, modern technologies must be used as appropriate. This use will be able to produce products at a lower cost. As entrepreneurs, it is important to comply with the existing laws enacted by the government in order to contribute to the development of the country's economic sector. Today's consumers are dependent on factory-produced foods, but they are paying special attention to healthy foods. Therefore, it is important for entrepreneurs to produce products that are suitable for health in the entire process of the food production, as well as strictly follow all the instructions of the Food and Drug Administration.

In addition to the above factors, there are many factors influencing the food and beverage industry. The study focuses on the five most important factors influencing the food and beverage industry: socio-cultural, economic, technological, regulatory, and competitive factors.

2.3 Factors Influencing on the Types of the Food and Beverage Industry

The theoretical concepts of socio-cultural factors, economic factors, technological factors, regulatory factors and competitive factors influencing the development of the food and beverage industries are presented in a manner compared to previous studies. These factors are especially important for policy makers and entrepreneurs to understand for the development of Myanmar's food and beverage industry.

2.3.1 Socio-Cultural Factors

According to Baron & Kenny (1986), consumers' preferences, habits and consumption patterns can be significantly influenced by socio-cultural aspects of the food and beverage industry. These factors may also be influenced by social and cultural factors that affect an individual's food choices, taste preferences and attitudes. Understanding socio-cultural information is important for businesses in this sector to adapt their products, tastes and marketing methods to suit customers' cultural customs and preferences.

(i) Cultural Traditions and Food Habits

As defined by the National Research Council, (1943), individuals who grow up within a culture tend to consume food regularly in accordance with established cultural norms. These actions are seen as systematically interconnected with other normal behaviors within the same society.

(ii) Rituals and Customs

Fotopoulos & Krystallis, 2002 found that food and beverage industries have a strong relationship with cultural traditions. For example, it is found that traditional food is mainly consumed at religious events, weddings, or other gatherings. Understanding the importance of these customs allows business owners to better execute their product offerings and marketing strategies.

(iii)   Taste Preferences and Flavor Profiles

Within the socio-cultural sphere, taste has a significant impact. Govers, Go & Kumar (2007) found that by using different spices, they expressed different taste preferences for the ratio of sweet, salty and spicy in their dishes. Food and beverage companies must modify their products to adapt to consumer preferences and discern tastes that can be linked to certain cultural contexts. It includes the integration of local products; This includes combining traditional recipes or collaborating with local chefs to ensure flavors that are loved by local people.

(iv)   Dietary Restrictions

Consumer decisions within the food and beverage sector have been found to be influenced by cultural norms and religious practices. According to Minten, Beyene, Legesse & Kuma (2015), some cultures follow dietary restrictions such as vegetarianism or halal eating practices. By understanding these dietary restrictions and preferences, businesses can better cater to the needs of different consumers.

(v)   Social and Lifestyle Influences

Social and lifestyle changes also influence food and beverage choices. Segoro & Nurlita (2021) found that there are differences in eating styles, mealtime rituals and social norms related to food consumption. For example, some lifestyles place more importance on communal dining experiences, while others prefer individual sharing and convenience. Entrepreneurs use social and lifestyle in creating goods, packaging and marketing campaigns to adapt to customer expectations and behaviors. Factors such as style must be considered.

(vi)   Health and Wellness Trends

Consumer perceptions of health are also influenced by the socio-cultural context. According to Grant and Schlesinger (1995), cultural concepts, customs and social norms affect individuals' food choices and habits. For example, in various cultures certain foods are associated with unique health benefits or treatments. Businesses must be aware of cultural perceptions and modify their product composition and communications to suit local beliefs and tastes.

2.3.2　Economic Factors

The development of food and beverage industry are greatly affected by economic considerations. The business environment significantly influences customer behavior, production costs, pricing strategies, and a firm's overall profitability. The food and beverage industry are dominated by several important business sectors.

(i)　Income Levels

The purchasing and spending habits of customers largely depend on their income level. A study conducted by Jacoby and Chestnut (1978) found that people with higher disposable income spend more on food and beverages, especially premium or specialty foods. During periods of economic recession or income volatility, customers tend to limit their spending and choose cost-effective alternatives. Therefore, differences in income levels can have a large impact on the demand for food and beverage products.

(ii)　Employment Rates

Kemp (2022) indicated that the unemployment rate in a region or country can significantly influence consumer behavior. Low unemployment tends to boost consumer confidence and stimulate spending on food and drink. Employment gives individuals more financial means to devote to purchasing high-quality products to eat out or seeking out innovative culinary experiences. In contrast, during periods of high unemployment, consumers tend to be cautious in their spending, choosing only essential foods.

(iii)　Economic Stability

Kemp (2022) identified that a country's economic stability has a direct impact on the growth of its industrial sector. Optimum economic conditions are a boon for companies to thrive as customers show confidence in their financial conditions. Economic stability often leads to increased investment, job creation and increased consumer spending. Conversely, economic instability, such as recessions or financial crises, lowers consumer confidence, lowers spending power and decreases aggregate demand for food and beverages.

(iv)   Production Costs

The food and beverage industry are significantly affected by the cost of production, which plays a significant role in the economy. Differences in raw material, energy, labor and transportation costs affect the cost of producing food products. Segorn & Nulita (2021) reported that fluctuations in commodity prices such as wheat, corn, or oil can have a large impact on production costs. Fluctuations in production costs can prompt manufacturers and traders to adjust their pricing strategy.

(v)   Pricing Strategies

Businesses within the food and beverage sector are influenced by economic issues in determining their pricing methods. Chaochotechaung & Mariano (2016) suggest that companies should consider market factors such as customer demand, production costs and competitive prices when setting the price of their products. During times of economic downturn or price increases, companies may use discounts, promotions, or value bundles to maintain sales volume. In contrast, during periods of economic expansion and rising consumer optimism, companies have the opportunity to focus on high-end products and take advantage of discretionary spending.

(vi)   Profitability and Financial Performance

The economic landscape significantly influences the profitability and financial results of the food and beverage industries. Wustenbery & Tanja (2014) reported that costs, revenue streams and profits are influenced by economic variables such as inflation, interest rates and currency exchange rates. Higher inflation rates may increase production costs as well as impact import and export costs for multinational businesses. Economic considerations can affect investment choices, market competitiveness and the ability of firms to finance growth or innovation.

2.3.3   Technological Factors

A study conducted by Marinova and McAleer (2003) revealed that technological advances have significantly changed the production, processing, distribution and marketing of the food and beverage industries. These technological innovations have dramatically changed the industry, encompassing the entire food and beverage sector. Technology has a huge influence on the market of all sectors.

(i)   Food Production and Processing

Advances in technology have completely changed the methods used in food production and processing, improving efficiency, productivity and safety. Automation systems, robots, and intelligent sensors optimize manufacturing processes and reduce the need for manual labor and human error. Advanced farming methods, such as precision agriculture and hydroponics, reduce the use of resources like water and fertilizers and improve crop yields. Additionally, advances in food processing methods such as freezing, sterilization and preservation processes have effectively extended the shelf life of the food products while maintaining their nutritional content and overall quality.

(ii)   Supply Chain Management

Technology has significantly improved supply chain management in the food and beverage sector. Using digital tools and platforms improves the efficiency of inventory management, demand forecasting and logistics. Real-time inventory monitoring is supported by sophisticated software systems and algorithms, optimizing stock management and minimizing waste. Additionally, the use of blockchain technology increases transparency and traceability in the supply chain, allowing customers to authenticate the source and quality of materials.

(iii)   Packaging and Preservation

According to Kottler (2008), packaging is a significant barrier to the food and beverage industry. According to Thackston (2013), food packaging serves the purpose of making food easier to handle and sell and to protect and preserve it. Advances in technology have led to the development of innovative methods for packaging and preserving food. These technologies help preserve product freshness, prevent spoilage, and ensure that food and beverage products are delivered to consumers in the best possible condition.

(iv)   Quality Control and Food Safety

The industry has greatly benefited from the use of technology in quality control and food safety processes. According to Gölgeci, Yildiz & Andersson (2020), the use of advanced laboratory methods such as DNA testing and spectroscopy allows fast and accurate identification of impurities, allergens and spoilage in food and beverages.

Real-time monitoring and detection systems and sensor technologies ensure compliance with food safety laws and help detect potential problems early. Additionally, the use of blockchain technology increases the ability to track and disclose information, simplifying the process of recognizing and resolving security issues within the supply chain.

(v)   Innovation

The food and beverage sector has been greatly impacted by the technological elements that have driven innovation, improved efficiency and improved customer experience. Industry participants must adopt these technological advances to meet customer expectations and address growing issues in the global food and beverage market to stay competitive. Through the use of technology, companies can improve their production processes, optimize the management of their supply chain, improve the quality and safety of their products, customize their services, and interact with customers in more meaningful ways. To ensure continuous expansion and prosperity in the food and beverage industry, it is important to stay up-to-date with technological advancements and use creative approaches.

(vi)   Sustainability New Technology

Product innovation and differentiation play an important role in determining competitiveness within the food and beverage industry. Companies must be able to create innovative products that effectively capture customers' trendy tastes and attention. Zehi and Sadikoglu. (2012) state that firms are under considerable pressure to keep abreast of emerging technology. Organizations need evolving technologies to meet changing employee demands. Manufacturing organizations need to meet the expectations of newly hired employees. This approach has the benefit of boosting employee motivation and ensuring optimal production for the company. According to Kumar (2012), technological advancements change the expectations of workers and enable them to anticipate opportunities to improve their skills and train to adapt to new technologies.

2.3.4   Regulatory Factors

The food and beverage industry are influenced by laws such as labeling mandates, food safety standards, government policies and trade regulations. Ensuring

consistency of product standards and protecting the well-being of customers depends on compliance with these regulations. The following six essential factors highlight the impact of regulatory influences.

(i)   Labeling and Packaging Requirements

Implementing labeling and packaging regulations ensures that consumers receive accurate and easy-to-understand information. Standards include ingredient composition, nutritional content, allergen warnings, place of origin and other health or safety details. Packaging regulations include elements such as adequate sealing, fragile attributes and suitable materials. Adherence to labeling and packaging standards enables consumers to make well-informed decisions and ensures product integrity and safety (Wandosell, et, al., 2021).

(ii)   Government Policies and Trade Regulations

Government policies and trade laws greatly influence the food and beverage industry. These policies include domains such as trade agreements, taxes, quotas and intellectual property rights. According to Duffy, et, al., (2022) compliance with these regulations is important for businesses involved in global commerce to maintain fair competition and ensure market access. Understanding and adapting to government policies and trade regulations is critical to effectively handling international markets.

(iii)   Food Safety Standard

Regulators develop and implement food safety standards to assure the safety and quality of the food and beverage products. These standards address issues such as sanitary methods, handling, processing, packing, and storage regulations. Compliance with food safety rules is critical for businesses to preserve public health, meet legal duties, and maintain customer trust.

(iv)   Advertising and Marketing Restrictions

Regulations influence advertising and marketing methods in the food and beverage industry. The authorities have implemented regulations to prevent misleading claims, false promotion and dishonest marketing practices. These regulations may impose restrictions on the use of certain health claims, control advertising aimed at young people, and impose truthful depictions of product characteristics. Adherence to

advertising and marketing standards prevents legal complications and promotes ethical marketing strategies to maintain consumer trust. (Jackson, et, la., 2015).

(v)   Sustainability and Environmental Regulations

The number of laws related to sustainability and environmental issues in the food and beverage industry is increasing. Segoro & Nulita (2021) stated that authorities implement laws and provide incentives to adopt sustainable practices, reduce carbon emissions and minimize environmental impact. Concepts include waste management, water conservation, use of renewable energy and adoption of sustainable resource practices. Adhering to sustainability and environmental regulations reinforces a company's dedication to sustainability, meeting customer demands and fostering a more conscientious business.

(vi)   Compliance and Legal Obligations

Consideration should be given to implementing regulations on businesses operating in the food and beverage sector and imposing sanctions and financial penalties as appropriate for non-compliance. According to Esinam, et, al., (2023), keeping companies informed about changing laws, proactively interacting with relevant regulatory bodies, and building strong compliance procedures must be prioritized. Companies can maintain customer confidence in complying with the law and stimulate continuous development in the food and beverage industry.

2.3.5   Competitive Factors

The food and beverage industry are characterized by intense competition as numerous competitors strive for market dominance and customer loyalty. Various competitive forces influence the expansion, profitability, and sustained success of businesses in this industry. It is important for companies to have a comprehensive understanding of these competitive factors in order to develop successful strategies and differentiate themselves in a saturated market.

(i)   Market Saturation and Rivalry

The food and beverage industry are characterized by a high level of market saturation, with multiple products and brands competing for customer attention. This creates fierce competition among industry players and fuels the need for diversification

and innovation. Companies must continuously strive to create unique value propositions, differentiate themselves from competitors, and gain market share through product differentiation, branding, pricing and marketing strategies.

(ii) Branding and Reputation

In the food and beverage business, a robust brand and favorable reputation are key competitive elements. Consumers often seek out brands and items that they perceive as have superior quality and value. Companies that have cultivated a favorable brand image and reputation have a competitive edge as customers are more inclined to choose their items over lesser-known or generic alternatives. Establishing and sustaining a robust brand presence requires the ongoing provision of high-quality goods, successful marketing initiatives, and exceptional customer experiences.

(iii) Pricing Strategies and Value Proposition

Grant & Schlesinger, 1995 said that pricing plays a significant role in influencing customer choice within the food and beverage business. Companies must achieve a harmonious equilibrium between delivering value to customers and ensuring profits. It is crucial to establish pricing that are competitive and in line with the quality of the product, the perceived value it offers, and the dynamics of the market. Certain organizations choose for premium pricing strategies to establish themselves as luxury or high-end brands, whilst others prioritize cost to cater to budget-conscious customers. Comprehending the level of sensitivity consumers have towards price and providing them with products or services that provide good value for the money are crucial factors in deciding on successful pricing strategies.

(iv) Distribution and Access to Markets

Efficient distribution and convenient market access are crucial competitive considerations in the food and beverage business. Companies must guarantee that their goods are delivered to customers via efficient distribution networks. Forging robust partnerships with retailers, distributors, and food service providers is crucial for attaining market entry and broadening one's reach. Furthermore, the expansion of e-commerce and online platforms presents novel prospects for enterprises to directly engage with customers and circumvent conventional distribution channels.

(v)   Customer Relationships and Loyalty

Establishing robust client connections and cultivating loyalty are crucial elements for gaining a competitive edge. (Jacoby & Chestnut, 1978) said that the act of making many purchases and exhibiting loyalty towards a particular brand are factors that contribute to the sustained expansion and profitability of a business. Companies should prioritize the delivery of outstanding client experiences, answering consumer feedback, and upholding high standards of product quality and consistency. Utilizing social media, loyalty programs, and tailored marketing campaigns may cultivate enduring client connections and establish a devoted customer base.

(vi)   Production of Quality Products

Mitra (2005) highlights the inherent difficulties faced by businesses, including short product life spans, product proliferation, limited or declining markets, increased competition for limited or declining markets, high consumer demands and employee expectations. Munizu (2006) stated that there are significant problems in the food and beverage industry related to differences in raw materials, packaging, product health and safety, product shelf life and training. According to Qin (2008), quality difficulties associated with raw materials have forced the industry to implement supplier quality management techniques. According to the same source, supplier quality control is critical to producing superior products.

2.4   Review on Previous Studies

There are many scholars and researchers conducted the SMEs research. Chaochotechuang and Stefania (2016) examine the actual implementation of product innovation management in the new product development process inside small and medium companies (SMEs) in the Thai food and beverage industry. The analysis revealed that new product development initiatives were mostly within the purview of senior executives. Obstacles to product creation include insufficient technology, limited financial resources, inadequate personnel skills, and stringent local regulations. SMEs primarily use networking, resource-based, knowledge-based, open innovation, and technology acquisition/making tactics to overcome these obstacles and enhance their competitiveness.

In additions, Thazin Han (2019) examines the obstacles faced in the growth of the food and beverage business in the Eastern District of Yangon. Restricted growth of

manufacturing capacity, Inadequate and poorly defined business strategy and management structure, State-imposed levies, Inadequate use of contemporary technologies and a dearth of inventive ideas from professionals, Expensive land cost, Inadequate investment amount, there is a need for highly qualified workers and technicians. Production: Government loan or subsidy provided to enhance production. Inadequate legislation and insufficient safeguards, Insufficient electrical power, Insufficient provision of a training program, Importation of equipment, raw materials, and packaging materials. Addressing market problems in international exports, Delays were identified as the primary factors contributing to the difficulties encountered in the development process.

Moe Hnin Phyu (2023) conducted a study to identify the elements that influence labor productivity in the garment industry. The study also investigated the correlation between labor productivity and garment exports, and studied if there is a short-term link between labor productivity and exports. The findings of this research indicate that the labor productivity of garment businesses in Myanmar is influenced by variables such as human capital, management practices, pay and incentive system, and employee welfare programs. These elements are within the direct control of the enterprises themselves. Conversely, a company's rise in worker productivity is indirectly bolstered by external factors such as government rules and policies, public utilities and infrastructure, and national culture.

Thin Thin Yu (2023) examines the various factors influencing the expansion of small and medium-sized enterprises (SMEs) in the manufacturing sector, which is entitled "Factors Influencing the Growth of Manufacturing SMEs in Industrial Zones in the Yangon Region: A Comparative Analysis of Industry Types." The study also looks at the differences in impact across various industry types. The objective of her study is to improve small and medium-sized business (SMEs) growth using a variety of strategies. These strategies include giving local business owners training programs to improve their management and skill sets, helping them secure funding, lowering obstacles, enabling access to contemporary technology and information, and enhancing infrastructure like power and storage facilities.

Tan, Wong, and Kong (2023) analyze the variables that influence consumer satisfaction in the food and beverage sector in Penang, Malaysia. The research findings indicate that several elements, including product quality, service quality, pricing, food

safety and cleanliness, and physical environment, positively influence consumer satisfaction within the food and beverage business in Penang, Malaysia.

The findings of this research indicate that franchisees in the food and beverage sector expressed a high level of satisfaction with brand value, training and knowledge transfer, operational assistance, communication and responsiveness, contractual integrity, trust, and financial support. They also acknowledged the importance of inputs and anticipated future outputs. Moreover, the majority of franchisees are seeing significant beneficial outcomes in terms of operational assistance via the use of analytical research methods, namely quantitative studies. (Zaw Win Lat, 2019)

Significant increases in income are linked to the combination of regional agricultural output and the expansion of densely populated areas. The dependent variable in this study is the average income growth from 2006 to 2008. The independent variables include the age of the plant, the number of employees, the sector of the commodity, the labor supply in the county (specifically manufacturing wages and education), the population in the county (specifically population density and population growth rate), and the rural/urban classification and agglomeration in the county (specifically agricultural receipts per capita, F&B manufacturing percentage, and the number of F&B wholesale/retail/service establishments on an individual basis). The modeling methodologies included statistical testing using ordinary least squares and two-stage least squares, as well as the instrumental variable approach for the firm mass variable in the stream. (Jeffrey S. Hall and Todd M. Schmitt, 2010)

Gaining a comprehensive understanding of this industry is crucial, given that it will contribute to about 15-30% of all environmental burdens by 2050, and the global population is projected to reach 9.5 billion individuals. According to Alkis Thrassou et al. (2020), the expansion of the food markets worldwide has made it more crucial to track the source, quality, nutritional content, and ethical and sustainable practices of the food production. This is important for both consumers and stakeholders involved in the food industry.

Based to Singh's Balraj research (2022), there exists a modest and negative link between the characteristics of restaurant consumers, such as their nationality, gender, and marital status, and the sort of cuisine they choose. This implies that consumers' choices are somewhat influenced by their nationality, gender, and marital status. Additionally, it indicates that those who possess a deep sense of patriotism and strong familial bonds are less like to get pleasure from eating in restaurants. Conversely, there

exists a modest but favorable association between economic status and dietary preferences, as well as a parallel relationship with religious affiliation. Disparities in religion or socioeconomic status have a direct impact on factors such as the expense and variety of the food consumed when dining out.

Yapp, Charlotte & Fairman, Robyn. (2006) identify the factors affecting food safety compliance within small and medium-sized enterprises: implications for regulatory and enforcement strategies. This empirical research assessed the factors affecting compliance with food safety legislation within small and medium-sized enterprises. This showed that whilst some of the barriers identified within other research were present within food businesses (specifically time and money), there were also a number of complexes, underlying issues that prevented compliance with regulatory requirements and which have implications for regulatory and enforcement policy. These barriers included the lack of trust in food safety legislation and enforcement officers; a lack of motivation in dealing with food safety legislation; and a lack of knowledge and understanding.

Murillo, Kelly & Rocha, Eugenio. (2020) determines the factors influencing the economic behavior of the food, beverages and tobacco industry: a case study for Portuguese enterprises. This study stated that the food sector plays an essential role in the economy of any country, representing a significant contribution to gross domestic product, total employment, and disposable income of households. The results of this study have shown that an analysis of the variables that must be approached differently to obtain better results regarding economic performance. Although there is an increase in credit with the acquisition of long-term debts, there is no evidence that this implies the ability of enterprises to grow faster, which affects profitability.

Demir, Yeliz & DİNCER, Fusun (2020) studies the effects of industry 4.0 on the food and beverage industry. This study stated that production and technology are the two concepts which have a significant relationship with each other. The food and beverage industry are a broad industry where raw materials, semi-finished and finished foodstuffs are processed, packaged and distributed.

CHAPTER III

OVERVIEW OF THE FOOD AND BEVERAGE INDUSTRIES IN MYANMAR

3.1   Myanmar's SMEs Sector

The sustainable development of the economic sector in various countries largely depends on small and medium enterprises (SMEs). Small and medium-sized enterprises (SMEs) contribute to many areas of the economy, including industries such as trade and services. They improve people's capabilities, provide employment opportunities, facilitate import substitution and exports, conserve natural resources and promote the development of modern technology.

In Myanmar, since 1990, the government has focused on SME businesses. In particular, in 1990, the state enacted the Private Industry Law. To bring the law up to date, the Union Parliament revised it in 2011. Therefore, it is known that successive governments in Myanmar have constantly emphasized SME businesses. Both the 1990 and 2011 laws clearly distinguish industries into small, medium, and large enterprises. The table below sets out the criteria defined by both of these laws.

Table (3.1)   Classification of Small, Medium and Large Enterprises

No.	Description	Small	Medium	Large
1	Electricity consumption	3 HP - 25 HP	25 HP - 50 HP	> 50HP
2	Employee	10 – 50	50 – 100	> 100
3	Capital (Kyat million)	1	1 - 5	> 5
4	Annual production (million kyat)	2.5	2.5 - 10	> 10

Source: Private Industries Act (1990/2011)

According to Table (3.1), the different sizes of industries are defined by 4 criteria, which are electricity consumption, workforce, capital and annual production capacity in order to accurately define the meaning.

All SMEs in Myanmar are under the direction of the Ministry of Industry. Before 1988, SMEs were spread all over the country, but in order to facilitate and speed up the flow of goods, after 1988, the government consolidated them into industrial zones. The original purpose of the industrial zones was to attract international investment, make domestic entrepreneurs competitive and produce high productivity, and promote equal development among states and regions. The time when the industrial zones began to be built was a time when they were going through international pressures and economic sanctions, so international investment and access to new technologies kept the industrial sector at a standstill for a time.

Although the national government faces economic sanctions in order to develop the domestic economy, since 1997, recognizing the importance of the role of SME enterprises to the national economy, it has participated in the ASEAN SME WG. In 2012, after the implementation of the market economy system, the government established the SME Development Center. Since then, the role of SME has gradually evolved. Then, in 2014, regional SME branches were expanded and opened. However, since there are no specific legal policies for SME enterprises, the development of SME enterprises has not been able to obtain accurate information. Therefore, Union Hluttaw Law No. 23 of the Union Hluttaw enacted laws and policies for the development of small and medium businesses in 2015 in order for SMEs to work equally under specific regulations. At the same time, in 2016, the regulation of SME enterprises was released. Then, in 2018, in order to further promote the role of SME enterprises, SME enterprises began to be used as MSME enterprises. In addition, since the 2018–2019 fiscal year, MSME product fairs and competitions have been held across the country to facilitate the innovation and flow of goods by SME entrepreneurs. Then, in order to upgrade industrial zones, create employment opportunities, attract foreign investment, and produce value-added products based on domestic raw materials, the Industrial Zone Law was enacted in 2020 with Union Hluttaw Law No. 7.

According to information provided by the Myanmar Information Management Department, a total of 89 industrial zones have been developed in all regions/ states/ union territories. According to the data, 47 industrial zones, which are 52.8% of the total number of industrial zones, have been opened in Yangon Region. Mandalay Region has the second largest number of industrial zones, with 7 industrial zones opened. In Nay Pyi Taw, which is a union territory, a Dakshina Sri Small and Medium Enterprises Industrial Zone has been opened. After that, 5 industrial zones have been opened in Irrawaddy Region, 4 industrial zones each in Bago Region, Sagaing Region

and Shan State. Three industrial zones have been opened in Tanintharyi Region, Mon State and Kachin State. 2 industrial zones have been opened in Rakhine State and Karen State, 1 industrial zone in Kayah State, and industrial zones have been developed in all states and regions. The details of these industrial zones are given in the Appendix (III/A). The total number of registered and operating factories in all the above-mentioned industrial zones is 46,889 factories according to the indicators of the Ministry of Industry. The information is presented in the table below.

Table (3.2) List of Small and Medium Industries by Region/State/Union Territory

No.	Region/ State/ Union Territory	Number of businesses			Grand Total	Percentage
		Large	Medium	Small		
1	Kachin State	133	260	1673	2066	4.41
2	Kayah State	45	185	47	277	0.59
3	Kayin State	163	258	1807	1228	2.62
4	Chin State	9	75	646	730	1.56
5	Sagaing Region	564	1364	2949	4877	10.40
6	Tannthari Region	308	232	1471	2011	4.29
7	Bago Region	797	1074	198	3869	8.25
8	Magway Region	227	813	2006	3046	6.50
9	Mandalay Region	1616	2655	2287	6558	13.99
10	Mon State	290	444	1732	2466	5.26
11	Rakhine State	124	190	994	1308	2.79
12	Yangon Region	3952	2580	1197	7729	16.48
13	Shan State	449	1304	2832	4585	9.78
14	Ayeyarwaddy Region	1204	721	3519	5444	11.61
15	Union Territory	249	215	231	695	1.48
	Grand total	10130	12370	24389	46889	100.00
	Participation percentage	21.60	26.38	52.01	100.00	

Source: Directorate of Industrial Supervision and Inspection website (20.2.2024)

According to the above table (3.2), 16.48% of the total industrial activities are located in Yangon due to the large number of industrial zones in Yangon Region, being a business capital, and easy and fast transportation. Then Mandalay Region, which is the second largest, with 13.99%, is found to be operating 6558 industries. Among all states and regions, Kayah State is found to be the least industrialized state, with 0.59%.

Businesses operating in all industries across the country are classified into 24 business categories. 24 types of businesses are: Food manufacturing industry (X_1), Beverage manufacturing industry (X_2), Tobacco-related products (X_3), Textile industry (X_4), clothing manufacturing industry (X_5), Production of silk-related products (X_6), Manufacture of wood and wood products (without furniture) (X_7), Paper and paper products (X_8), Reproduction of printed and recorded information (X_9), Production of petroleum coal and refined crude oil products (X_{10}), Manufacture of chemicals and chemical products (X_{11}), Medicines, Medicinal Chemicals, and Botanical Products (X_{12}), Production of rubber and plastic products (X_{13}), Manufacture of other non-metallic minerals (X_{14}), Production of basic metal products (X_{15}), Manufacture of metal refining equipment, excluding machinery and equipment (X_{16}), Manufacture of computer, electronic, and optical communication equipment (X_{17}), Manufacture of electrical appliances (X_{18}), Manufacture of machinery and equipment not otherwise specified (X_{19}), Manufacture of motor vehicles and trailers (X_{20}), Other transportation equipment manufacturing (X_{21}), Furniture making (X_{22}), Manufacture of other goods (X_{23}), Preparation and installation of machinery and equipment (X_{24}).

Table (3.3)   List of Industries in Myanmar

No.	Type of Industries	Kachin State	Kayah State	Kayin State	Chin State	Sagaing Region	Tanınthari Region	Bago Region	Magway Region	Mandalay Region	Mon State	Rakhine State	Yangon Region	Shan State	Ayeyarwaddy Region	Union Territory	Total
1	X_1	1386	110	385	625	2934	1000	2304	2014	2320	954	883	1891	2409	3868	399	23482
2	X_2	58	9	57	4	125	33	155	99	295	98	23	507	197	119	61	1840
3	X_3	1		1		6	3	18	8	57	3		9	33	2		141
4	X_4	37			1	192	1	18	64	825	1	9	169	12	13	2	1344
5	X_5	1	11	44		8	1	62	8	48	23	5	1048	8	23	5	1295
6	X_6			2		10		13	23	71			107	4			230
7	X_7	153	31	50	4	179	90	342	160	296	105	65	432	144	84	35	2170
8	X_8	1	2			10	1	8	4	39	3	2	179	55		1	305
9	X_9					9		7	2	67	8		387	17	3	1	501
10	X_{10}			1		161				74		1	11				248
11	X_{11}	7		13		43	14	34	61	162	30	22	194	45	58	12	695
12	X_{12}		1			10		5	2	21			43	4	6		92
13	X_{13}	19	1	60		50	28	54	19	191	92	21	846	66	44	26	1517
14	X_{14}	45	32	73	64	155	91	102	62	562	206	10	160	271	54	37	1924
15	X_{15}	5	4		8	50	8	29	21	1190	42	1	144	69	10	3	1584
16	X_{16}	72	13	198	1	112	251	272	108	42	402	27	551	285	893	40	3267
17	X_{17}							2		1			3	1			7
18	X_{18}		1			3		5		20	12		84	4		1	130
19	X_{19}	4	6	3		12	1	15	10	23	6		45	8	45	2	180
20	X_{20}			3		9		10		23	2		42	7	1		97
21	X_{21}					1	1	4	2	13			23		1	1	46
22	X_{22}	10	16	43	5	18	34	13	3	20	89	17	123	46	86	2	525
23	X_{23}	33		34	1	27	56	22	57	82	55	3	216	34	57		677
24	X_{24}	234	39	260	17	750	398	378	318	114	328	219	515	865	77	67	4579
25	Total	2066	276	1227	730	4874	2011	3872	3045	6556	2459	1308	7729	4584	5444	695	46876

Source: Directorate of Industrial Supervision and Inspection Website (20.2.2024)

Table (3.3) shows that there are 25,322 food and beverage factories (23482 in food and 1840 in beverage) out of a total of 46,876 enterprises, which is the largest type of enterprise in Myanmar's industrial sector. In addition, due to urbanization and lifestyle changes in Myanmar, consumers' consumption patterns are also changing.

With social media-driven trends, consumers' consumption of ready-to-eat foods, processed snacks, and beverages is steadily increasing.

The growth of the domestic food and beverage industry in Myanmar depends on economic reforms, increased foreign investment, the development of new production methods and changes in consumer behavior. These factors can contribute to the development and transformation of the local food and beverage industry. The following table (3.4) shows the number of small, medium and large food and beverage enterprises in Myanmar between 2015 and 2022.

Table (3.4)   Food and Beverage Industries in Myanmar

Years	Food	Percentage	Beverage	Percentage
2015-2016	27600	-	520	-
2016-2017	27384	0.992%	831	1.598%
2017-2018	27712	1.004%	1003	1.929%
2018-2019	27911	1.011%	1211	2.329%
2019-2020	27463	0.995%	1412	2.715%
2020-2021	25863	0.937%	1586	3.050%

Source: Directorate of Industrial Supervision and Inspection Website (20.2.2024)

According to the table above, it can be seen that the domestic food industry has gradually decreased since the financial year 2019-2020 when the global epidemic Covid-19 broke out. However, the beverage industry has grown year-on-year without decreasing.

There are 7,729 registered enterprises in all industrial zones of the country, of which 4,364 (56.10%) are SMEs. The largest share (28.62% of all SMEs) is found in industrial zones in the Yangon Region. Mandalay Region (28.53%) and Sagaing Region (13.91%) are the second and third cases. Yangon Region is home to the largest number of industrial zones, as well as being a business capital with good transportation and a fast flow of goods. In addition, the Yangon region is Myanmar's commercial and logistics center for international trade, and the ports in Yangon and export-oriented production facilitate the entire international container and cargo costs with low labor costs. Therefore, the manufacturers are considering investing in industrial zones in the Yangon Region because they want to produce locally and abroad. In this way, most SMEs focus on the Yangon market, which is the largest consumer market in Myanmar. For these reasons, the number of businesses registered in industrial zones in Yangon Region is the highest in the country.

3.2 Industrial Zone in Yangon

Since the government implemented industrial zones in the 1990s to build industrial zones in Myanmar's major urban areas, the number of industrial zones has been growing until 2019. The total number of industrial zones in the Yangon region has now reached (47) zones, according to the website in Directorate Industrial Supervision and Inspection, Ministry of Industry. Yangon Region is one of the most economically active regions of the country due to its high level of infrastructure development compared to other regions and states. Therefore, these industrial zones are areas where business operations and activities can be carried out by entrepreneurs, are designated as the main location for export-oriented sectors, and are the most populated areas.

Most of these industrial zones are expressly designated for private manufacturing. Investors manage the day-to-day management of each industrial zone. A private industrial zone management committee made up of representatives from pertinent public agencies and government officials oversees it. Management techniques and service standards vary across industrial zones, but most, such as South Dagon and Hlaing Tharyar, have taken initiatives to improve their utilities. This includes the construction of substations, the installation of backup generators, and wastewater treatment plants.

Road conditions within industrial zones in the Yangon Region vary significantly from one location to another. Paved highways are generally wide enough to handle heavy trucks, especially container trucks. However, many of the access roads to each manufacturing plant in the industrial zone are in disrepair. Due to inadequate drainage, road conditions can deteriorate significantly during the monsoon season. An excessive lack of street lights hinders safe driving in many places.

Located a few kilometers from Yangon's industrial zones, Dagon Port now handles nearly 90 percent of Myanmar's international trade. Due to the decrease in the depth of the rivers in the center of Yangon, the port is unable to accommodate large cargo ships. Due to increased trade volume, inadequate port infrastructure, and inefficient cargo handling procedures, cargo ship congestion often occurs.

Factories located in industrial zones can operate on leases requested by individual management committees. Land leasing in Myanmar is mostly restricted to international entrepreneurs, but local investors are allowed to lease office or commercial buildings. Prominent industrial zones in Yangon include the Thilawa Special Economic Zone, the Hlaing Tharyar Industrial Zone, and the Shwe Lin Ban

Industrial Zone. These zones are positioned close to key transport networks such as ports, roads, and airports, ensuring easy access for businesses and their supply chains.

There are a total of 7,729 businesses in Yangon Region. There are 4125 enterprises inside the industrial zone and 3604 enterprises outside. A total of 2,398 (1891 in food and 507 in beverage) of these businesses are in the food and beverage sector. The table below shows the factories operating in Yangon Region, which includes 24 enterprises base on the DISI website, 20, February 2024.

Table (3.5)   Industries Operating in Yangon Region (2024)

No.	Items	Number
1	Food production	1891
2	Beverage production	507
3	Baccy products	9
4	Textile products	169
5	Clothes products	1048
6	Leather products	117
7	Materials	432
8	Wood and wood products (without furniture)	179
9	Paper and paper products	387
10	Printing & Recording Information	11
11	Oil, coal and refined crude oil	194
12	Chemicals and Chemical products	43
13	Rubber and plastic products	846
14	Minerals	160
15	Basic metal products	144
16	Metal cleaners other than machinery and equipment	550
17	Computer Electronics	3
18	Electrical equipment product	84
19	Equipment and machinery not separately specified	45
20	Vehicle and trailer	42
21	Transportation	23
22	Furniture making	123
23	Manufacture of other goods	216
24	Equipment (preparation/installation)	515

Source: Directorate of Industrial Supervision and Inspection website (20.2.2024)

3.3 Hlaing Tharyar Industrial Zone

Hlaing Tharyar Township is located in the western part of Yangon and includes 20 wards and 9 villages. Htan Tapin Township is located in the northern and northwestern regions. It is bordered by Insein Township, Mayungone Township to the east, Hlaing Township, and Tontway Township to the south. Hlaing Tharyar is the most densely populated township and the largest township in the country. Home to 15% of Yangon's urban population, it is well known for its important industrial zones and companies. Hlaing Tharyar is a neighborhood where most of the working class live. But now, a construction site has started in the southeast of the township, focusing on the development of housing.

In 1989, Hlaing Tharyar Township was developed to resettle squatters in the center of Yangon. In 1991, the authorities established industrial zones in the township and started trading centers. The largest industrial zone, Hlaing Tharyar, was established in 1995 and covers an area of 567 hectares. In 1995, FMI City was established as a high-end housing estate. After Cyclone Nargis in 2008, thousands of refugees from the Irrawaddy Delta region resettled in Hlaing Tharyar.

Hlaing Tharyar Industrial Zone has a dense population and a large land area, so administrative committees have been formed into 2 zones, East and West. In East, there are Zone-1, Zone-2, Zone-3, Zone-4, Zone-6, Zone-7, Shwe Lin Ban, and Shwe Thanlyin. In West, there are Zone-5, Shwe Lin Ban, Mway Myauu Rayy, Ngwe Pin Lae, Shwe Thanlyin, Anawratar and Emerald Green. The industrial zones located according to the relevant committee are shown in the table below.

Table (3.6)   List of Industries in Hlaing Tharyar Industrial Zone (East)

No.	Type	Z1	Z2	Z3	Z4	Z6	Z7	SLB	STL	Total
1	Cloth	17	43	18	28	-	5	20	12	143
2	Consumer Goods	36	27	11	28	3	2	29	1	137
3	Food and Beverage	12	16	7	20	1	19	19	1	95
4	Warehouse	48	63	27	45	6	22			211
5	Beans	13	11	6	15	-	-	26		71
6	Construction/ Building Material	17	12	6	7	4	5	3	3	57
7	Chemicals	4	11	-	5	1	8	1		30
8	Drainage &Refrigeration	1	3	2	5	4	2	4		21
9	Forest Products	2	7	3	8	-	4	1		25
10	Paper And Stationery	5	7	-	7	1	4			24
11	Machinery & Equipment	4	4	4	9	1	6	8	2	38
12	Lightning	3	4	2	-	-	1	4		14
13	General	5	11	5	8	-	8	50	8	95
14	Grand Total	167	219	91	185	21	86	165	27	961

Source: Directorate of Industrial Supervision and Inspection

Table (3.7)   List of Industries in Hlaing Tharyar Industrial Zone (West)

No.	Type	Z5	SLB	MMM	NPL	STL	ANYT	EG	Total
1	Cloth	30	84		13	22	5	4	158
2	Consumer Goods				1	2			3
3	Food and Beverage	59	39	41	11	6	4		160
4	Warehouse								
5	Beans								
6	Construction/ Building Material		18		3	1			22
7	Chemicals	3	28		6	3	2		42
8	Drainage &Refrigeration								
9	Forest Products	25	1	5	4	1	2		38
10	Paper And Stationery	3	7	2	2	1		1	16
11	Machinery & Equipment		14						14
12	Lightning								
13	General	176	60	31	6	13	2	5	293
14	Grand Total	296	250	77	46	49	12	10	746

Source: Directorate of Industrial Supervision and Inspection

3.4   Food and Beverage Industry in Myanmar

Food production by Myanmar's food industries has focused on traditional agriculture and local consumption. However, in the early 2000s, economic reforms were initiated with the aim of increasing foreign investment and developing the private sector. These changes have created great prospects for the food and beverage sector and attracted local and foreign entrepreneurs.

Myanmar is transitioning from a centralized economy to a market economy and is gradually adopting modern manufacturing and better distribution systems in the food and beverage sector. Also, innovative technologies are being used in the food processing and manufacturing sectors to increase their productivity. By doing so, it helps domestic producers more easily meet market demand for processed and packaged food products.

Myanmar has an economically advantageous geographical position in Southeast Asia. Myanmar is a good choice for local and foreign food and beverage entrepreneurs. As a result, global companies have set up their operations in Myanmar, promoting the development and competitiveness of the local sector.

Foreign direct investment (FDI) is critical to the growth of Myanmar's food and beverage sector. Global corporations are involved in domestic food processing and packaging. These investments not only provided financial resources and specialized knowledge for the local market but also introduced contemporary management methods, modern technologies, and global standards for quality.

The current state of Myanmar's food and beverage industry is that urbanization and evolving lifestyles are increasing market demand for many food and beverage products, such as prepackaged foods, processed snacks, and beverages. In addition, a significant consumer desire in the Myanmar food and beverage sector is to consume nutritious and high-quality foods. Consumers are becoming more health-conscious and are looking for food products that match their eating habits and health goals. Therefore, natural and local food products have increased in demand during these years. Food manufacturers are meeting this demand by using clean, sustainable ingredients sourced from the field.

With Myanmar's increasing integration into the global economy, the demand for diverse culinary options and dining experiences is rising. Therefore, multinational food chains, cafes, and restaurants have been built in major cities to cater to the diverse tastes and preferences of customers. In addition, the food and beverage industry is

facing significant change as new culinary ideas and styles emerge. Growth in Myanmar's tourism sector has also boosted the food and beverage industry as tourists actively seek out authentic local foods and dining experiences.

Being a multi-ethnic country with different cultural traditions, Myanmar has a different cooking style and offers a lot of potential in the food and beverage sector for local and international entrepreneurs. But it is increasingly important for industrialists to adopt sustainable and eco-friendly packaging materials and to incorporate sustainable methods throughout the supply chain. Another feature of this sector is the digitization process and the growing prevalence of e-commerce platforms. Due to the rapid growth of Internet and smartphone usage in Myanmar, online food delivery services and mobile applications have expanded significantly. Consumers readily embrace the convenience and accessibility provided by these platforms, allowing them to easily purchase food and beverages from their homes. The move to online platforms allows food and beverage companies to create their presence on the Internet. It enabled them to enhance their digital marketing strategies and ensure seamless delivery services to adapt to evolving customer tastes. Nevertheless, traditional markets and street food vendors are still important, especially in rural areas and for most local people.

The food and beverage sector in Myanmar is now poised to emphasize healthy options. Customer desire for sustainability and unique culinary experiences is also increasing. In this field, using the latest equipment, healthy products are being implemented. Local entrepreneurs are responding to these trends by adopting modern technologies and sustainable methods. Understanding the sector is essential in order to strategically implement product offerings and marketing expansions that meet the needs and preferences of customers in Myanmar.

The production of beverage (Beer and Alcohol) increased by 40.43 % in the first quarter of 2023-2024 compared with the first quarter of 2022-2023. The production of beverage increased by 55.44 % in the first quarter of 2023-2024 compared with the fourth quarter of 2022-2023. The production of Cigarettes decreased by 15.02% in the first quarter of 2023-2024 compared with the first quarter of 2022-2023 according to office No.32, Nay Pyi Taw, CSO.

The production of Salt (Fine) increased by 4.71% in the first quarter of 2023-2024 compared with the first quarter of 2022-2023. The production of Cooking Oil decreased by 18.79% in the first quarter of 2023-2024 compared with the first quarter

of 2022-2023. The production of Instant Noodles increased by 4.61% in the first quarter of 2023-2024 compared with the first quarter of 2022-2023.

For the first quarter 2023-2024 compared to the first quarter 2022-2023, there was an increase in the production of pork (5.73%), mutton (3.69%), chicken (3.49%), duck (3.14%), beef (1.86%) and a decrease in the production of fish (4.56%) and over the same year, the production of eggs and milk increased by (9.92%) and (3.47%) according to office No.32, Nay Pyi Taw, CSO.

The Consumer Price Index by food and non-alcoholic beverages is 175.53 in the fourth quarter 2022-2023 and 193.98 in the first quarter 2023-2024. The Consumer Price Index by alcoholic beverages is 160.95 in the fourth quarter 2022-2023 and 167.86 in the first quarter 2023-2024. The Consumer Price Index by food and beverage group in the first quarter 2023-2024 is increased by 1.08% in the previous quarter according to office No.32, Nay Pyi Taw, CSO.

The food and beverage industry in Myanmar serves several vital functions that are critical for the country's socio-economic development. Primarily, it acts as a major employer, especially in rural areas where large-scale employment opportunities are limited. The industry employs a significant number of people in various capacities, from agricultural production and food processing to sales and distribution, thus playing a crucial role in alleviating poverty and enhancing the living standards of many families (World Bank, 2020).

Additionally, the industry is at the forefront of Myanmar's export economy. With the global demand for exotic and ethnically diverse foods rising, Myanmar's food and beverage industry has the potential to expand its international footprint. This expansion is supported by the rich biodiversity and traditional agricultural practices that allow for the production of unique food products that are appealing on the international market (FAO, 2019).

Food safety and quality are other critical functions of the industry. With the increasing local and global attention to health and wellness, there is a growing emphasis on maintaining high standards of hygiene and quality in food production. This concern is addressed through the implementation of various quality control measures and compliance with international food safety standards, which not only ensure the health of the local population but also enhance the competitiveness of Myanmar's exports (Food Safety Authority of Myanmar, 2021).

The food and beverage industry in Myanmar plays a crucial role in the preservation and promotion for local food and beverage products. Many SMEs in this sector are engaged in the production of traditional Myanmar foods and beverages, which are integral to the cultural identity of the country. These traditional products are not only consumed locally but are also marketed to tourists and the international diaspora, serving as a bridge between Myanmar's cultural heritage and the global community (Ministry of Culture, Myanmar, 2022).

As an agricultural nation, Myanmar boasts a wealth of agricultural raw materials that form the backbone of its food and beverage industry. These resources are not only pivotal for domestic manufacturing but also for regional trade. The finished products derived from these raw materials are both sold within the domestic market and exported internationally. This dynamic contributes significantly to Myanmar's economy, reinforcing its role as a key player in the global food and beverage sector. Further enhancing this impact, the industry's integration into international markets helps to elevate Myanmar's agricultural profile, providing a crucial link between local production capabilities and global economic opportunities.

3.5   Food and Beverage Sector in Yangon Region

Yangon, as Myanmar's commercial and trade hub, plays a critical role in the food and beverage industry, which is the largest sub-sector in terms of consumer spending, accounting for about 15% of total expenditures in recent years (Flanders Investment and Trade). The region is marked by its strategic access to air, water, and land transportation networks, enhancing its capacity to facilitate trade and distribution of food and beverage products.

Yangon's food and beverage enterprises thrive on a stable domestic demand, supported by a network of local ward markets and major wholesale centers like Danyingone and Thiri Mingalar markets. The shift towards supermarkets and shopping malls reflects a significant change in public lifestyle, offering enhanced customer service and better hygiene standards. This transition, coupled with the growth of local supermarket chains and the entry of international businesses, underscores the sector's robust domestic market presence. Local enterprises have adapted to these changes by improving quality and understanding consumer behavior, allowing them to compete effectively with foreign imports and new market entrants (Euromonitor).

The sector's major challenges include technological advancement and ingredient quality, essential for meeting international standards. Local SMEs often struggle to access high-quality inputs and advanced production technology, which limits their competitive edge in the international arena. The reliance on imported quality inputs due to the scarcity of local food hygiene certifications further complicates this issue. Additionally, while foreign investment has predominantly benefited larger corporations, SMEs face difficulties due to inadequate capital and technological support, necessitating more supportive government policies such as lower interest loans (World Bank).

The average income in Yangon is expected to rise, which could increase consumer spending on food and beverages. With foreign investments flowing into the market since 2011, the sector has seen continuous expansion, particularly in packaged foods and soft drinks. The local production has been boosted by joint ventures with international brands, which have invested in significant production facilities in the region. This influx of investment enhances the capacity for local production to meet growing domestic demand (ASEAN SME Agency).

To further enhance the resilience and growth of the food and beverage sector in Yangon, it is crucial to invest in local SME development, focusing on training and technological upgrades that can improve production efficiency and product quality. Strengthening the regulatory and financial support structures to better support SMEs can also mitigate the sector's current vulnerabilities and prepare it for future challenges and opportunities.

To fortify the industry's growth and mitigate these challenges, strategic investments in local SME development are crucial. This includes enhancing their access to technology, improving production efficiencies, and aligning with global quality standards. Strengthening the regulatory and financial support structures is also vital for enabling SMEs to navigate the competitive landscape effectively.

Looking ahead, the food and beverage sector in Yangon must continue to innovate and adapt to external pressures, including global economic fluctuations and the evolving demands of consumers. By doing so, it can maintain its trajectory of growth and play a pivotal role in the economic resilience and prosperity of Myanmar. Through concerted efforts from both the government and private sector stakeholders, the industry can overcome its current vulnerabilities and unlock new opportunities for expansion and success.

CHAPTER IV

ANALYSIS OF INFLUENCING FACTORS ON THE DEVELOPMENT OF THE FOOD AND BEVERAGE INDUSTRY

4.1   Survey Profile

This study aims to investigate the factors influencing the development of the food and beverage industry in Myanmar. The study area mainly focuses on food and beverage industry of Hlaing Tharyar Industrial Zone located in Yangon. The Hlaing Thar Yar Industrial Zone, established on February 15, 1995, spans 1401.98 acres and is strategically positioned along the Pan Hlaing River. Over the years, it has seen substantial growth in the number of operational factories. As of early 2016, there were over 650 factories functioning within the zone, encompassing major industries such as grain, toiletries, foodstuffs, garments, and construction materials. There are 251 food and beverage industries in Hlaing Tharyar Industrial Zone currently. For collecting the data collection, it determines the sample size for food and beverage industries in Hlaing Tharyar Industrial Zone as follow:

If the population size is known, the Yamane formula (1967) is given by:

$$n = \frac{N}{1+Ne^2}$$

where, n   = sample size,

N = population size, and

e   = Margin of error (±10% precision)

If the population size is 251,

$$n = \frac{251}{1+251(0.10)^2} = 71.5060 \simeq 72$$

So, the sample size for data analysis is 72 respondents including owners, managers, and leaders for a population of 251 in the food and beverage industry of Hlaing Tharyar Industrial Zone. The general information of respondents includes gender, age, education, occupation, technological machines development, types of industry, availability of raw materials, ownership type and FDA registration as the

current situations of the food and beverage industry. The first-four elements are the respondent's demographic data and the next five elements are industrial data.

4.2   Survey Design

Primary data was collected from a sample of 72 respondents including owners, managers, and leaders of the food and beverage industry by using simple random sampling. There are two parts in structured questionnaire to measure the factors influencing the development of the food and beverage industry. First part is the characteristics of the respondents and second part is five influencing factors which are socio-cultural factors, economic factors, technological factors, regulatory factors and competitive factors. Secondary data was collected through reports and records in the organization.

This study utilizes both primary and secondary data to use a descriptive methodology. The demographic question consisted of nine elements in detail. There are six aspects being investigated as influences on the development of the food and beverage industry. Each composition was presented with six statements, and one statement with an inadequate calculation was removed and determined. Each statement receives a rating using a five-point Likert scale.

To ensure the reliability of the survey, Cronbach's alpha is calculated. Cronbach's alpha of sampling adequacy for each variable as socio-cultural factors, economic factors, technological factors, regulatory factors, competitive factors and the development factors are described in Table (4.1).

Table (4.1)   Cronbach's Alpha of Sampling Adequacy

No.	Variables	Items	Cronbach's Alpha
1.	Socio-cultural factors	5	0.85
2.	Economic factors	5	0.79
3.	Technological factors	5	0.83
4.	Regulatory factors	5	0.70
5.	Competitive factors	5	0.84
6.	Development factors	5	0.85

Source: Survey Data (2024)

The reliability analysis was referred to measure the degree of the accuracy and consistency of the collected factors. Because the reliability coefficient is the recommended value of 0.7, the instruments of measurement can be concluded to have higher reliability, and the next-choice calculations are capable of being done.

4.3   Survey Results

In this section, there are describing the demographic characteristics of the respondents in the food and beverage industry and analyzing on the factors influencing the type of the food and beverage industry.

4.3.1   Demographic Characteristics of Respondents

The demographic characteristics of the respondents in the food and beverage industry were presented in table (4.2).

Table (4.2)   Demographic Characteristics of Respondents

No.	Variables	Characteristics	No of Respondents	Percent
1.	Gender	Male	53	73.6
		Female	19	26.4
		Total	72	100.0
2.	Age (Years)	Under 30	7	9.7
		30-60	57	79.2
		Above 60	8	11.1
		Total	72	100.0
3.	Education	Pre-Graduate	2	2.8
		Graduated	42	58.3
		Master	27	37.5
		Ph.D.	1	1.4
		Total	72	100.0
4.	Occupation	Owner	32	44.4
		Manager	30	41.7
		Supervisor	6	8.3
		Other	4	5.6
		Total	72	100.0

Table (4.2)   Demographic Characteristics of Respondents (Continued)

No.	Variables	Characteristics	No of Respondents	Percent
5.	Technological Machines Development	No	10	13.9
		Yes	62	86.1
		Total	72	100.0
6.	Types of Industry	Beverage	19	26.4
		Milk and Dairy Products	4	5.6
		Curry Powder	7	9.7
		Ready-made Curry Mix	6	8.3
		Instant Noddle	10	13.9
		Snack and Confectionary	16	22.2
		Other firms	10	13.9
		Total	72	100.0
7.	Availability of Raw Materials	Domestic	64	88.9
		Foreign	8	11.1
		Total	72	100.0
8.	Ownership Type	Self	39	54.2
		Joint Venture	13	18.1
		Other	20	27.8
		Total	72	100.0
9.	FDA registration	Obtained	59	81.9
		No Obtained	3	4.2
		Still in progress	10	13.9
		Total	72	100.0

Source: Survey Data (2024)

Gender of Respondents: In order to see the gender ratio, sample respondents are asked to response their gender and the results are presented in Table (4.2). It was found that the sample includes only 53 male and 19 female respondents. In term of percentage, 73.6 percent of major respondents were female while the male respondents took part of 26.4 percent. The inquiry into the gender of the factory's leadership found that approximately 75% of the participants identified as male.

Age of the Respondents: In order to see the different age distribution of the firm, sample respondents are asked to response their age, and the results are presented in Table (4.2). Ages of respondents are grouped into three. It was found that 7 respondents are less than 30 years, 57 respondents between 30 and 60 years, and 8 respondents above 60 years. In term of percentage, major respondents were the age group less than 30 years taking for 9.7 percent, the age group between 30 and 60 years taking for 79.2 percent and followed by the age group above 60 years which take 11.1 percent of the respondents. The study included middle-aged and older people, who were divided into age groups. Because of the controllable age of this demographic, each of us is likely to see a significant upward trend in the food and beverage industry.

Education of the Respondents: Education levels of respondents are categorized into pre-graduate, graduated, master, doctor and others. The results are presented in Table (4.2). It was found that in the sample 2 respondents have pre-graduate, 42 respondents have education level with graduated, 27 respondents are master, and only 1 respondent is doctor level. The section of other has no respond. In term of percentage, 2.8 percent of respondents were pre-graduate, 58.3 percent of most respondents held graduated while the master level were 37.5 percent of the sample. The doctor level was 1.4 percent of respondents. Furthermore, 97 percent of the participants had received a formal education. Currently, it has been observed that the sector's leadership is highly educated, indicating a clear trend of progress in the food and beverage industry.

Occupation of the Respondents: The occupation levels of respondents are categorized into four groups as owner, manager, supervisor, and other. The results are also presented in Table (4.2). It was found that in the sample 32 respondents have owner, 30 respondents have manager, 6 respondents have supervisor, and 4 respondents have only the other group. In term of percentage, major respondents were owner taking for 44.4 percent, manager taking for 41.7 percent, supervisor and other group taking for only 8.3 percent and 5.6 percent of respondents.

Technological Machines Development: To get the technological machines development of the food and beverage industry, sample respondents are asked to response their current situation of the industry during last five years and the results are presented in Table (4.2). It was found that the sample 10 respondents have no development and 62 respondents have the development in technological machines used. In term of percentage, the respondents were 13.9 percent in no development and 86.1 percent in development. Over the last 5 years, within the food and beverage business,

86% of respondents said that technological equipment has undergone changes in accordance with evolving times. Hence, it is evident that there is a discernible inclination towards enhancement in the food and beverage business. The lack of improvement in some firms' reactions indicated that there was no rise in consumption as a consequence of the COVID-19 effect and the country's economic crisis, leading to a decline in output and a drop in the workforce.

Types of Industry: The types of industry are categorized into seven groups as beverage, milk and dairy products, curry powder, ready-made curry mix, instant noddle, snack and confectionary, and other firms. The results are also presented in Table (4.2). It was found that the sample 19 respondents in beverage, 4 respondents in milk and dairy products, 7 respondents in curry powder, 6 respondents in ready-made curry mix, 10 respondents in instant noddle, 16 respondents in snack and confectionary, and 10 respondents in other firms. Other firms included oil, tea leaves, canned, dry fish, and so on. In term of percentage, it is found that 26.4 percent in beverage, 5.6 percent in milk and dairy products, 9.7 percent in curry powder, 8.3 percent in ready-made curry mix, 13.9 percent in instant noddle, 22.2 percent in snack and confectionary, and 13.9 percent in other firms respectively.

Availability of Raw Materials: The availability of raw materials in food and beverage industry are asked to get the current operation. The availability of raw materials is grouped into two as domestic and foreign, and the results are also presented in Table (4.2). It was found that the sample 64 respondents have received from domestic and the sample 8 respondents have only received from foreign. In term of percentage, the respondents were 88.9 percent in domestic and 11.1 percent in foreign. It was observed that solely domestically sourced raw materials were purchased and used, indicating a favorable economic condition in the area. It was observed that solely domestically sourced raw materials were purchased and used, indicating a favorable economic condition in the area.

Ownership Type: The ownership types of the food and beverage industry are asked to get the current operation. The ownership type is grouped into three as self, joint venture and other, and the results are also presented in Table (4.2). It was found that the sample 39 respondents in self, 13 respondents in joint venture firms and 20 respondents in other firms. In term of percentage, the respondents were 54.2 percent in self, 18.1 percent in joint venture firms, and 27.8 percent in other firms. Other firms

included the corporation, partnerships and limited liability companies. It was observed that most of the food and beverage industry are only oneself or traditional firms.

FDA Registration: In order to get the condition of FDA that are important for food and beverage industry, sample respondents are asked to response their conditions and the results are also presented in Table (4.2). FDA registration of industry categorized into three groups as obtained, no obtained and still in progress. It was found that the 59 respondents have obtained, 3 respondents have not obtained, and 10 respondents have the condition of still in progress. In term of percentage, major respondents were obtained group taking for 81.9 percent, the condition of no obtained and still in progress were 4.2 percent and 13.9 percent each.

According to the findings of the study, almost 96% of the industries that have received FDA certification. Other industries that are still undergoing FDA certification are new factories that have relocated. Therefore, it is found that the products produced by companies registered with the FDA certificate will be consistent with the health of consumers.

4.3.2 Analysis on the Factors Influencing on the Types of the Food and Beverage Industry

This study described the analysis on the factors influencing the type of the food and beverage industry, and thus respondents' feelings towards those factors are examined. Measurement to respondent the factors influencing the development of the food and beverage industry is conducted as the following factors; socio-cultural factors, economic factors, technological factors, regulatory factors, competitive factors and the development factors. Each variable includes different number of statements and each statement is measured on five-point Likert scale. (1) strongly disagree, (2) disagree, (3) neither disagrees nor agrees, (4) agree and (5) strongly agree. And, the mean score of each scale can range between 1 and 5. Hence it could be assumed that if the mean score of a statement is above 3, then respondents are satisfied. Conversely, the mean score of a statement below 3 could imply respondent dissatisfied.

(1) Analysis on Socio-cultural Factors

To analyze the socio-cultural factor, the following statements are used and findings are presented in Table (4.3).

Table (4.3)   Analysis on Socio-cultural Factors

No.	Description	Average	Std. Dev
1.	The product exhibits utility in traditional festivals and religious ceremonies, particularly within the domain of the food consumption.	3.81	1.12
2.	The product constitutes a dietary staple integrated into the daily consumption regimen of local inhabitants.	3.78	0.98
3.	The product embodies a flavor profile familiar to the indigenous populace, thereby contributing to its widespread adoption.	3.97	1.06
4.	The product transcends ethnic boundaries, rendering it universally consumable across diverse demographic groups.	4.11	1.00
5.	The product is classified as a health food, denoting its inherent nutritive properties and alignment with contemporary wellness trends.	3.65	1.04
	Overall	**3.86**	**1.04**

Source: Survey Data (2024)

According to Table (4.3), the average value of socio-cultural factors is 3.86, so it is found to be at a moderate acceptable level in the opinion of the respondents. In addition, the average value of all questions included in the socio-cultural factor is at a moderate acceptable level. Being an omnivore had the highest mean value among all questions. According to the results, it has been found that the local food and beverage entrepreneurs are targeting all ethnic groups living in the country. Being a health-promoting food was found to have the lowest average value across all questions. According to the results, it was found that most of the local food and beverage products may deviate slightly from the rest of the health standards. After that, being able to be used in traditional events and religious events, being a food included in daily consumption, and being a kind of the food that consumers are familiar with, among the 5 questions, are at moderate acceptable level. This suggests a significant alignment between production and consumer preferences for traditional foods, but highlights a potential area for growth in enhancing innovation processes to expand product diversity and appeal.

(3)   Analysis on Economic Factors

To analyze the economic factor, the following statements are used and findings are presented in Table (4.4).

Table (4.4)   Analysis on Economic Factors

No.	Description	Average	Std. Dev
1.	The product is manufactured and retailed at a price point conducive to accessibility across socioeconomic strata.	4.18	0.88
2.	Recruitment processes are conducted systematically to maintain full staffing levels within the product's production operations.	3.86	0.98
3.	As demand for the product escalates, adjustments to its selling price are made accordingly.	3.97	0.89
4.	Selling price depends on the fluctuations in value of currency.	3.99	0.84
5.	Discount schemes or promotional initiatives are employed strategically to bolster product sales volume.	3.97	0.84
Overall		**3.99**	**0.89**

Source: Survey Data (2024)

According to Table (4.4), the average value of economic factors is 3.99, so it is found to be at a moderate acceptable level in the opinion of the respondents. In addition, questions related to economic factors (5) also have a high average value. The item that is available to all classes has the moderate acceptable level among these questions. According to the result, the country has the largest grassroots class, and domestic entrepreneurs are targeting only the grassroots class, which is the largest market. The lowest average value of the questions was regular staffing. According to the results, it was found that local food and beverage companies do not hire employees regularly, such as every year or month, but only when needed or when there is a vacancy. Among the questions, currency change changes production cost, production cost change changes selling price, selling price change sales promotion changes the business, and it is found that the mean value is medium level. The findings indicate that the selling prices in the domestic food and beverage market are significantly influenced by currency value fluctuations.

(4)   Analysis on Technological Factors

To analyze the technological factor, the following statements are used and findings are presented in Table (4.5).

Table (4.5) Analysis on Technological Factors

No.	Description	Average	Std. Dev
1.	Technological advancements dictate the use of contempor-ary materials in the production process of the product.	4.06	0.89
2.	The packaging design is meticulously crafted to preserve the product's efficacy and appeal.	3.94	0.85
3.	The production process undergoes rigorous step-by-step testing utilizing advanced research methodologies.	4.17	0.93
4.	Novel product iterations have undergone rigorous testing and manufacturing within the preceding five years.	3.82	1.07
5.	Product formulation is periodically revised to align with evolving consumer preferences, introducing new flavors or formulations as dictated by contemporary trends.	3.47	1.14
Overall		**3.89**	**0.98**

Source: Survey Data (2024)

According to Table (4.5), the average value of technological factors is 3.89, so it is found to be at a moderate acceptable level in the opinion of the respondents. It was also found that the average value of all 5 questions was at a moderate acceptable level. Among those questions, it was found that step-by-step research and trial production of products had the moderate acceptable level. According to the results, it can be seen that local food and beverage companies have changed their methods of testing from traditional to modern technology in order to improve the quality of product production. New products, new flavors, new formulas, and manufacturing were found to have the lowest average value among the 5 questions. According to the results, it was found that local F&B industry are not able to develop and produce innovative food for consumers and are far from these technologies. However, it was found that the ability to test and produce a new product within 5 years had the second lowest average value, indicating that few local F&B entrepreneurs could test and produce a new product. Among the questions, it was found that the use of high-tech materials and efficient packaging were

at the average value level. According to the results, it was found that most of the local food and beverage industries use high-tech equipment in the production section.

(5)   Analysis on Regulatory Factors

To analyze the regulatory factor, the following statements are used and findings are presented in Table (4.6).

Table (4.6)   Analysis on Regulatory Factors

No.	Description	Average	Std. Dev
1.	The inclusion of consumption labels and allergy statements pertinent to the product is mandated at all times.	3.99	0.72
2.	The acquisition of legal copyrights pertaining to the product's technology or brand has been duly executed.	3.86	0.89
3.	Promotional activities associated with the product adhere strictly to government-approved methodologies.	3.99	0.88
4.	Disposal of waste materials associated with the product is conducted in a methodical and regulated manner.	3.79	0.91
5.	Adherence to international standards pertinent to the product is rigorously observed.	3.85	0.97
Overall		**3.90**	**0.87**

Source: Survey Data (2024)

According to Table (4.6), the average value of regulatory factors is 3.90, so it is at a moderate acceptable level in the opinion of the respondents. Also, the average value of each question was found to be at a moderate acceptable level. Among those questions, the use of government-approved sales promotion methods and the use of the food labeling and allergy disclosure were found to be the highest, with a mean value of 3.99. According to the results, it was found that local food and beverage operators follow the existing laws established by the government as well as the instructions of the Food and Drug Administration. The lowest average value among the questions was proper disposal of waste. However, its average value is 3.79, which is at a moderate acceptable level. Then it was found that obtaining patents and complying with international standards were in the middle of the average value in all questions. Therefore, according to the results, most of the products of the local food and beverage

industry are easily imitated, and the core competence of the local food industry is low. In addition to the lack of compliance with international standards, it is also found that the ability to export abroad is also low.

(6)   Analysis on Competitive Factors

To analyze the competitive factor, the following statements are used and findings are presented in Table (4.7).

Table (4.7)   Analysis on Competitive Factors

No.	Description	Average	Std. Dev
1.	The product faces substantial competition within the market landscape.	4.00	0.87
2.	The product enjoys recognition and esteem among its customer base.	4.07	0.72
3.	Consistency in both price and quality characterizes the product offering.	4.01	0.80
4.	The product is readily accessible for purchase within its designated geographic area.	3.92	1.01
5.	The production items consistently increase to attract local customers.	3.82	0.92
	Overall	**3.96**	**0.86**

Source: Survey Data (2024)

According to Table (4.7), the average value of the competitive factors is 3.96, so it is found that the respondents have a moderate acceptable level in their opinion. The average value of all five questions included in the competitive factor was found to be at a moderate acceptable level. Among those questions, the average value of customer recognition was found to be the highest. According to the results, it was found that domestic food and beverage products have gained market share, respectively. The question regarding the monthly expansion of product offerings received the lowest average score among the five questions. Consequently, this indicates that despite having a loyal customer base, the strategy of regularly increasing product variety is a few effectiveness in attracting new customers. It was found that the market competition, the price and quality matching, and the ease of purchase in the city area are at the average

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value level. According to the results, it was found that the domestic food and beverage market is a competitive type of business and can cover the entire country.

(7)   Analysis on Development of the food and Beverage Industry

To analyze the socio-cultural factor, the following statements are used and findings are presented in Table (4.8).

Table (4.8)   Analysis on Development of the food and Beverage Industry

No.	Description	Average	Std. Dev
1.	Over the period spanning 2019 to 2023, there was a notable increase in the consumer base for domestically produced food within the food and beverage industry.	4.26	0.75
2.	Over the period spanning 2019 to 2023, the domestic food and beverage sector experienced considerable expansion within Myanmar's economic landscape.	4.19	0.88
3.	Over the period spanning 2019 to 2023, there was a discernible update in the adoption of technological equipment by domestic food and beverage industries.	4.09	0.95
4.	The regulatory framework governing domestic food and beverage industries during the period from 2019 to 2023 is expected to facilitate industry development.	3.94	0.95
5.	Over the period spanning 2019 to 2023, a greater influx of new enterprises has been observed entering the domestic food and beverage sector.	3.96	0.89
Overall		**4.09**	**0.88**

Source: Survey Data (2024)

According to Table (4.8), the overall average value of the development factors is 4.09, so it is found to be at a moderate acceptable level in the opinion of the respondents. In addition, it was found that the average value level of the 5 questions included in this factor was also at a moderate acceptable level. The fact that the number of consumers consuming local food products has increased over the years has the moderate acceptable level among all questions. According to the results, consumers are more dependent on domestic food products that can be easily purchased at reasonable

prices than imported food. It was found that the domestic food and beverage industry contributed to the economic sector with the second-moderate acceptable level. According to the results, it is found that the income of domestic food industries increases as the number of domestic consumers increases, which further improves the country's finances. The third-moderate acceptable level factor is the accessibility of technology. During these years, domestic F&B industry have found that they can use high-tech equipment more widely through the use of ordinary equipment. New business entry into the domestic food industry has the fourth moderate acceptable level. According to the results, it was found that the increase in the number of consumers is attracting local entrepreneurs to operate these businesses. Then, among all the questions, the lowest average value was that the rules were helpful. According to the results, there is a small gap between the local entrepreneurs and the government's policy.

4.4 Analysis on the Correlation between Influencing Factors and Development of the Food and Beverage Industry

As questionnaire composed of factors influencing the development of the food and beverage industry and five factors which are the socio-cultural factors, economic factors, technological factors, regulatory factors and competitive factors. The major intention of this section is to determine the factors that influenced the development of the food and beverage industry, the five factors were used in model was employed because it provided the most accurate interpretation of the independent variables. Data analyses on factors influencing the development of the food and beverage industry are measured by separating the five points Likert scale and are calculated by using the regression model.

In order to find a best model of the data, it is required to have significant correlation between dependent variable (development factors) and five independent variables (socio-cultural factors, economic factors, technological factors, regulatory factors and competitive factors). The results of correlation coefficients are showed in Table (4.9).

Table (4.9)   Correlation between Influencing Factors and Development of the Food and Beverage Industry

	Development	Socio-cultural	Economic	Technological	Regulatory	Competitive
Development	1.00***					
Socio-cultural	0.49***	1.00***				
Economic	0.71***	0.69***	1.00***			
Technological	0.75***	0.58***	0.71***	1.00***		
Regulatory	0.60***	0.33**	0.55***	0.65***	1.00***	
Competitive	0.70***	0.40***	0.59***	0.65***	0.59***	1.00***

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2024)

Table (4.9) showed the correlation between development factor and other influencing factors of the food and beverage industry. The results showed positive correlation between the all variables. This means that five factors (Socio-cultural, Economic, Technological, Regulatory and Competitive factors) are favorable for the development of the food and beverage industry. Thus, one might assume the correlation between the development of the food and beverage industry and all the small factors associated with these five factors is positively strong. There was nothing no linear relationship because of absenting the zero-correlation coefficient value.

In aspect of development of the food and beverage industry, socio-cultural factors related with the development by the value of 0.49. Thus, the value of 0.49 might assume the correlation between the development of the food and beverage industry and all the small factors (cultural traditions, food habits, taste preferences, flavor profiles, dietary foods, etc.) associated with socio-cultural factors was positively moderate. Economic factors related with the development by the value of 0.71. Thus, the value of 0.71 might assume the correlation between the development of the food and beverage industry and all the small factors (income levels, employment rates, giving the promotional initiatives, pricing strategies, etc.) covered with economic factors was positively high. Technological factors related with the development by the value of 0.75. Thus, the value of 0.75 might assume the correlation between the development of the food and beverage industry and all the small factors (food production, processing, distributing, supply chain management, packaging, etc.) covered with technological

factors was positively high. Regulatory factors related with the development by the value of 0.60. Thus, the value of 0.60 might assume the correlation between the development of the food and beverage industry and all the small factors (labeling requirements, packaging requirements, government policies, trade regulations, food safety standards, etc.) covered by regulatory factors was positively moderate. Competitive factors related with the development by the value of 0.70. Thus, the value of 0.70 might assume the correlation between the development of the food and beverage industry and all the small factors (market saturation, rivalry, branding, reputation, customer relationships, etc.) covered with competitive factors was positively moderate in this study. It is shown that there is a significant correlation on development factors and other influencing five factors at 1% level equally.

In aspect of effecting socio-cultural factors, the correlations among other influencing four factors are positively low and moderate correlation value of 0.33 to 0.69. The values 0.69 and 0.58 might assume the correlation of all the small factors covered with economic and technological factors is positively moderate on the socio-cultural factors. The values 0.33 and 0.40 might assume the correlation of all the small factors covered with regulatory and competitive factors was positively low on the socio-cultural factors in this study. It is shown that there is significant correlation on socio-cultural factors and other influencing four factors (1% level in economic, technological and competitive factors and 5% level only in regulatory factors).

In aspect of effecting economic factors, the correlations among other influencing three factors are positively moderate and high correlation value of 0.55 to 0.71. The value of 0.71 might assume that the correlation of all the small factors covered with technological factors is positively high on the economic factors. The values 0.55 and 0.59 might assume the correlation of all the small factors covered with regulatory and competitive factors was positively moderate on the economic factors in this study. It is shown that there is significant correlation on economic factors and other influencing three factors at 1% level equally.

In aspect of effecting technological factors, the correlations among other influencing two factors are positively moderate correlation values 0.65 twice. The values 0.65 might assume the correlation of all the small factors covered with regulatory and competitive factors was positively moderate on the technological factors in this study. It is shown that there is significant correlation on technological factors and other influencing two factors at 1% level equally.

In aspect of effecting regulatory factors, the correlation with competitive factors is positively moderate correlation value of 0.59. The values 0.59 might assume the correlation of all the small factors covered with competitive factors was positively moderate on the regulatory factors in this study. It is shown that there is significant correlation on regulatory factors and competitive factors at 1% level equally. Finally, the correlation values on competitive factors are mentioned above respectively.

4.5 Analysis on the Relationship between Influencing Factors and Development of the Food and Beverage Industry

The development of food and beverage industry is measured by five dimensions including socio-cultural factors, economic factors, technological factors, regulatory factors and competitive factors. The proxy of development is the mean value of these five dimensions.

The multiple linear regression equation is

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_i$$

where, Y_i = Development Factor

β_0 = intercept term (constant)

X_1 = Socio-cultural Factor

X_2 = Economic Factor

X_3 = Technological Factor

X_4 = Regulatory Factor

X_5 = Competitive Factor

$\beta_1, \ldots, \beta_5$ = regression coefficients of X_1 and X_6

ε_i = residual terms

The findings show the effects of influencing factors on the development of food and beverage industry in Table (4.10).

Table (4.10)   Effects of Influencing Factors on the Development of the Food and Beverage Industry

Variable	Coefficient	Std. Error	t-test	Prob.
Constant	0.16	0.37	0.43	0.67
Socio-cultural factors	-0.03	0.09	-0.35	0.73
Economic factors	0.30**	0.13	2.32	0.02
Technological factors	0.32***	0.11	2.88	0.01
Regulatory factors	0.07	0.10	0.67	0.51
Competitive factors	0.34***	0.12	2.85	0.01
R-squared	0.67			
Adjusted R-squared	0.65			
F-statistic	27.33			
Prob.(F-stat)	0.00			

***Significant at 1% level, **5% level and *10% level

Source: Survey Data (2024)

According to Table (4.10), the estimated multiple linear regression equation is

$$\hat{Y} = 0.16 - 0.03\ X_1 + 0.30\ X_2 + 0.32\ X_3 + 0.07\ X_4 + 0.34\ X_5$$

The value of the constant is 0.16 indicated that there is positively relationship between the development factors of food and beverage industry and five influencing factors. The value of the adjusted correlation coefficient is 0.65 indicated that 65% of variation in factors influencing the development of the food and beverage industry is explicated by its five independent variables.

The study's results indicated an adverse connection between socio-cultural factors and the development of F&B industry. It is not statistically significant. If socio-cultural factor increases by one unit, development factors of the food and beverage industry will decrease by 0.03 units when other factors remain unchanged. Myanmar's rich culinary legacy greatly influences local eating habits. A keen taste for traditional and homemade cuisine may restrict the potential customer base for certain sorts of the food and beverage establishments. Particularly those who bring contemporary foreign or modern culinary ideas that vary much from local preferences may have a substantial impact on food consumption patterns influenced by dietary restrictions stemming from religious beliefs or societal conventions. Today's digital transformation provides new opportunities for marketing and connecting with customers. However, it also exposes

local food and beverage enterprises to competition from both domestic and global trends as well as foreign franchises.

The economic factor has a positive relationship with the development of the F&B industry. It was statistically significant at the 5% level. If economic factor increases by one unit, development factors of the food and beverage industry will increase by 0.30 units when other factors remain unchanged. The value of 0.30 underlines the critical role that economic conditions played in shaping the growth and sustainability of the F&B sector. The facts of consumer pricing, sufficient staffing, and improved sales and currency stability will lead to the development of the F&B industry.

The technological factor is found to be positively related to the development of the F&B industry. It was statistically significant at the 1% level. If technological factor increases by one unit, development factors of the food and beverage industry will increase by 0.32 units when other factors remain unchanged. The value of 0.32 underscores the pivotal role technology played in enhancing industry growth. This impact is profound and multifaceted, influencing operational efficiencies, customer experiences, product innovation, and market reach. Improving technological elements leads to the advancement of F&B facilities in the industry. The adaptation of high-tech equipment to current trends and the gradual implementation of pilot production and standardization of packaging styles demonstrates the potential for continued development in the F&B industry.

The regulatory factor has a positive impact on the development of the F&B industry. It is not statistically significant. If regulatory factor increases by one unit, development factors of the food and beverage industry will increase by 0.07 units when other factors remain unchanged. Regarding the F&B industry, "the more policy factors are well established, the more the development of F&B industries will be shown." The lack of statistical significance of regulatory factors in this study, despite the observed positive relationship with the development of the F&B industry, may stem from a variety of underlying causes.

The competitive factor is the most important and positively associated factor among the several development variables in the F&B industry. It was statistically significant at the 1% level. If competitive factor increases by one unit, development factors of the food and beverage industry will increase by 0.34 units when other factors remain unchanged. The value of 0.34 highlights the crucial role that competition plays in driving industry growth and innovation. This suggests that an increase in competitive

pressures or dynamics within the industry is associated with a substantial improvement in development factors, such as efficiency, innovation, product quality, and customer service. The development of F&B industries is more evident when competitive conditions are stronger. This relates to the inflow of new enterprises in the F&B industry and the need to understand the distribution of new items while ensuring operational stability without negatively impacting one's company. Success may be attained through attentiveness and careful consideration to ensure ongoing improvement. Each product is characterized by its packaging, flavor, visible durability, and quality. Examining such aspects, the individuals saw the distinctiveness of the company's product in comparison to others. Furthermore, it suggests that by engaging in competition, the firm may acquire information and grow to achieve market penetration and customer loyalty.

CHAPTER V
CONCLUSION

5.1　Findings

The Food and Beverage (F&B) industry, a vital component of Myanmar's manufacturing sector and one of the country's 14 main economic sectors, is experiencing significant growth. To enhance factory revenues and product quality, it is crucial to examine factors such as government support, market dynamics, and raw material availability. It has been found that the local F&B Industry needs to meet the brand, packaging and quality of products to be able to export abroad. Therefore, to develop the F&B Industry, there is a need for technical reform, labor training and good competition.

In Yangon's 7729 industrial zones, 2398 are dedicated to the food and beverage (F&B) industry, representing 31.03% of the total manufacturing facilities. Within the Hlaing Tharyar Industrial Zone, 251 zones specialize in F&B, accounting for 10.67% of Yangon's F&B industry. This significant concentration underscores the role of SMEs in the F&B sector as the main contributors to employment and regional economic development. Among the entities surveyed, it was discovered that 54.2 percent were possessed by sole proprietors, 18.1 percent were possessed by joint ventures, and 27.7 percent were possessed by organizations. The majority of companies only use facilities that have been operational for a minimum of 5 years. This practice ensures that factories have successfully navigated challeHnges and adversities arising from many sources, including the country's economic conditions.

From the inquiry concerning the gender of the factory's leadership, it was discovered that around 75% of the participants identified as male. Therefore, it is reported that there are men in most of the businesses leading and supervising. According to the findings of this study, most of the F&B Industry factories are small enterprises. It is demonstrated that the F&B Industry is producing efficiently with a small number of workers. And, there have nearly 90 percent of all industries received

the raw materials under local economy. It is seen that the prospects of domestic trade are good.

The analysis reveals that economic factors, significant at the 5% level, are instrumental in shaping the consumer spending power and investment capacities within the Food and Beverage (F&B) industry. As economic growth enhances disposable income, there is a corresponding increase in consumer demand for diverse F&B products and services. This increase in demand is further evidenced by the strategic pricing adjustments made by entrepreneurs, ensuring product accessibility across various socioeconomic strata. Additionally, promotional strategies such as 'buy more, save more' discounts have been effectively utilized to boost sales volumes and enhance customer engagement. These findings underscore the pivotal role of economic factors in driving the growth and accessibility of the F&B industry, facilitating a broader reach and deeper market penetration.

The study indicates that technological factors, significant at the 1% level, are crucial in enhancing efficiency, innovation, and customer satisfaction in the Food and Beverage (F&B) industry. Through the integration of technology, businesses have improved their production processes, achieving higher quality and consistency in their products. This has been complemented by modern packaging techniques that align with current consumer preferences and maintain product integrity. Additionally, technology has enabled cost reductions and operational optimizations that are essential for maintaining competitive advantage and facilitating industry growth. The impact of these technological advancements is evident in the superior quality and presentation of products, which cater to the increasing expectations of consumers.

In the competitive landscape of the Food and Beverage (F&B) industry, significant at the 1% level, competition remains intense. Businesses are actively engaged in enhancing both product quality and pricing strategies to cater to the needs of their customers, ensuring both convenience and mutual benefit. The ongoing adjustments in price and quality, driven by keen market competition, facilitate easier access to products for regional consumers and promote a healthy market environment. Moreover, the focus on local distribution minimizes logistical challenges, further enabling businesses to maintain robust relationships with their direct buyers and wholesalers. This strategic approach to competition underscores the significant impact that competitive factors have on the evolution and success of F&B businesses.

Regulatory factors positively influence the Food and Beverage (F&B) industry, with government policies both supporting and challenging business operations. Some regulations help stabilize and support businesses for the long term, while others create obstacles that entrepreneurs need to overcome. This complex relationship highlights that, although regulations are designed to promote industry growth, rule and regulations can also vary in effectiveness and impose burdens that affect how businesses operate and expand. Currently, the orderly and controlled disposal of waste materials related with manufacturing goods was seen as the industrial zone getting the low attention.

The Food and Beverage (F&B) industry in Myanmar is currently navigating a series of formidable challenges. These hurdles stem not only from internal operational factors but also from broader economic unstable that influences pricing, supply chains, and market stability. As this sector confronts these obstacles, it becomes crucial to examine how such challenges impact the industry's competitive dynamics and overall sustainability. This analysis continues to explore the multifaceted nature of these difficulties and their repercussions for F&B operators in the region.

In F&B industries, there was a need to improve the infrastructure and the technology so that the production process could be changed to improve export quality. Access to infrastructure sector requires stable electricity, clear water and good transport links. Smooth alignment of roads in industrial areas is key to good transport connectivity. However, the roads in Hlaing Tharyar Industrial Zone were narrow and uneven. It caused some difficulties for the vehicles and workers working in the F&B industry using those roads. Therefore, the roads in Hlaing Tharyar Industrial Zone need to be renovated to meet international standards.

Some F&B industries had imported raw materials. Currently, it is difficult for F&B industries to purchase raw materials that are used abroad. Due to these conditions, they operated using raw materials that could only be purchased locally. In order to obtain these raw materials conveniently, it is also necessary to improve transportation and stabilize the international economic relations.

With Myanmar's labor force abundant, most F&B industries focused on labor rather than purchasing and using high-end modern machinery. In the mechanization department, they were using existing or hand-made forms of equipment that were convenient for the business. Even if the machinery breaks down, they fix it in their own way. The use of such low-tech equipment is convenient for immediate operation, but the product quality is affected. They want to increase the quality of products and

increase the number of products by combining the existing workforce with modern technology equipment, but there were difficulties in expanding F&B products in the domestic market and penetrating abroad.

The F&B sector is currently in a situation where it can only access the electricity that the government has released through an alternative system. Due to this process, the production of products in their factories has to be completed during the time of electricity generation, divided, and processed. There were difficulties, such as keeping the products stored at a certain temperature so that they were not destroyed or lost. In addition, if there is a power outage during the day when the business is operating normally, the work has to be changed to other preparations that do not require the use of electricity. It was difficult to replace gasoline or diesel because the machinery can only run for one to four hours if it is used to replace gasoline or diesel to complete production quickly. Therefore, it is described that to describe the main situation that the F&B industry is currently facing, they need more stable electricity for their business to run smoothly.

Almost 96% of the industries in this study that have received FDA certification. Other industries that are still undergoing FDA certification are new factories that have relocated. By the end of 2023, in the process of obtaining FDA certification using the online system, officials will be conducting ground inspections of the factory. Ministry of Health It is known that the FDA has extended the certificate period to 3 years even after receiving approval under Article 10 of the National Food Law. FDA certification upgrades and new applications have also become easier. It is also known that the government has relaxed strict ground inspection rules for SMEs depending on local supply and demand. Therefore, it is only renewed once every 3 years, there is a lot of convenience for entrepreneurs at current situation. In order to penetrate internationally, it was also necessary to comply with FDA regulations in various countries. Difficulty in returning land (ownership or lease) according to some regulations in that country; it was difficult to see and understand how to easily solve difficulties such as submitting products for inspection within a specified period of time.

Given the economic challenges in Myanmar, the soaring gold prices and inflation have caused a significant increase in the cost of raw materials, impacting the F&B industry. Hourly changes in raw material prices lead to daily fluctuations in F&B operations, necessitating frequent price adjustments when products are redistributed and sold. This instability in the economic environment directly influences the

competitive factors within the F&B industry, as businesses must continuously adapt their pricing strategies to maintain market position and operational viability. This underscores the profound effect of national economic conditions on the competitive landscape of the F&B sector.

5.2   Suggestions

As a developing country, Myanmar faces unique challenges in efficiently supporting all SMEs across various sectors. Broad governmental initiatives often result in low efficiency due to the diverse needs and capabilities within different industries. Therefore, a more targeted approach in the F&B sector could potentially enhance effectiveness and foster more rapid development. When focusing on a specific category within the F&B sector, the government's policies and qualification criteria play a crucial role in ensuring that targeted support yields effective outcomes. By focusing on specific categories within the F&B sector initially, the government can create a model for success that can be replicated across other categories and sectors, thus gradually elevating the overall performance and impact of SMEs in the national economy.

To optimize the effectiveness of government initiatives aimed at supporting SMEs in Myanmar's F&B sector, it is crucial that entrepreneurs actively engage with and adhere to these policies. This involves utilizing government-provided resources, such as financial aid, technology, and training opportunities, specifically designated for the enhancement of the F&B industry. Entrepreneurs should ensure that these resources are employed exclusively to augment their operational capacities and product offerings.

Moreover, when the government facilitates the exportation of domestic products, F&B businesses must prioritize international market exposure over immediate profit gains. This strategic approach helps to establish Myanmar's presence in global markets and encourages the cultivation of a reputation for quality.

To further enhance product quality and production processes, the engagement of both domestic and foreign experts is essential. Collaborative workshops and seminars can be instrumental in this regard, providing platforms for knowledge exchange and the development of best practices. By integrating these expert insights into their operations, F&B businesses can elevate their products to meet international standards, ensuring consistency and competitiveness in both domestic and overseas markets. Such concerted efforts between the government and F&B enterprises can

significantly boost the industry's development, leading to sustainable economic growth and a stronger global standing for Myanmar's food and beverage products.

In light of the identified disparities between governmental policies and the expectations of entrepreneurs, adopting a Public-Private Partnership (PPP) model could serve as a viable pathway for collaboration. This approach would facilitate a cooperative framework where both government and business leaders can jointly address and bridge the gaps, thereby aligning their objectives and leveraging their combined resources for mutual benefit and sector-wide enhancement. In that direction, there will be conveniences on the government's side as well as on the entrepreneur's side, and the requirements will be reduced. If the government provides investment for the production steps, the entrepreneur must undertake them. Government funding of training programs and food science will not only increase the skills of the food and beverage industry's workforce but also have an impact on the products produced. In addition, market access and export opportunities will be facilitated through joint efforts to enter the market. In this way, the products of the local food and beverage industry can enhance their international reach.

Research on the food and beverage industry in Myanmar requires more rigorous and intensive investigation to fully understand and support its development. Therefore, in collaboration with the government on research and development activities, food processing, and safety standards, it will lead to innovations in sustainable practices. These are the components that might support the development of the food and beverage industry in Myanmar.

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APPENDIX (A)

Questionnaire for A study on the development of the food and beverage industry

   I am a student attending a Master of Public Administration at Yangon University of Economics . The questionnaire required for my thesis is drawn up as follows. The points answered by you are hidden and will only be used for the Master's thesis. Please tick the boxes for each question.

Part (A) Respondent Information (Demographic Factors)

(1) Gender _____

(2) Age _____ years

(3) Educational qualification

  ☐ Undergraduate ☐ Graduated ☐ Master ☐ Doctor ☐ Other

(4) Position

  ☐ Owner ☐ Manager ☐ Supervisor ☐ Other

(5) Has the investment income of the current business improved compared to the investment income 5 years ago?

  ☐ It tends to increase. ☐ Do not increase.

(6) Type of business

Beverage	
Milk and dairy products	
Spices	
Curry extract	
Instant noodles	
All kinds of bread	
If it is another business, please describe it. _____	

(7) Type of Ownership

  ☐ Private ☐ Joint Venture ☐ Other

(8) Which of the raw materials required for the production of domestic and foreign raw materials should be used more?

  ☐ Domestic ☐ Foreign

(9) Manufactured food and beverages Are its FDA approved?

  ☐ Received ☐ Not available ☐ Still in progress

Part (b) Influencing Factors of Food and Beverage Industry

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

No.	Socio-cultural Factors	1	2	3	4	5
1.	The product exhibits utility in traditional festivals and religious ceremonies, particularly within the domain of food consumption.					
2.	The product constitutes a dietary staple integrated into the daily consumption regimen of local inhabitants.					
3.	The product embodies a flavor profile familiar to the indigenous populace, thereby contributing to its widespread adoption.					
4.	The product transcends ethnic boundaries, rendering it universally consumable across diverse demographic groups.					
5.	The product is classified as a health food, denoting its inherent nutritive properties and alignment with contemporary wellness trends.					
No	Economic Factors	1	2	3	4	5
1.	The product is manufactured and retailed at a price point conducive to accessibility across socioeconomic strata.					
2.	Recruitment processes are conducted systematically to maintain full staffing levels within the product's production operations.					
3.	As demand for the product escalates, adjustments to its selling price are made accordingly.					
4.	Selling price depends on the fluctuations in value of currency.					
5.	Discount schemes or promotional initiatives are employed strategically to bolster product sales volume.					
No	Technological Factors	1	2	3	4	5
1.	Technological advancements dictate the use of contemporary materials in the production process of the product.					
2.	The packaging design is meticulously crafted to preserve the product's efficacy and appeal.					

3.	The production process undergoes rigorous step-by-step testing utilizing advanced research methodologies.					
4.	Novel product iterations have undergone rigorous testing and manufacturing within the preceding five years.					
5.	Product formulation is periodically revised to align with evolving consumer preferences, introducing new flavors or formulations as dictated by contemporary trends.					
No	**Regulatory Factors**	**1**	**2**	**3**	**4**	**5**
1.	The inclusion of consumption labels and allergy statements pertinent to the product is mandated at all times.					
2.	The acquisition of legal copyrights pertaining to the product's technology or brand has been duly executed.					
3.	Promotional activities associated with the product adhere strictly to government-approved methodologies.					
4.	Disposal of waste materials associated with the product is conducted in a methodical and regulated manner.					
5.	Adherence to international standards pertinent to the product is rigorously observed.					
No	**Competitive Factors**	**1**	**2**	**3**	**4**	**5**
1.	The product faces substantial competition within the market landscape.					
2.	The product enjoys recognition and esteem among its customer base.					
3.	Consistency in both price and quality characterizes the product offering.					
4.	The product is readily accessible for purchase within its designated geographic area.					
5.	The production items consistently increase to attract local customers.					

Part (c) examines the development of the food and beverage industry

(1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree)

No.	Development of the food and beverage industry	1	2	3	4	5
1.	Over the period spanning 2019 to 2023, there was a notable increase in the consumer base for domestically produced food within the food and beverage industry.					
2.	Over the period spanning 2019 to 2023, the domestic food and beverage sector experienced considerable expansion within Myanmar's economic landscape.					
3.	Over the period spanning 2019 to 2023, there was a discernible uptick in the adoption of technological equipment by domestic food and beverage industries.					
4.	The regulatory framework governing domestic food and beverage industries during the period from 2019 to 2023 is expected to facilitate industry development.					
5.	Over the period spanning 2019 to 2023, a greater influx of new enterprises has been observed entering the domestic food and beverage sector.					

Thank you very much for your reply.

APPENDIX (B)

Socio-cultural Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.853	5

Item Statistics

	Mean	Std. Deviation	N
S1	3.806	1.1214	72
S2	3.778	.9818	72
S3	3.972	1.0611	72
S4	4.111	1.0008	72
S5	3.653	1.0368	72

Economic Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.792	5

Item Statistics

	Mean	Std. Deviation	N
E1	4.181	.8774	72
E2	3.861	.9830	72
E3	3.972	.8877	72
E4	3.986	.8474	72
E5	3.972	.8387	72

Technological Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.830	5

Item Statistics

	Mean	Std. Deviation	N
T1	4.056	.8863	72
T2	3.944	.8540	72
T3	4.167	.9345	72
T4	3.819	1.0658	72
T5	3.472	1.1380	72

Regulatory Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.696	5

Item Statistics

	Mean	Std. Deviation	N
Re1	3.986	.7218	72
Re2	3.861	.8929	72
Re3	3.986	.8800	72
Re4	3.792	.9183	72
Re5	3.847	.9737	72

Competitive Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.842	5

Item Statistics

	Mean	Std. Deviation	N
C1	4.000	.8721	72
C2	4.069	.7185	72
C3	4.014	.7960	72
C4	3.917	1.0175	72
C5	3.819	.9243	72

Development Factors

Reliability Statistics

Cronbach's Alpha	N of Items
.849	5

Item Statistics

	Mean	Std. Deviation	N
Dev1	4.264	.7505	72
Dev2	4.194	.8824	72
Dev3	4.097	.9518	72
Dev4	3.944	.9478	72
Dev5	3.958	.8950	72

Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.821[a]	.674	.650	.41532	.674	27.330	5	66	.000

a. Predictors: (Constant), S, E, T, R, C

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.571	5	4.714	27.330	.000[b]
	Residual	11.384	66	.172		
	Total	34.955	71			

a. Dependent Variable: D

b. Predictors: (Constant), S, E, T, R, C

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.162	.374		.433	.667
	S	-.030	.085	-.035	-.351	.727
	E	.302	.130	.280	2.319	.023
	T	.319	.111	.345	2.881	.005
	R	.067	.100	.066	.667	.507
	C	.337	.118	.282	2.852	.006

a. Dependent Variable: D

Correlations

		DEVELOP	Socio_Cultural	Economic	Technology	Regulatory	Competative
Pearson Correlation	DEVELOP	1.000	.493	.705	.751	.599	.696
	Socio_Cultural	.493	1.000	.694	.578	.328	.400
	Economic	.705	.694	1.000	.713	.553	.591
	Technology	.751	.578	.713	1.000	.651	.652
	Regulatory	.599	.328	.553	.651	1.000	.588
	Competative	.696	.400	.591	.652	.588	1.000
Sig. (1-tailed)	DEVELOP	.	.000	.000	.000	.000	.000
	Socio_Cultural	.000	.	.000	.000	.002	.000
	Economic	.000	.000	.	.000	.000	.000
	Technology	.000	.000	.000	.	.000	.000
	Regulatory	.000	.002	.000	.000	.	.000
	Competative	.000	.000	.000	.000	.000	.
N	DEVELOP	72	72	72	72	72	72
	Socio_Cultural	72	72	72	72	72	72
	Economic	72	72	72	72	72	72
	Technology	72	72	72	72	72	72
	Regulatory	72	72	72	72	72	72
	Competative	72	72	72	72	72	72