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The Effects of Logistics Activities on Performance of Dagon Foods Processing and Canning Factory (Hlaingtet)

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Abstract

This study focuses on the effects of logistics activities on firm performance of Dagon Foods Processing and Canning Factory (HlaingTet). The objectives of the study are to identify the logistics activities of Dagon Foods Processing and Canning Factory, and to analyze the effects of logistics activities on performance of Dagon Foods Processing and Canning Factory (HlaingTet). There are totally 98 employees in this factory among them, 80 employees are selected by using simple random sampling method. The sample size represents by 82% of population. The primary data are collected from the owner by in-depth interview and selected employees by conducting survey through structured questionnaires. The secondary data are obtained from the relevant text books, previous research paper and the related websites. Descriptive statistics, correlation analysis, and multiple regression analysis are used. The data collection period was August, 2023. The result of correlation analysis shows that the logistics activities (order processing, inventory management, packaging and transportation) are positively and strongly correlated with firm performance. The result of multiple regression analysis shows that order processing, inventory management, packaging and transportation have significant and positive effects on firm performance. Therefore, Dagon Foods Processing and Canning Factory should emphasize on logistics activities to improve firm performance.

Keywords: Order processing; Packaging; Inventory management; Transportation; Firm performance

Introduction

Food is one of the pillars upon which society is built. It is fundamental to health, happiness and political stability. The food industry has developed massively, from the fundamentals of production, harvesting and storage, to a situation where productivity is enhanced through genetics, chemistry, mechanization and management. Food processing industries are today facing increasing levels of competitive pressure and difficulty with regard to maintaining and improving profitability. Manufacturing firms can gain competitive advantage through a well-designed logistics management because logistics include all activities from the source of origin to the end of destination. Logistics supports the firm by providing products or services in an efficient manner, which is both important for financial gain and support the objectives of the firm. Within the business sector, logistics can be applied to transportation, warehousing and storage, industrial packaging, material handling, inventory control, order fulfillment, demand forecasting, production planning/scheduling, procurement, customer service, facility location, return goods handling, parts and service support, and salvage and scrap disposal. To be successful, firms must manage their logistics activities, which enhances efficiency, reduce costs and improve performance. Logistics management has to do with acquiring the sufficient resources at the right quantity, place, price, and time. Ideally, manufacturers should take advantage of latest business innovations to drive overall performance (Bello & Adeoye, 2018), and one area where such intervention enhances performance is in logistic activities, such as transportation, inventory management, warehousing, material handling and other logistic activities. Dagon Foods Processing and Canning Factory (HlaingTet) is the private food processing firm. This factory is situated at HlaingTet village, Thazi Township, Meiktila District, Mandalay Division in Myanmar. It products fruit juice, dried fruit, jam, sauce, and dehydrated vegetables. Therefore, this study analyzes the logistics

and firm performance of Dagon Foods Processing and Canning Factory (HlaingTet).

Rationale of the Study

In developing countries, agriculture plays a crucial role in the economy and provides the main source of food, income and employment to their rural populations. Agriculture sector is the backbone of Myanmar's economy. The agriculture sector contributes to 37.8 percent of gross domestic product (GDP), accounts for 25 to 30 percent of total export earnings and employs 70 percent of the labour force. Integration of production agriculture with on-farm primary processing is needed to have higher and sustainable production, productivity, and better quality end products for domestic and export markets. Fruit and vegetable processing projects also aim to replace imported products, like squash, jams, tomato sauces, etc., besides earning foreign exchange by exporting finished or semi-processed products. Additionally, the food processing industry is an important economic segment, contributing to Myanmar in terms of employment creation, provision of food which is a basic necessity and generating substantial revenue for the country. According to this condition, the aim of this study is to investigate logistics management problems and their influence on business performance in the food processing industry. And this foods processing and canning factory also provide not only an economics growth but also foreign currency can increase and develop for GDP of Myanmar. Therefore, this study emphasizes to identify how order processing, inventory management, packaging, and transportation effect the firm performance of foods processing and canning factory. As a food processing industry, Dagon Foods Processing and Canning Factory produces a variety products ranging from Cordial, Jams, Juice, Sauce, dehydrated fruits and vegetables, Herbal Raw for medicine and concentrate, and these products are also exported to Japan, Korea, Singapore, and Thailand. The efficiency and effectiveness of Dagon Foods Processing and Canning Factory's logistics operation has a considerable influence not only on the business performance of the manufacturer but also on the customer's perception of the quality of the products and services provided by the manufacturer. For this reason, in order to get competitive advantages through firm performance, Dagon Foods Processing and Canning Factory has to implement logistics activities.

Objectives of the Study

The objectives of the study are:

1. To identify the logistics activities of Dagon Foods Processing and Canning Factory (HlaingTet).
2. To analyze the effects of logistics activities on performance of Dagon Foods Processing and Canning Factory (HlaingTet).

Scope and Methods and Limitations of the Study

This study focused on logistics activities and performance of Dagon Foods Processing and Canning Factory (HlaingTet). As the population, there are totally 98 employees in Dagon Foods Processing and Canning Factory (HlaingTet). Among them, 80 employees are selected as respondents by using simple random sampling method which represented by 82% of population. The primary data are collected from 80 employees by distributing structured questionnaires. The secondary data are obtained from factory's records and annual report, documents provide by the factory, and internet websites. The collected data are analyzed by using descriptive statistics, correlation analysis, and multiple regression analysis. Generally, there are fourteen logistics activities. Among them, the present limitation of the study is that focuses on logistics activities (order processing, inventory management, packaging and transportation). The survey period was conducted in August, 2023. The data are only collected from 80 employees of Dagon Foods Processing and Canning Factory (HlaingTet). Their perception on firm performance may be different from respondents of other food processing industries.

Concept of Logistics Management

Council of Logistics Management (1991) defined that logistics is 'part of the supply chain process that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements. Logistics management is that part of the supply chain process that plans, implements, and control the effective flow and storage of goods, service, and related information from point-of-origin to the point-of-consumption in order to meet customers' requirements [1]. The logistics of physical items usually involves the integration of information flow, material handling, production, packaging, inventory, transportation, warehousing, and often security [2]. Logistics is a link between the market place and the operating activity of the business. The scope of logistics spans the organization, from the procurement and management of raw materials through to the delivery of the final product. Logistics plays a huge role within today's economy. Today, companies have good infrastructure and record keeping, which continues to improve through advancements in technology. This means that logistics has an impact on the shipment of goods and how quickly they can get to the consumer, again adding a competitive edge to other businesses [3].

Logistics Activities

The elements of the logistics activities must work as a unit to achieve the greatest ability to unite and work together. For logistical activities, important factor is the ability to respond

quickly to market changes, as well as take into account the various changes in the environment. Due to these features, all the elements of logistics activities represent a single activity having a feedback and flexible in responding to what is happening described the fourteen logistics activities [4,5]. These activities are materials handling, transportation, warehousing and storage, inventory management, packaging, order processing, demand forecasting, production planning, purchasing, customer service levels, plant and warehouse site location, return goods handling, part and service support, and salvage and scrap disposal. Among them, this study focuses such as order processing, inventory management, packaging and transportation.

Order Processing

Order processing is the process or work flow from order placement to delivery. This is a key element of retail order fulfillment, where reliability and accuracy lead to customer satisfaction. Steps in order processing include picking, sorting, tracking and shipping. Order processing can range from manual processes (hand written on an order log sheet) to highly technological and data-driven processes (through online orders and automated order processing software) depending on the operation [6]. Order Processing is important in logistics because it's an organized and effective procedure in take care of customer orders. As a consequence, efficient processing of orders will lead to increased sales and higher customer satisfaction.Each order is assigned a tracking number which is then shared (either manually or automatically, depending on the software) with the customer, allowing them to see the status of their order every step of the way. Finally, items are delivered to the end customer [6]. Order processing includes activities for receiving, handling, filing, recording of orders. Management has to ensure that order processing is accurate, reliable and fast. Delays in execution of orders can become serious grounds for customer dissatisfaction; which must be avoided at all costs [7]. Because the order processing cycle is a key area of customer interface with the organization, it can have a big impact on a customer's perception of service, and therefore satisfaction [1].

Inventory Management

Drury (1996) defined inventory as a stock of goods that is maintained by a business in anticipation of some future demand. Inventory management is an accounting term that refers to goods that are in various stages of being made ready for sale, including finished goods (that are available to be sold), work-in-progress (meaning in the process of being made) and raw materials (to be used to produce more finished goods). According Chase et al, inventory is the stock of any item or resource used in any organization. An inventory system is the set of policies and controls the minor levels of inventory and determine what levels should be maintained, when stock should be replenished and how large order should be [8].

Inventory management is of great importance especially for managers who must decide how much to hold and how to administer the rest of the logistics system more creatively in order to ensure that customer service does not suffer as a result of lower inventory levels. That's the reason why inventory management requires a particular attention or the support of the entire company's management levels in order to meet customers' satisfaction [9]. When making decisions on inventory, management has to find a compromise between the different cost components, such as the costs of supplying inventory, inventory-holding costs and costs resulting from insufficient inventories [8].

Packaging

Packaging is a fairly new concept that has during the last years developed and gained increased attention by both industry and scientific community [10]. Product packaging has earned a great emphasis today because these factor considered safe to use by the consumers. Food packaging has four main functions: containment, protection, convenience and communication; all of them are correlated to each other and need to be considered during the packaging development process [11]. Packaging can be described as a coordinated system of preparing goods for transport, warehousing, logistics, sale, and end use. Packaging contains, protects, preserves, transports, informs, and sells [12]. Packaging also affects supply chain effectiveness because it represents an interface between the supply chain and its main customer: the end user and enables the chain's primary task i.e. serving end consumers, to be accomplished. This is especially evident in the Fast Moving Consumer Goods supply chain [13].

Transportation

Transportation physically moves product from where they are produced to where they are needed. This movement across space or distance adds value to products. This value is often referred to as place utility. Transportation is also a factor in time utility, it determines how fast and consistently a product moves from one point to another [14]. Transportation is the most significant area of logistics because of the impact on customer service level and cost structure. Without well-developed transportation systems, logistics could not bring its advantages into full play. Besides, a good transport system in logistics activities could provide better logistics efficiency, reduce operation cost, and promote service quality. A well-operated logistics system could increase both the competitiveness of the government and enterprises [5]. Nowadays, organizations are concerned about transportation management because transportation represents a major expense item. And, the transportation system is the physical link connecting a firm's customers, raw material suppliers, plants, warehouses, and channel

members. In addition, a good transport system performing in logistics activities brings benefits not only to profitability but also to company competitiveness [3].

Firm Performance

The concept of firm performance has received various interpretations over the years. Some look at the firm performance to mean the development of share prices, while others viewed it in terms of profitability [15]. A firm's marketing performance indicates how productive its marketing activities are with regards to its marketing goals, which is influenced by the firm's characteristics, approach, internal and external environment, resources and other qualities/characteristics of the shareholders and management of the firms. The most notable performance measures of a firm are financial and non-financial measures, and in strategic management research, firm performance is frequently used as a dependent variable [16]. According to the Richard et al, firm performance encompasses three specific areas of firm outcomes: financial performance (profits, return on assets, return on investment), market performance (sales, market share), and value added. Firm performance include return on asset, return on investment, market share, sale growth, customer satisfaction, cost, employee satisfaction, lead time and profit. Firm performance comprised the actual output or results of an organization as measured against its intended outputs (or goals and objectives), it involved the recurring activities to establish organizational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently [17].

Conceptual Framework of the Study

Based on the results of literature review, it can be constructed a conceptual framework. This study only focuses on the logistics activities as inventory control, transportation, packaging, and order fulfillment in the field of foods processing and canning factory. The conceptual framework of the study is shown (Figure 1). According to Figure (1), order processing, inventory management, packaging, and transportation are independent variables and firm performance (increasing sale volume, productivity, revenue, reduced cost and saving time) is dependent variable. The main purpose of this research is to find out whether the logistics activities have a significant effect and subsequently helps firm to improve firm performance of Dagon Foods Processing and Canning Factory.

Logistics Activities of Dagon Foods Processing and Canning Factory (HlaingTet)

The factory is practicing four logistics activities according to business nature, such as order processing, packaging, inventory management, and transportation.

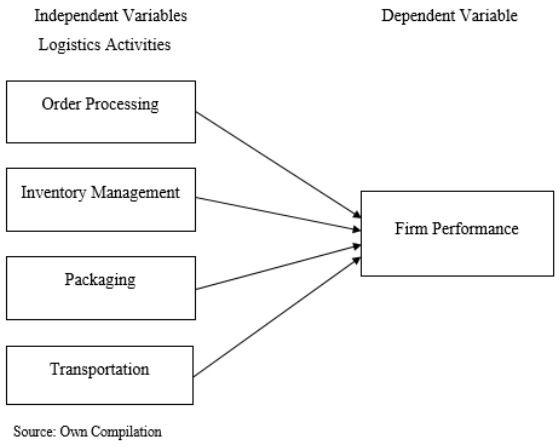

Figure 1: *Conceptual Framework of the Study*

Order Processing

Order processing activities is important for food processing and canning factory. The factory has to deliver the products to the customers when the customers want. And the factory has to handle concerning with the ordering materials. Firstly, it collects the orders from customers and then the customers' orders are fulfilled. The factory directly fulfill the customer's orders to sites in previously connected townships and also give the service delivery to the public transportation gate for the customers from other cities. Moreover, the factory also delivers orders through Global Sky Company Limited for distribution in Yangon. The Global Sky Company Limited is the main distributor of Dagon Foods Processing and Canning Factory. The factory always careful to deliver the right quality of products what the customer order and perform the customer order on time.

Inventory Management

According to the business nature, Dagon Foods Processing and Canning factory has cold storage room to store fruits pulp and semi-finished products in order to produce jam. The workers to warehousing department are responsible to entry daily stock in and stock out according to their stock form. Therefore, inventories are used not only for storing raw materials or finished products but also receiving products from multiple suppliers. In addition, factory uses first-in, first-out (FIFO method) for raw materials and finished goods. The warehousing department of Dagon Foods Processing and Canning factory is one of the main activities in operation of the firm. There are four warehouses to store and distribute the products to require destination smoother and faster without any damage. The warehouse that stored raw materials, semi-finished and finished products locate nearly in the plant. Raw materials are stored according to product categories. Finished products are also stored with suitable shelves and placed according to product names. The employees of warehousing department are responsible for

verifying the quantities and quality of raw materials and finished products before receipting. After checking, the employees have to place the materials according to their products category. The employees have to place the materials according to their receipting. After checking, the employees have knowledge of the expiration, weight and size of each product to store and manage raw materials and finished products. Dagon Foods Processing and Canning factory's inventory management helps their product demand and take inventory control has to do with keeping accurate records of goods that are ready to transport. Therefore, factory has no delays in delivery of products due to sufficient inventories.

Packaging

The packaging serves the important function of containing the food, protecting against chemical and physical damage whilst providing information essential to consumers and marketers. Dragon Foods Processing and Canning Factory's packaging plays important role in the smooth transfer to finished goods from plant to the distribution center and customer locations. Firstly, these items are picked from the shelves and placed to the packaging area. After packaging, the firm distributes to customers. Dragon Foods Processing and Canning Factory packed its products with plastic bag, cans, glasses and carton box. And factory's main packaging materials are plastics and tinplate steel. Plastic can protect water. Due to pitting resistance and quality surface finish it is easy to clean and maintain. Moreover, tinplate steel does not change the color, taste or smell of the canning food. The purpose of their packaging is to protect from damaging, temperature shocks during transportation and it is easy to handle during the movements from point to point and minimizing of space in warehouse.

Transportation

Transportation of Dagon Foods Processing and Canning factory provides the essential service of linking factory to its suppliers and customers. There are five ways of transportation such as rail, road, ship, air and pipeline. Dagon Foods Processing and Canning factory is especially using road way. The factory has chosen road way for both inbound and outbound transportation in daily activities. The factory uses private transportation service firms and public transportation for delivery system. The factory uses transport schedule to deliver finished goods to customer's right time, right place and right product. The firms always check vehicle condition to smooth transportation. And they also use lead time to effective and efficient transportation channels. Therefore, the factory can reduce transportation time and cost and also they can arrange on time delivery of customers order.

Performance of Dagon Foods Processing and Canning Factory (HlaingTet)

Logistics activities are accelerated the operation performance. Reducing cost of each outbound logistics activities influence the total amount of costs and enhance firm's performance. The main goal of the firm is to maximize the revenue and sale maximization. Profit maximization is to maximize the present value of the firm and try to maximize sale growth. Firm performances are measured by the improvement in productivity. Dagon Foods Processing and Canning Factory have produced the products based on the orders from Dagon Foods Company. Dagon Factory has been gaining the increase in sale growth through the logistics activities within from 2015-2016 to 2018-2019. Dagon factory has been gaining improvement in productivity through the logistics activities within four years from 2015-2016 to 2018-2019. This means improving in the strength to determine the productivity in the factory. Then, the factory's annual production units are also seen in the following (Table 1). According to Table (1) performance of Dagon Foods Processing and Canning factory can be measured by productivity in Tons. According to this data, firm performance has increased over last five years and the logistics activities were developed in Dagon Foods Processing and Canning factory.

Table 1: *Annual Production (Tons) of Dagon Foods Processing and Canning Factory*

Sr. No.	Years	Production (Tons)
1	2015-2016	130
2	2016-2017	153
3	2017-2018	214
4	2018-2019	240
Source: Dagon Foods Processing and Canning factory (August,2023)		

Analysis of Logistics Activities and Performance of Dagon Foods Processing and Canning Factory

Demographic profile of respondents include gender, age, marital status, education level, position, income level and working experience. To analyze the effects of logistics activities on performance of Dagon Foods Processing and Canning Factory (HlaingTet), frequency distributions of seven demographic factors for 80 respondents are shown in the following Tables (Appendix A). Analysis of Respondent Perception on Logistics Activities and Performance This section is to analyze the effects of logistics activities on firm performance of Dagon Foods Processing and Canning Factory (HlaingTet).

Reliability of the Variables

This section is to analyze the effects of logistics activities on performance of Dagon Foods Processing and Canning Factory

(HlaingTet). Firstly, descriptive statistics, reliabilities, the mean values of the factors, and correlations were calculated. Before the reliability analysis, four components of the logistics activities were measured with 25 items, firm performance was measured with eight items. According to the results of the reliability analysis of the variables, all items of each variable support the acceptable level of reliability test. Cronbach (1951) described reliability is the overall consistency of a measure [18- 32]. The alpha value for each question is identified and summarized, which shows the reliabilities (Alpha values) of the variables (Table 2). Table (2) presents Cronbach's alpha value for each item: order processing, packaging, inventory management and transportation and firm performance from 0.600 to 0.744. The reliability of order processing is 0.600, the reliability of packaging is 0.794, the reliability of inventory management is 0.745, the reliability of transportation is 0.813 and the reliability of firm performance is 0.744. Therefore, the alpha values of all variables have reliable and acceptable levels.

Table 2: *Reliability of the Variables.*

Sr. No.	Logistics Activities	Items	Cronbach's Alpha
1	Order Processing	6	0.600
2	Inventory Management	7	0.745
3	Packaging	7	0.794
4	Transportation	5	0.813
5	Firm Performance	8	0.744
Source: Survey Data (August, 2023)			

Summary of Respondent Perception on Logistics Activities

In studying order processing, packaging, inventory management and transportation are focused and presents overall employee perception on logistics activities (Table 3). Table (3) describes the overall mean values of order processing, packaging, inventory management and transportation. The maximum mean value of order processing is 4.04, it means because employees accept fulfilling the right quality of customer's order product, always accepting customer order exactly with required information (date, time, place, product, type with comments) and performing customer order just-in-time. Although the minimum mean value of inventory management is 3.88, it shows the agree level.

Table 3: *Summary of Respondent Perception on Logistics Activities.*

Sr. No.	Particular	Mean	SD
1	Order Processing	4.04	0.614
2	Inventory Management	3.88	0.583
3	Packaging	4.01	0.559
4	Transportation	3.92	0.652
Source: Survey Data (August, 2023)			

Table 4: *Respondent Perception on Firm Performance.*

Sr. No.	Description	Mean	SD
1	Increasing revenue by performing customer's order on time	4.15	0.638
2	Increasing sale value by using order processing software	3.61	0.907
3	Reducing transportation cost by using good quality packaging	4.25	0.666
4	Saving time and cost by using automatic packing machines	3.88	0.848
5	Reducing storage cost due to use effective inventory management and production planning	4.01	0.864
6	Increasing productivity by using systematically inventory control	4.03	0.729
7	Increasing productivity by using annual transportation planning	3.99	0.755
8	Saving time and cost by using transportation schedule	4.29	0.679
	Overall Mean	4.02	
Source: Survey Data (August, 2023)			

Respondent Perception on Firm Performance

Firm performance factors were measured with eight statements. The results in the table show the mean values and overall mean value concerning firm performance of logistics activities in the factory. The overall mean score is 4.02 and it can be concluded respondents are agreed with their performance at factory. The maximum mean of 4.29 shows that the factory has saving time and cost by using transportation schedule over last five years. The minimum mean value of 3.61 shows that agree level of respondents. It means that the factory has increased sale value by using order processing software over last five years (Table 4).

Correlation Analysis of Logistics Activities and Performance

After the reliability, correlations of independent variables (order processing, packaging, inventory management and transportation) are tested to show their correlation with dependent variable (firm performance). Correlation is the statistical technique that can show whether and how strongly pairs of variables are related. Correlation coefficient ranges from -1.0 to +1.0. As the correlation coefficient value goes toward 0, the relationship between the two variables will be weaker. The direction of the relationship is indicated by the sign of the coefficient; a (+) sign indicates a positive relationship and a (-) sign indicates a negative relationship. If the value is positive, it means that as one variable gets larger, the other gets larger. If the value is negative, it means that one variable gets larger, the other gets smaller. The results of the correlations of the measured variables are shown (Table 5).

Table 5: *Correlation between Logistics Activities and Performance.*

Sr. No.	Logistics Activities	Pearson Correlation Coefficient	P-value
1	Order Processing	0.474**	0.000
2	Inventory Management	0.748**	0.000
3	Packaging	0.729**	0.000
4	Transportation	0.653**	0.000

Source: Survey Data (August, 2023)

**Correlation is significant at the 0.01 level (2-tailed)

Multiple Regression Analysis of Logistics Activities and Performance

As the main analysis, the study was applied regression analysis to test the objective of the effects of logistics activities (order processing, packaging, inventory management and transportation) and firm performance. Multiple regression analysis is conducted to test the proposed objectives. The results of the multiple regression analysis are shown (Table 6).

$P < 0.05$; Dependent variable: Firm Performance

The propose Model is

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \square i$$

The estimate model is,

$$y = a + b1X1 + b2X2 + b3X3 + b4X4$$

where,

y = Firm Performance
a = Constant (intersection)
b = Coefficient (the slope of the regression)
X1 = Order Processing
X2 = Inventory Management
X3 = Packaging
X4 = Transportation

εi = Random error

Thus, the regression equation is;

Firm Performance = 0.560 + 0.187 Order Processing + 0.296 Inventory Management + 0.216 Packaging + 0.176 Transportation

According to the results in Table (6), the model explains that the variation in overall level of performance exists as R square value is 64 percent. This indicates that independent variables can explain 64 percent variation in dependent variable. If the company has emphasized the logistics activities (order processing, inventory management, packaging and transportation) the performance will have been 0.560. Among the logistics activities, the factory gets more performance as the results of order processing, inventory management, packaging and transportation. According to the results among logistics activities, order processing, inventory management, packaging and transportation show the positive and significant effect on performance. The results show that order processing has positive and significant effect on firm performance because its p-value is 0.024. It shows that the amount of firm performance would increase by every unit change in the factor of order processing when all other variables are constant. This implies that there is a positive and significant effect of order processing on firm performance at 5% significant level. One additional unit of order processing increased 0.187 times in performance.

The results show that inventory management has positive and significant effect on firm performance because its p-value is 0.018. It shows that the amount of firm performance would increase by every unit change in the factor of inventory management when all other variables are constant. This implies that there is a positive and significant effect of inventory management on firm performance at 5% significant level. One additional unit inventory

management increased 0.296 times in performance. The results show that packaging has positive effect on firm performance because its p-value is 0.062. It shows that the amount of firm performance would increase by every unit change in the factor of packaging when all other variables are constant. This implies that there is a positive and significant effect of packaging on firm performance at 10% significant level. One additional unit of packaging increased 0.216 times in performance. The results show that transportation has positive and significant effect on firm performance because its p-value is 0.027. It shows that the amount of firm performance would increase by every unit change in the factor of transportation when all other variables are constant. This implies that there is a positive and significant effect of transportation on firm performance at 5% significant level. One additional unit of transportation increased 0.176 times in performance.

Table 6: *The Effect of Logistics Activities on Firm Performance.*

Model	Unstandardized coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(constant)	0.560	0.327			
Order Processing	0.187	0.081	0.185	2.306	0.024
Inventory Management	0.296	0.123	0.310	2.412	0.018
Packaging	0.216	0.114	0.235	1.893	0.062
Transportation	0.176	0.078	0.235	2.255	0.027
R^2					0.645
Adjusted R^2					0.626
Source: Survey Data (July, 2020)					

Table 7: *Order Processing*

Sr. No.	Statement	Perception				
1	The factory provides customer's order product with period of time.	1	2	3	4	5
2	The factory can perform customer order just-in-time.	1	2	3	4	5
3	The factory uses order processing software to reduce errors in maintaining order detail.	1	2	3	4	5
4	The factory staffs always accept customer order exactly with required information (date, time, place, product, type with comments).	1	2	3	4	5
5	The factory services ordered product with standard quality.	1	2	3	4	5
6	The factory fulfills the right quality of customer's order product.	1	2	3	4	5

Table 8: *Inventory Management*

Sr. No.	Statement	Perception				
1	Factory uses effective inventory management and production planning.	1	2	3	4	5
2	Factory keeps inventory record by manually.	1	2	3	4	5
3	Factory also uses inventory control software.	1	2	3	4	5
4	Factory uses just-in-time inventory management practices to reduce inventory costs.	1	2	3	4	5
5	Inventories are systematically stored at the factory depend on the type of the product.	1	2	3	4	5
6	Factory has sufficient warehouses to maintain raw materials.	1	2	3	4	5

7	The responsible person usually checks inventory balance for warehousing and storage activities.	1	2	3	4	5

Table 9: *Packaging*

Sr. No.	Statement	Perception				
1	Packaging protects physical accidents and barriers.	1	2	3	4	5
2	Packages and labels give exact information to customer how to use.	1	2	3	4	5
3	The factory always uses the good quality packaging materials.	1	2	3	4	5
4	The factory uses IT technology, electronic machines and automatic packing machines.	1	2	3	4	5
5	The factory uses tinplate steel (safety pack of product and safety first of customer) packing material.	1	2	3	4	5
6	The factory's product has attractive packaging design.	1	2	3	4	5
7	The factory uses the good quality of plastic packaging system approved by FDA.	1	2	3	4	5

Table 10: *Transportation*

Sr. No.	Statement	Perception				
1	The factory uses the safety and security truck cars for transportation. (public transportation)	1	2	3	4	5
2	The factory uses transport scheduling to ensure that deliveries are completed in right time, right place and right product.	1	2	3	4	5
3	The factory prepares an annual transportation planning for saving transportation cost.	1	2	3	4	5
4	The factory regularly checks the track car in order to smooth transportation.	1	2	3	4	5
5	The factory use effective and efficient transportation channels.	1	2	3	4	5

Table 11

Sr. No.	Statement	Perception				
1	The factory has increased revenue by performing customer's order on time over last five years.	1	2	3	4	5
2	The factory has increased sale value by using order processing software over last five years.	1	2	3	4	5
3	The factory has reduced transportation cost by using good quality packaging design over last five years.	1	2	3	4	5
4	The factory has saving time and cost by using IT technology, electronic machines and automatic packing machines over last five years.	1	2	3	4	5
5	The factory has reduced storage cost due to use efficient and effective inventory management and production planning over last five years.	1	2	3	4	5
6	The factory has increased productivity by maintaining efficient and effective inventory control over last five years.	1	2	3	4	5
7	The factory has increased productivity by preparing detail annual transportation planning over last five years.	1	2	3	4	5
8	The factory has saving time and cost by using transportation schedule over last five years.	1	2	3	4	5

Sr. No.	Description	Frequency	Percentage
1	**Gender of Respondents**		
	Male	33	41.25
	Female	47	58.75
	Total	80	100.00
2	**Age of Respondents**		
	25 to 34 years	42	52.50
	35 to 44 years	21	26.25
	45 to 54 years	10	12.50
	55 years and above	7	8.75
	Total		100.00
3	**Marital Status of Respondents**		
	Single	21	26.25
	Married	59	73.75
	Total	80	100.00
4	**Educational Level of Respondents**		
	High School	46	57.50
	University Students	16	20.00
	Graduate	17	21.25
	Post Graduate	1	1.25
	Total	80	100.00
5	**Position of Respondents**		
	Director	1	1.25
	Manager	9	11.25
	Assistant Manager	12	15.00
	Supervisor	16	20.00
	General Worker	42	52.50
	Total	80	100.00
6	**Income Level of Respondents**		
	100,001 - 200,000 Kyats	42	52.50
	200,001 - 300,000 Kyats	16	20.00
	300,000 - 400,000 Kyats	12	15.00
	Above 400,001 Kyats	10	12.50
	Total	80	100.00
7	**Working Experience of Respondents**		
	1 - 3 years	32	40.00

	4 - 6 years	38	47.50
	7 years and above	10	12.50
	Total	80	100.00

Source: Survey Data (August, 2023)

Among the logistics activities, inventory management had more supported firm performance than any other factors. According to the results among the logistics activities, order processing, inventory management and transportation are appropriate positive and significant effect on firm performance. This study analyzed relationship between logistics activities and firm performance. The result revealed that logistics activities are essential for firm performance. The final results of the multiple regression analysis are illustrated in the following (Figure 2).

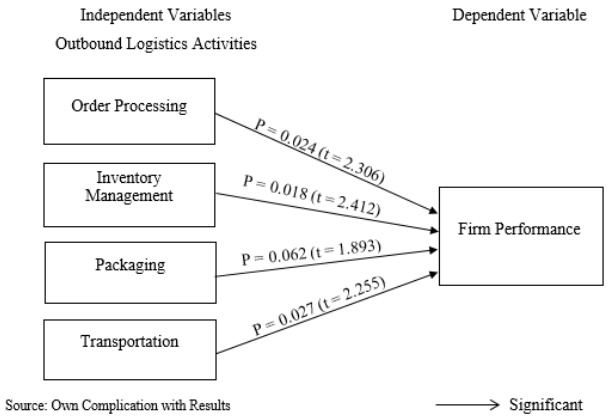

Figure 2: *Conceptual Framework with Results.*

According to Figure (2), structural model of logistics activities, the research finding on the effects of logistics activities and firm performance of Dagon Foods Processing and Canning Factory (HlaingTet) is shown as follows. Inventory management shows the most significant effect on firm performance. Order processing, packaging and transportation also found that the positive and significant effect on performance. This study highlights the importance of order processing, inventory management, packaging and transportation to increase firm performance.

Conclusion

Dagon Foods Processing and Canning Factory (HlaingTet) uses the good quality of the raw materials the safe product for customer and give the safety first for human on the virtual issues by testing and approving by FDA. Dagon Foods Processing and Canning Factory (HlaingTet) fulfills customers' products by using the right quality of products specifically according to recorded data from the order processing department. And the Factory (HlaingTet) uses the responsible person to maintain and check the quality of raw materials and finished goods at warehousing and storage. Moreover, they rent vehicles from long term relationship owners who arrange drivers to deliver the products for right time, right days, and right palaces according to transportation plan of factory. By analyzing the employee perception on performance, it is found that the respondents agree the performance of Dagon Foods Processing and Canning Factory (HlaingTet).

Moreover, the correlation of the variables showed that the logistics activities (order processing, inventory management, packaging and transportation) and firm performance has the strong and positive correlation. In this multiple regression analysis, order processing, inventory management, packaging and transportation are significant and positive effect on performance of Dagon Foods Processing and Canning Factory (HlaingTet). These results show that factory can create better performance as the result of order processing, inventory management, packaging and transportation of logistics activities. Therefore, these factors were taken into consideration and essential for the improvement of firm performance. The findings of this study are valuable for the organization to consider the strengths and weakness of the logistics activities in the real workplace. Based on the findings of the study, the factory can achieve and meet its goal and objective by implementing systematically logistics activities because these logistics activities are essential for Dagon Foods Processing and Canning Factory (HlaingTet). Therefore, the factory should carefully manage to increase logistics activities and to increase firm performance in long term. For further research, it is suggested that this research is expanded to the whole Myanmar of factory's logistics activities and firm performance. It can be used in other organization such as manufacturing or service organization, private or public, profit or non-profit organization. Further research should conduct the logistics activities of other companies in Myanmar.

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