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Practice of SCM Performance Drivers and Procurement Process: Case Study on Globe Pharmaceuticals Limited

Syed Abrar Rafid[1] Ashfaque A. Mohib[2] Md. Faruque Hossain[3, *]

1.MBA Student, Department of Operations and Supply Chain Management, Faculty of Business Administration, American International University-Bangladesh, House 58/B, Road#21, Kemal Ataturk Avenue, Dhaka-1213, Bangladesh

2.Associate Professor, Department of Operations and Supply Chain Management, Faculty of Business Administration, American International University-Bangladesh, House 58/B, Road#21, Kemal Ataturk Avenue, Dhaka-1213, Bangladesh

3.Professor, Department of Operations and Supply Chain Management, Faculty of Business Administration, American International University-Bangladesh, House 58/B, Road#21, Kemal Ataturk Avenue, Dhaka-1213, Bangladesh

Abstract

This paper presents a descriptive research which addresses a case study on Globe Pharmaceuticals Limited., Bangladesh. The main objective of this study is to identify and demonstrate the practices of Supply Chain Management (SCM) upon the organization. The study is conducted by in-depth interviewing of the personnel working in the commercial department of the organization as well as secondary data. Globe Pharmaceuticals Limited has been manufacturing medicines since 1986 with a view to provide high quality medicines throughout the country. They are not only distributing medicines in the country but also exporting to international market. Till now, they have expanded their overseas marketing coverage in Singapore, Vietnam, Philippines, Srilanka, Myanmar, Yemen and Cambodia. The company is now in the process of receiving regulatory approvals for start its business in various countries of Africa, Middle East and Latin America. This has been possible by effective implementation of supply chain management performance drivers. The author has thoroughly analyzed SCM performance drivers and procurement process of Globe Pharmaceuticals Limited, to explore innovative ideas regarding SCM practices in pharmaceuticals industry. The performance of the supply chain of Globe Pharmaceuticals Limited is evaluated based upon the six supply chain performance drivers; Facilities, Inventory, Transportation, Information, Sourcing, Pricing. These drivers are utilized to create the balance between responsiveness and efficiency. The right combination of efficiency and responsiveness increases the performance of the supply chain and reduce inventory and operating expense simultaneously. Globe Pharmaceuticals Limited, practices all the six drivers of supply chain performance and tries constantly to improve its performance. There are certain aspects of their supply chain where they can bring improvements which will improve the performance of the whole supply chain.

Keywords: Supply chain management, Practice, Performance drivers, Procurement process, Globe Pharmaceuticals Limited

1. Introduction

In any manufacturing company Supply Chain Management (SCM) plays a vital role in capturing the market share. By utilizing proper SCM, a company can achieve its goals which is much truer in pharmaceutical industry. In both developed and developing countries the pharmaceutical supply chain varies in terms of their organization, financing, function, and the ideal characteristics of the best performing supply chains (Choi et al., 2012). The SCM can enable an organization to make better use of its assets and resources and ensure that customer demands are fulfilled effectively. Without appropriate SCM, organizations can fail to achieve its goals and fall behind in the ever-competitive industry (Wisner et al., 2015).

A supply chain can be defined as all the parties that are involved both directly or indirectly in fulfilling a customer's request. Supply chain is not confined within the boundaries of an organization. It includes not only the manufacturers and suppliers but also the warehouses, transports, retailers as well as the ultimate customers (Chopra et al., 2013). Another scientist defined SCM is the management of flow of information and upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain (Stevenson, 2009; Christopher, 2011).

Globe Pharmaceuticals Limited, launched in 1986 with the responsibilities to provide highest quality and efficient medicine throughout the country within a reasonable price. It is the flagship company of Globe Pharmaceuticals Group of Companies Limited. The manufacturing plant has been built in accordance with the norms of WHO-GMP and other international drug regulatory bodies. Globe Pharmaceuticals Limited, currently produces and markets over 200 products which are both marketed both domestically and globally. Till now, Globe has expended its overseas marketing coverage in Singapore, Vietnam, Philippines, Srilanka, Myanmar, Yemen and Cambodia. The company is now in the process of receiving regulatory approvals for start its business

in various countries of Africa, Middle East and Latin America (Christopher, 2011; Wisner et al., 2015).

2. Literature review

The term Supply Chain Management is developed by the consultants in the 1980's to integrate the key business processes from supplier to end user (Oliver and Webber, 198). It is believed that SCM originated from many fields such as distribution, transport and logistics process (Lewis 1957; Croom et al., 2000).

Supply chain can be defined as the network of organizations that are involved, interconnected through upstream and downstream linkages in the different processes and activities that produce value in the form of products and services in the hands of the end consumer (Christopher, 2011). The objective of every supply chain is to maximize the supply chain surplus, which is defined as the difference between what the value of the final product is to the customer and the costs incurred by the supply chain in if product (Chopra et al., 2013).

The Council of Supply Chain Management Professionals (CSCMP) has defined supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities [12]. It also includes coordination and partnership with channel partners, which can be suppliers, intermediaries, third party service providers and finally the customers. According to CSCMP there are following two core principles behind SCM (CSCMP, 2017):

i. Practically every product in the world that reaches the consumer requires the cumulative efforts of multiple organizations. Collectively, these organizations make up the supply chain.
ii. The SCM is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. Supply chain covers everything from product development, sourcing and production to logistics as well as the information systems to coordinate these activates.

The SCM focuses on the management of relationships between the various stages involved in the supply chain to achieve a profitable outcome for all of them. Supply chain deals with the planning and control of total materials flow from suppliers through end users (Jones & Riley, 1985). With an end to end of view SCM can achieve the desire profit for all the parties and ensure a long-term relationship between the parties involved in the chain. Many authors have defined supply chain management in differently but all of them has the same underlying meaning, which is SCM is the management of all processes and activities involved in fulfilling customer needs

The main objective of managing any supply chain is to synchronize the requirements of the customer with the flow of materials from suppliers to affect a balance between what are often seen as the conflicting goals of high customer service, low inventory investment and low unit cost. The design and operation of an effective supply chain is of fundamental importance to every company (Stevens, 1989).

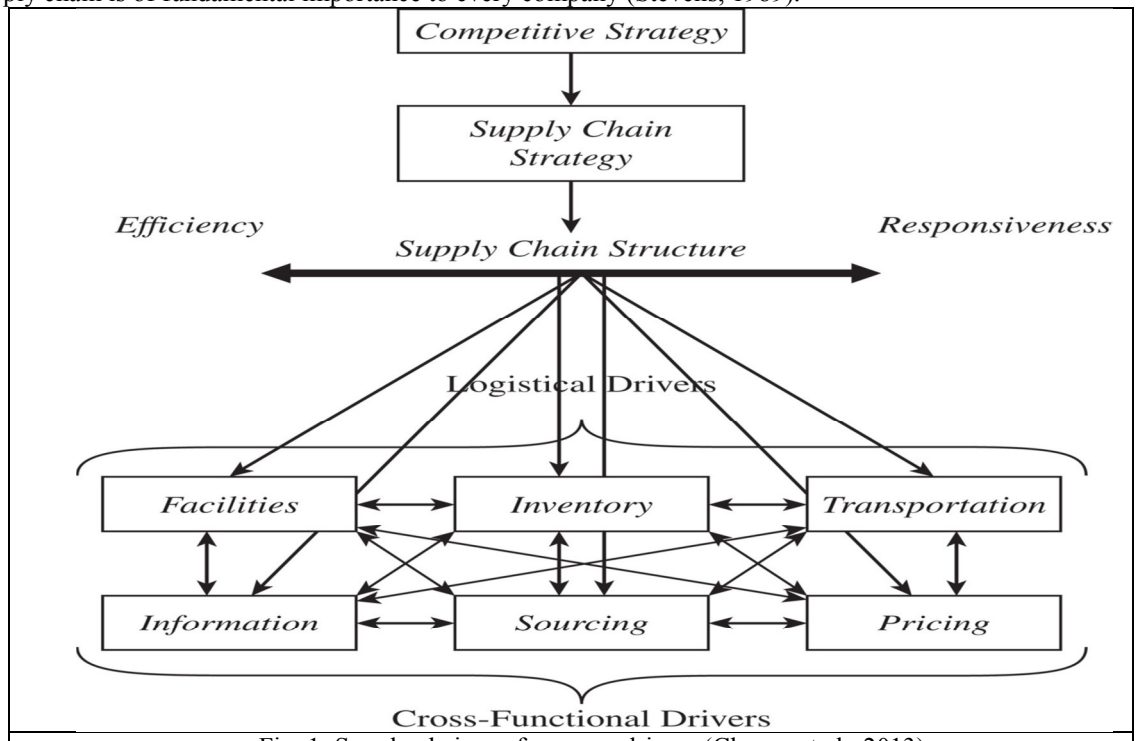

Fig. 1: Supply chain performance drivers (Chopra et al., 2013).

Every supply chain strategy aims to meet the balance between responsiveness and efficiency. To understand how an organization is performing to strike a balance in responsiveness and efficiency it can examine

its performance in terms supply chain performance drivers. The key supply chain performance drivers consist of three logistical and three cross functional drivers, such as Facilities, Inventory, Transportation, Information, Sourcing, Pricing (Fig. 1). Information being the key driver that can affect all other drivers and helps an organization to achieve better supply chain performance.

2.1. Facilities

Facilities are the physical locations in a supply chain where products are assembled, fabricated or stored. There are two major types of facilities, production site (factory, workshop) and storage site (warehouse). Any supply chain is designed by considering the role, location, capacity and flexibility of the facilities as it has a significant impact on the supply chain's performance. Facilities are designed based upon the two approaches to manufacturing: product focus and functional focus (Chopra et al., 2013).

2.1.1. Product focus

A factory which follows this approach performs the range of operations and activities required to produce a given product line. These activities can be fabrication of different product parts to assembly of the final product.

2.1.2. Functional focus

A functional focus approach concentrates on performing a given set of functions or operations such as only making selected group of parts or just assembling the product.

2.2. Inventory

Inventory contains all the raw materials, work in process and finished goods within a supply chain [19]. Changing inventory policies can dramatically alter the supply chain's responsiveness and efficiency. Inventory impacts the assets held, the costs incurred and the overall responsiveness of the supply chain. Too much inventory can increase the responsiveness as well as the overall cost of the supply chain. On the other hand, low level of inventory can improve inventory turns but also result in lost in sales. So, it is important to make correct inventory decisions. There are three basic decisions to make regarding inventory such as Cycle inventory, Safety inventory and Seasonal inventory. Cycle inventory is the amount of inventory needed to satisfy demand for the product given a regular cycle (Chopra et al., 2013). Safety inventory is the inventory that is held to counter the uncertainty in demand, within lead time. Seasonal inventory is held to counter the predictable variability in demand following an anticipated peak / off-peak pattern (Chopra et al., 2013).

2.3. Transportation

Transportation means the movement of inventory from point to point in the supply chain. Transportation can take the form of many combinations of modes and routes. Each of this modes and routes has its own performance characteristics. Transportation decisions can impact the responsiveness of the supply chain. Responsiveness can be attained by using transportation mode which is fast and flexible (Tseng et al., 2005). These are the basic modes of transportation from which a company can make transportation decisions based on their strategy,

2.3.1. Ships: Ships plays a key role in international trade. It can provide a cheap and transport very high capacity of loads (Tseng et al., 2005). It can carry a huge amount of inventory over a long distance. It is also a slow mode of transportation. The transportation schedule is highly affected by the weather conditions. The use of ship is limited to certain geographic areas, such waterways with harboring facilities.

2.3.2. Rails: Rails are very cost efficient for transporting very large, heavy or high density products and raw materials over a long distance, across the land. Railway transportation has the advantages of having high carrying capacity, low influence of weather conditions and low energy consumption. However, main disadvantages of rails are high cost of essential facilities and maintenance, restricted to limited locations. It takes relatively longer time to organize carriages, making it a relatively slower transportation mode (Tseng et al., 2005).

2.3.3 Package carriers: Package carriers are transportation companies which carries small packages for the shipper. The trend toward increasingly compact and small products is expected to improve the cost-benefit ratio by using third party package carriers to ship the products (Tseng et al., 2005). Package carriers are suitable for shipping small and time sensitive products cheaply and quickly Chopra et al., 2013).

2.3.4. Trucks: Trucks are very flexible in terms of carrying capacity and the locations they can go. It is a low-cost mode of transportation though the cost can fluctuate depending on the cost of fuel and the condition of the road as they vary. There are many advantages of using trucks as a mode of transportation. They are cheaper initial investment, high accessibility of roadways, mobility and availability. The main disadvantages are low capacity, lower safety and slow speed (Tseng et al., 2005). Trucks are suitable for shipment between manufacturing facilities and warehouse or between suppliers and manufactures.

2.3.5. Air: Airplanes are very fast and responsive mode of transportation. They are primarily used as for shipping small, expensive and time sensitive products over a long distance. This mode of transportation is used

to deliver products with speed, flexibility, security, lower risk of damage and good frequency over a fixed, and regular route. The biggest disadvantage is the high delivery fee which makes it suitable for only certain high value products (Tseng et al., 2005; Chopra et al., 2013).

2.3.6. Pipeline: Pipelines are very cost effective for transporting large volume of products over a long distance, but are restricted to commodities which are liquid or gaseous such as water, oil and natural gas Chopra et al., 2013). The advantages of using pipeline are high capacity, less effected my weather conditions and cheaper to operate. But the biggest disadvantage being expensive infrastructures (Tseng et al., 2005).

2.3.6. Electronic media or internet: Internet is the fastest mode of transportation which are suitable for transporting certain type of products made up of electronic data such as music, images, text, videos etc. (Chopra et al., 2013).

2.4. Information

Information is the connection between all stages of supply chain and helps them to coordinate and maximize the total value generated by the supply chain (Chopra et al., 2013). It gives the organization the opportunity to make the supply chain more responsive and efficient at the same time. Information are used in the following way in a supply chain:

- Coordinating daily operations related to the functioning of the other supply chain drivers.
- Planning and forecasting to anticipate future demands and meet those demands efficiently. Information is used to make forecasts which guides the setting of the monthly and quarterly production schedule.
- Many technologies are used to coordinate the information available to the organization. Technologies such as RFID, ERP, World wide web or Internet are used to coordinate and integrate the flow of information within the supply chain. Also, marketing personnel can be the medium of transferring information between manufacturer and consumers.

2.5. Sourcing, Procurement and Pricing

Sourcing is the set of business processes and activities required to purchase goods and services. At strategic level the organization, at first, must decide which tasks are to be performed within the organization and which are going to be outsourced. Sourcing decisions components include:

2.5.1. In-house or outsourcing: The most important sourcing decision for any company is to decide which of the tasks are to be performed in-house and which are going to be outsourced to third party outside the company. This decision should be taken based upon its impact on the total supply chain profitability (Chopra et al., 2013).

2.5.2. Supplier selection: Companies must select the number of suppliers they will have for a certain activity and how each supplier impacts the total supply chain profitability. The company must identify the criteria based on which the suppliers are going to be evaluated and selected through direct negotiation or auction (Chopra et al., 2013).

2.5.3. Procurement: Procurement is the business management function that ensures identification, sourcing, access and management of the external resources that an organization needs or may need to fulfill its strategic objectives (CIPS, 2017). So, procurement is the process of obtaining goods and services in any way (Blazenka, 2015).

Purchasing is obtaining materials of the right quality in the right quantity form the right source, delivered, to the right place at the right price (Blazenka, 2015). When purchasing materials from abroad it is important to pay attention to the terms of sale as well as the price. It is important to use generally accepted trade terms, to reduce the confusion between buyers and sellers (ICC, 2010). It is a widely-used series of trade terms published by the International Chamber of Commerce (ICC). These terms are used in almost every international commercial transaction (Livingston, 2010). Incoterms are grouped into two groups:

- Rules for any mode of transportation: Includes the terms EXW (Ex Works), FCA (Free Carrier), CPT (Carriage Paid to), CIP (Carriage and Insurance Paid to), DAT (Delivered at Terminal), DAP (Delivered at Place) and DDP (Delivered Duty Paid; ICC, 2010).
- Rules for sea and inland waterways only: Includes the terms FAS (Free Alongside Ship), FOB (Free on Board), CFR (Cost and Freight), and CIF (Cost Insurance and Freight; ICC, 2010).

In Bangladesh the terms used are, CPT (Carriage Paid to) for road and air transport and CFR (Cost and Freight) for sea transport.

CPT (Carriage Paid to): Seller is responsible for export customs and transportation to destination. Buyer is responsible for all risks of loss or damage once delivered to first carrier. Used for any mode of transportation, such as road and air (Livingston, 2010).

CFR (Cost and Freight): Seller is responsible for export customs and transport costs to named port of destination. Used only for ocean and inland waterway travel (Livingston, 2010).

2.6. Pricing

Pricing determines the amount a company will charge for the products and services that it makes available in the supply chain. Prices affects the behavior of the customer and thus affecting the supply chain performance and profitability. Pricing can be used to place the products in different market segments and match supply and demand.

3. Research methodology

The analysis is based on both primary and secondary data sources. Primary data were collected through conducting in-depth interviews of managers and other personnel of the commercial department of Globe Pharmaceuticals Limited. The interviews and discussions were conducted without any structured questionnaire. Secondary data were collected from online databases, Globe Pharmaceuticals Limited website, books, journals, conference papers, articles etc.

4. Results and discussions

A quick overview of the supply chain activities of Globe Pharmaceuticals Limited are given below:

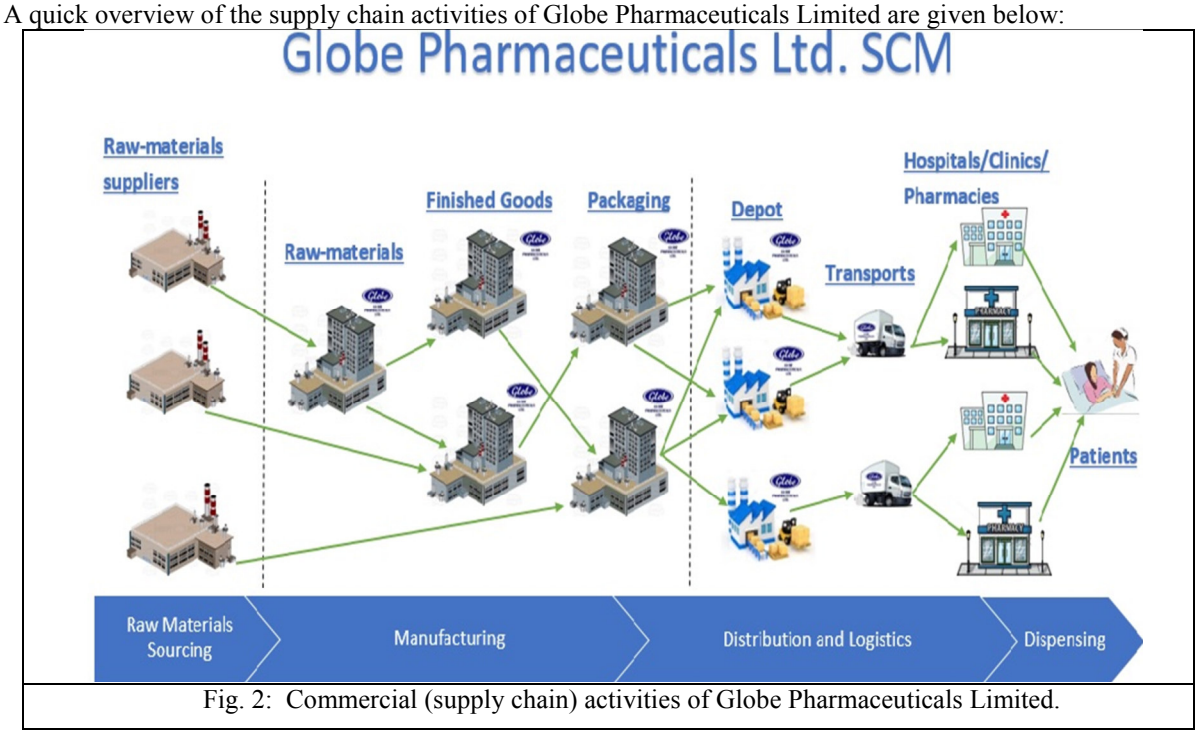

Fig. 2: Commercial (supply chain) activities of Globe Pharmaceuticals Limited.

Raw materials sourcing: Almost all the pharmaceuticals raw materials are sourced from abroad and shipped to the plant for manufacturing.

Manufacturing: The whole manufacturing process is completed in the plant situated at BSCIC industrial zone under Begumgonj Upazilla of Noakhali District.

Distribution and Logistics: Globe pharmaceuticals has its own distribution network for distributing its products. The main component of this network are the depots which are located in strategic locations all around the country. Globe has its own vehicles for transporting the medicines.

Dispensing: Dispensing is accomplished when the medicine reaches its final consumer the patients. This mainly happens through pharmacy, clinics and hospitals.

By doing through analysis of Globe Pharmaceuticals Limited., in terms of supply chain performance drivers, some key points have been identified which are shown below:

4.1. Facilities

The manufacturing plant of Globe Pharmaceuticals Limited, is situated at BSCIC industrial zone under Begumgonj Upazilla of Noakhali District, South-East part of Bangladesh. The plant is in a strategic location which is 250 kilometers away from the Capital city Dhaka and about 200 kilometers away from Chittagong port. Because of this, the imported raw materials can be transported to the plant easily from the Chittagong port. The manufacturing plant is designed to maintain optimum environment required to ensure highest quality and safety for each formulation manufacturing area. The plant is divided into separate zones and each zone consists separate AHUs (Air Handling Units), Dehumidification Unit, Dust Extraction System, Temperature Controlling as per WHO GMP (Good Manufacturing Practices) norms. The manufacturing plant is segmented in many

sections, as following:

4.2. Inventory

For storing raw materials and finished products a state of the art warehouse is built in the production facility premises. The warehouse is designed to maintain optimum storage conditions recommended for specific drug formulations, drug and packaging materials. The warehouse is well ventilated and illuminated to ensure proper operations. Quarantine room, cold room, cool room, Controlled Room Temperature (CRT) Storage facilities are present for the storage of special materials. Raw materials are labeled according to their conditions and placed in the designated place. The labels used are,

- **"ON TEST"**
- **"APPROVED"**
- **"REJECTED"**

Rejected materials are quarantined and stored in secure area. These materials are handled or disposed according to the policy. Sometimes a batch of finished goods can be rejected due to some imperfection or not meeting the required specifications or standard. These are also quarantined and stored in secure areas.

Quality Assurance (QA) manager approves the format of labels. These labels are used for storage, control of distribution of approved raw materials, packaging materials and finished products.

The distribution records of finished goods are kept at the factory warehouse. The product records are maintained as batch and sent to the depots based on this. The finished products are distributed on first in first out (FIFO) basis. This is done to ensure that the products are distributed as soon as possible and to maintain the potency of the products.

4.3. Transportation

For importing materials from abroad the main mode of transportation used by Globe Pharmaceuticals Limited., is sea and air. The mode of transportation depends on the nature and volume of the raw materials. For materials which are purchased in bulk and are not temperature sensitive the mode of transportation used is sea. When transporting the materials by sea CFR (Cost and Freight) policy is maintained. When the raw materials are purchased it takes around 21 to 30 days from China and 45 to 60 days from Europe or America to reach Bangladesh by sea. For highly sensitive and high value raw materials the mode of transportation used is air. It is much more expensive compared to sea but much faster which is a must for time sensitive raw materials. The policy maintained when shipping raw materials by air is CPT (Carriage Paid to). With the assistance of Clearing and Forwarding (C&F) agents all imported raw materials are unloaded, cleared by customs and sent to the manufacturing plant warehouse at Noakhali.

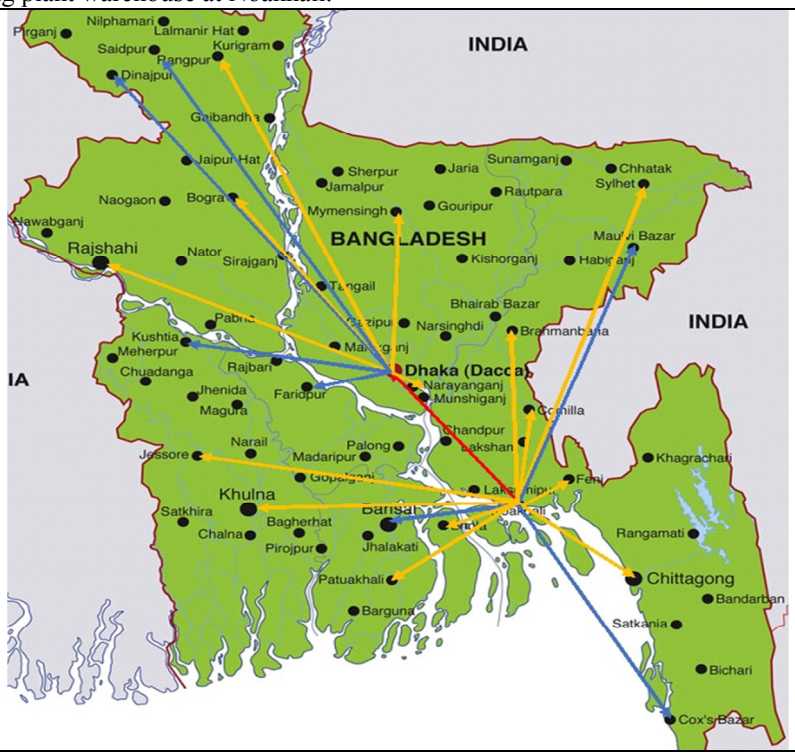

Fig. 2: Distribution Network of Finished Goods

For distributing the finished products all around the country Globe Pharmaceuticals has its own fleet of covered vans and other vehicles. Globe Pharmaceuticals Limited, has total of 250 vehicles. These vehicles transport the finished goods to the 22 depots located all around the country. Based on this information the following distribution network diagram has been drawn (Fig. 2).

The main depot is located at Dhaka, from here the products are distributed to the Rajshahi, Rangpur, Mymensingh and Dhaka division. Khulna, Sylhet, Barisal, and Chittagong division is supplied form the depot located at the factory in Noakhali. Globe Pharmaceuticals Limited., does not have any refrigerated vehicles as every depot can be reached within a day and company does not produce any products that needs refrigeration. To maintain the lead time for product delivery and keep control over the distribution Globe Pharmaceuticals Limited., uses in-house transportation.

4.4. Information

Globe Pharmaceuticals Limited, has 1450 Medical Promotion Officer or MPOs who works all around the country to promote the products. MPO's are placed at 30 segments around the country based on the depots. The main customer of Globe Pharmaceuticals Limited, are the different pharmacies, doctors, hospitals and other institutions. The MPOs visit the customers for promoting the products and to take order. Till now the order is received by the MPOs using papers but by the end of the 1st quarter of 2017 a new digital system is going to be implemented. This will use mobile phones as a medium to link the order receiving with companies' data base. Globe Pharmaceuticals Limited, has a custom-built software, which is used for

- Procurement Management
- Order management
- Collection system
- Package material inventory
- Central storage and raw material inventory

This custom software is named Financial Management Inventory and it is created using tally 9. Globe Pharmaceuticals also use Oracle Application for maintaining certain functions of the business. These are:

- Employees field level
- Attendance of employees
- Work hour

4.5. Sourcing

Globe Pharmaceuticals Limited, manufactures more than 200 OTC and ethical medicines. The raw materials are sourced from various suppliers and around 96% of the raw materials are imported including the packing of medicines. When sourcing of any new raw material is done, the material has to be tested before order is placed. Sample material is collected from sources who meets the requirements and standards set by Globe Pharmaceuticals Limited., The material is tested to ensure that the material is of good quality and it meets the standard set by Globe Pharmaceuticals and other regulatory bodies. Sample amount is ordered for the testing purpose. First small amount is ordered for the initial testing and if it passes the initial quality check then a larger amount is ordered for the R&D testing. This testing process can take around two months to twelve months depending on the raw materials. The minimum time that takes to test any material is 2 months.

The lead time for procuring raw materials is 5 months. The material requisition is placed by the warehouse which is located at the manufacturing plant. Inventory for producing next 5 months' worth of medicine is kept on hand before placing the order for the next 5 months. This is done to keep the production running and to avoid stock outs and maintain lead time. The planning horizon for materials requisition is 5 months.

Fig. 3: Foreign purchase process flow diagram.

4.6. Pricing

The pricing of any pharmaceutical product is fixed after taking approval from Drug Administration Office. According to Drug Ordinance Act 1982, the government has fixed the price for 138 products. So, it is essential for any pharmaceutical company to get approval before fixing the final price. Because of this, before launching any new product in the market Globe Pharmaceuticals Limited, has to send the product along with all relevant data to Drug Administration office for the approval. If they approve the new product and the price only then the company can launch the new product in the market. The price for any product takes under consideration factors such as,

- Raw material cost
- Packaging material cost
- Components for manufacturing the product
- Certain overhead cost
- Administrative cost
- Marketing cost
- Retailer commission

Almost all the raw materials are sourced and purchased from international suppliers. Only some packaging materials such as cardboard box are purchased locally on the spot. So, the procurement process only focus on foreign purchasing. Material purchasing or importing is initiated after requisition is received from the plant by the Dhaka office. The requisition is sent to the commercial department which is located at Dhaka office. A typical flow of foreign purchase is given in Fig. 3.

Pro-Forma Invoice or P/I is issued by the manufacturer or source from whom the raw materials are being imported from. Pro-Forma Invoice is prepared by the supplier before shipping the raw materials. It informs Globe Pharmaceuticals Limited, of the goods to be sent, their value and other specifications.

To provide payment to the foreign source L/C or Letters of credit is processed by the commercial department of Globe Pharmaceuticals Limited., but before doing so the commercial department collects the Pro-Forma Invoice or PI as without this the cannot fill up the L/C form provided by the bank.

The first step in opening an L/C is to fill up the papers provided by the bank selected by Globe Pharmaceuticals Limited. The papers given by the bank are,

- L/C Application form
- LCA Form (Letter of credit authorization form)
- IMP Form (Import Permission form)
- Agreement Form
- Charges of Documents
- Guarantee Form

Commercial department fills up and submits these forms to the bank for verification. After the verification and signing the following documents are submitted to the bank for completing the final stage for opening an L/C;

- Trade License
- Import Registration Certificate (IRC)
- TIN (Tax Payer Identification Number)
- Membership Certificate
- Memorandum & Articles Associations
- A Copy of Pro-Forma Invoice etc.

For any international purchase, Clearing and Forwarding (C&F) agents plays a vital role. They are responsible for making sure that the imported goods reach the factory warehouse without any loss, damage of pilferage. To release the imported raw materials or goods from the port certain documents are required. These documents need to be submitted by the C&F Agents to the customs authority. These documents are,

- Copy of bill of Lading (BL)
- Copy of Invoice
- Packing List
- Certificate of Origin (CO)
- UD/UP (Utilization Declaration/ Utilization Permission)
- Copy of Master L/C
- Letter of credit authorization (LCA)
- Pro-Forma Invoice (P/I)
- Copy of Insurance cover note.

After the raw materials are discharged from the port by C&F agents the goods are sent to the warehouse located at the manufacturing plant in Noakhali. Materials are received and checked by warehouse in charge, commercial department and the C&F agents. Than the materials are stored according to the nature of the materials received. An inventory summery is prepared by the PPIC or Product Planning Inventory Control Department.

The major findings after the analysis and interpretation of the data collected during the study and comparison of their performance of Supply Chain in term of six performance drivers are stated below:

Facilities:

- Globe Pharmaceuticals Limited, has a large manufacturing facility situated at BSCIC zone under Begumgonj Upazilla of Noakhali District.
- This single production unit is designed to produce different product units.
- The manufacturing plant also includes the packaging facility.
- Globe Pharmaceuticals Limited has 22 depots all around to country to distribute their products.

Inventory:

- Globe Pharmaceuticals Limited have state of the art warehouse situated within the manufacturing plant to store raw materials and finished products.
- There are controlled room temperature (CRT) storage facilities to store temperature sensitive materials.
- Globe Pharmaceuticals Limited usually do ABC classification of their inventory and the materials are arranged according to their lead time.
- The finished products are distributed on first in first out (FIFO) basis.

Transportation:

- The main modes of transportation used for importing raw materials from abroad are sea and air.
- The transportation mode is selected based on the nature and volume of the raw materials.
- For the distribution of finished goods Globe Pharmaceuticals Limited has 250 vehicles consisting of covered vans and microbus. These vehicles are owned and maintained in-house.

Information:

- Globe Pharmaceuticals Limited has 1450 medical promotion officers who promotes and takes orders from their customers
- At the end of the 1st quarter of 2017 a digital order management system is going to be implemented for the MPOs.
- The company uses custom software for procurement management, order management and other functions.
- Globe Pharmaceuticals Limited also uses Oracle Application for maintaining certain function such as employees field level, attendance of employees and work hour.

Sourcing:

- Around 96% of the raw materials are imported from abroad including the packaging of medicines.
- When sourcing new raw materials samples are tested to ensure that the materials are up to the standard set by Globe Pharmaceuticals Limited and other international regulatory bodies.
- The lead time for procuring raw materials is 5 months.

Pricing:

- Globe Pharmaceuticals Limited follows pricing policy which includes raw material price, packaging cost, overhead cost, administrative cost, production cost, distribution cost and retailer commission.
- Prices for new products are has to be approved by the Drug Administration Office before launching it into the market.

Finally, it has displayed the distribution network of finished products based on the location of depots and other data, also presented the whole procurement process of raw materials from abroad in details and created a flow diagram. This diagram shows the step by step process of purchasing raw materials from abroad, shipping raw materials to the factory warehouse and how they are stored.

5. Conclusion

For any company the performance of its supply chain greatly impacts the performance of the whole company. The performance of the supply chain is evaluated based upon the six supply chain performance drivers; Facilities, Inventory, Transportation, Information, Sourcing, Pricing. These drivers can be utilized to create the balance between responsiveness and efficiency. The right combination of efficiency and responsiveness can increase the performance of the supply chain and reduce inventory and operating expense simultaneously. In recent times it has become apparent that having a proper supply chain management can enable a company to achieve its long term goals. This study is a context-specific which aims to identify the SCM practices of a particular pharmaceutical company. The SCM plays a vital role in pharmaceutical industry as the industry depends on correct supplier selection, sourcing of raw materials, transportation of raw materials, internal movement of raw materials and products, distribution of finished goods.

Globe Pharmaceuticals Limited, practices all the six drivers of supply chain performance and tries constantly to improve its performance. There are certain aspects of their supply chain where they can bring improvements which will improve the performance of the whole supply chain.

6. Recommendations

Globe Pharmaceuticals Limited, operates both in national and international market. This has been possible for the efficient supply chain management and aligning the supply chain with the business strategy. Still there are certain areas that can be improved to increase the performance of the whole supply chain.

- Globe Pharmaceuticals Limited should eliminate the silo effect present in the commercial department to improve the performance of the supply chain.
- They should implement the end to end of view of supply chain to make the operation more coordinated and precise.
- Globe Pharmaceuticals Limited has already trying to implement the new digital order receiving system which is going to be used by the MPOs. They should integrate it to the procurement and inventory system as soon as possible to compete with other pharmaceuticals company.
- Although Economic Order Quantity (EOQ) is maintained for almost every raw material purchase it mainly depends on the market and the order. Globe Pharmaceuticals Limited should maintain EOQ for

all purchase to minimize the purchasing cost.

- More efficient inventory policies should be implemented to reduce the buffer inventory furthermore and reduce the overall lead time.

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