Report On

Purchase Process Model of Square Pharmaceuticals Ltd.

By

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An internship report submitted to the BRAC Business School in partial fulfillment of the requirements for the degree of Bachelor of Business Administration

BRAC Business School Brac University December 2019

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Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at BRAC

University.

2. The report does not contain material previously published or written by a third party, except

where this is appropriately cited through full and accurate referencing.

3. The report does not contain material which has been accepted, or submitted, for any other

degree or diploma at a university or other institution.

4. I have acknowledged all main sources of help.

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Letter of Transmittal

Dr. Md. Mamun Habib

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Subject: Submission of Internship Report on "Purchase Process Model of Square

Pharmaceuticals Ltd."

Dear Sir,

I am very pleased to submit to you my Internship Report on the topic "Purchase Process Model

of Square Pharmaceuticals Ltd", which I was appointed with under your direction as per the

course requirement of BUS400. I would like to thank you for the constant support and guidance

you have provided me with in this journey.

I have attempted my best to finish the report with the essential data and credibility, and

constructed the report with integrity towards my organization of work.

I trust that the report will meet the desires of all involved and will provide a pathway for further

study on the matter.

Sincerely yours,

Jennifer Halder

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Date: December 10, 2019

iii

Non-Disclosure Agreement

This agreement is made and entered into by and between Square Pharmaceuticals Ltd., and the

undersigned student at BRAC University.

I understand that in my internship tenure I have had access to information regarding the

operations of the business, computer generated and written information and data related to the

company. I certify that I have not disclosed any confidential data about the company in my

internship report which may have an adverse effect on the values and reputation of the company

and cause any breech of the confidentiality policy of the company.

Organization Supervisor's Full Name & Signature:

Mr. Md. Mijanur Rahman Khan

Senior Manager, Supply Chain Management Square Pharmaceuticals Ltd.

iv

Acknowledgement

I would like to take this opportunity to thank everyone involved in the construction of the paper without whom, the task would have been unimaginable.

Firstly, I would like to thank the Almighty because without Him, nothing could be achieved. Next my sincere gratitude goes to my academic supervisor for the course BUS400, Dr. Md. Mamun Habib, for providing me with the necessary knowledge and the tremendous support he has given me all through my course of action.

Next, I would also like to thank my Internship Supervisor at Square Pharmaceuticals Ltd., Mr. Md. Mijanur Rahman Khan (Senior Manager, Supply Chain Management), for his incredible contribution in making me accustomed to the processes of the department and the organization as a whole. Also important to the gathering of my knowledge is Mr. Fazlul Amin Talukder (Head of Supply Chain Management, Square Pharmaceuticals Ltd.), from whom I have received immense motivation in the three month period. Lastly, I would like to thank the whole department of SCM and TSD at Square Pharmaceuticals Ltd. for being there for me whenever I needed any help or guidance.

Executive Summary

Square Pharmaceuticals Limited, being the largest pharmaceutical company in the country, has

a very intricate supply chain network that helps to deliver life-saving medicine all around the

country. One of the most crucial part of the supply chain of SPL is the purchase process of raw

materials and packaging materials. This report is written to construct a Purchase Process Model

for SPL for raw materials and packaging materials in both local and international purchase.

This paper also aims to shed light on the inner departmentalization in SPL and how the whole

purchase process is maintained by the coordination among the key departments involved in the

process. They maintain a list of approved vendors through vendor evaluation procedures, and

only buy from the enlisted vendors and for new materials another department called TSD work

on source development process. Automation through usage of SAP software helps to minimize

cost along with regular market monitoring, careful packaging and calculating suitable order

quantity. Risk is minimized by careful selection of vendor and having insurance coverage and

careful shipment. The employees can put their sole focus on one job since the work of SCM is

divided into two departments, but can also lead to miscommunication as well. Lastly, the report

also shows that the SCM and TSD face few problems in finding suitable materials for new

product development and finding vendors who can maintain high quality requirements of SPL

or to satisfy price requirements of Marketing department. .

Keywords: Supply Chain Management; Purchase Process; Technical Services Department;

Product Manufacturing Department; Approved Vendor List

vi

Table of Contents

Declaration	ii
Letter of Transmittal	iii
Non-Disclosure Agreement	iv
Acknowledgement	v
Executive Summary	vi
Table of Contents	vii
List of Figures	ix
List of Acronyms	X
Glossary	xii
Chapter 1 Generalities to the Study	1
1.1 Introduction to the study	1
1.2 Objectives	1
1.3 Significance	2
1.4 Limitations	2
Chapter 2 Literature Review	4
Chapter 3 Framework	8
3.1 Purchase Process Model	9
3.2 Purchase Process	10
3.3 Cost Minimization in the process	16
3.4 Risk Management	18

Chapter 4 Discussion on Findings	199
4.1 Departmentalization of TSD	199
4.2 Issues to deal with	19
Chapter 5 Limitations and Conclusion	22
References	24
Appendix A.	266
Appendix B.	268

List of Figures

Figure 1: Typical Supply Chain Network	
Figure 2: Purchase Process Model of SPL	9

List of Acronyms

BDT Bangladeshi Taka

SPL Square Pharmaceuticals Limited

PPIC Production Planning and Inventory Control

MMIC Material Management and Inventory Control

PO Purchase Order

SCM Supply Chain Management

PMD Product Manufacturing Department

QA Quality Assurance

QC Quality Control

DGDA Director General of Drugs Administration

L/C Letter of Credit

C&F agent Clearing and Forwarding agent

HS code Harmonized Standard code

WHO World Health Organization

GMP Good Manufacturing Practices

MDI Metered-Dose Inhaler

EOQ Economic Order Quantity

MOQ Minimum Order Quantity

Glossary

SCM The management of the flow of goods and services from

the point of production to the final point of consumption.

Hormone An organic substance produced my plants and animals that

are secreted to maintain stable internal physiological

conditions in the organism.

Steroid Man-made version of hormones used when organism is

unable to produce hormones on their own.

Ophthalmic Relating to the eye and the disease of the eye area

Penicillin A type of anti-bacterial drug used to treat a plethora of

diseases.

Cephalosporin A type of anti-bacterial drug used to treat a plethora of

diseases.

Proforma Document sent to buyer containing sales documents for

goods that are yet to be supplied.

HS Code Harmonized System Code - Worldwide standard code to

label the type of good being shipped.

L/C Bank letter assuring payment of correct amount by buyer

to seller.

Chapter-1

Generalities to the Report

1.1 Introduction to the report

Square Pharmaceutical Ltd. was founded under the visionary leadership of the late Mr. Samson H. Chowdhury in 1958. Initially it started off as a partnership farm but later in 1964 it was converted into a Private Limited Company. Now, Square Pharmaceuticals Ltd. is a Public Limited Company (from 1991) and it has been the market leader in Bangladesh Pharmaceutical industry since 1985. As per 2018, their gross revenue is around BDT 45,887 million and their exports account for BDT 1,451 million which is 4.59% more than the previous year. Products of Square Pharmaceuticals include 664 Pharma, 129 Agrovet, 32 pesticides, 14 pellet products and 8 basic chemical and they export products to 42 countries worldwide.

To have amassed such a leadership role in one of the most complex and sensitive industries of the country, they must have a very strong and intricate purchase process for their raw materials (RM) and packaging materials (PM). Since the pharmaceutical industry is highly dependent on the import of RMs and PMs, the report aims to shed some light on how the whole process works.

1.2 Objectives

The report is aimed to find out how the total purchase process works. The main objectives of the report are given below.

- To create a model on the purchase process of SPL
- To understand how different departments work collectively to make the purchase smooth
- To understand the different risks involved in the process

• To identify key issues in the process and give details about it

1.3 Significance

The report can be of particular significance to new companies trying to enter into the pharmaceutical industry of Bangladesh. Since the whole industry is highly dependent on the import of RM and PM, any new company will also have to design an appropriate purchase process for themselves. Having a model of a purchase process of the largest pharmaceutical company in the country before starting the venture will give the company valuable ideas and insights to arrange and design their own purchase process. The model contains information on the various steps that needs to be taken to import materials legally and the different documents that are needed for the whole process. Looking at that, any new company will get information on the legal procedures mandated by the Bangladesh Government and familiarize themselves with the several documents involved in the process. Moreover, by looking at the limitations, the new company can work on minimizing them to achieve a more efficient purchase process. Additionally, this report can work as a base for further study, if anybody wants reference on the topic.

1.4 Limitations

The construction of such a report can come with some inevitable limitations and the report has been constructed in as much detail as possible by figuring out the problems and finding a way around them. The limitations faced were:

- Some details of the process were too confidential and unique to the company to expose.
- The processes does not follow any specific cycle or order of workflow in the company for which it was difficult to construct in an understandable manner.

- Since two departments collectively work on the purchase process, it was difficult to construct a model fitting to the real life scenario.
- It was difficult to find out some of the limitations of the purchase process because employees only highlighted the positives.

Chapter-2

Literature Review

The literature review is an objective study of literature or previous study on the topic under consideration. Familiarity on the topic maybe achieved through the process and it may help clear the justification of further research on the topic.

The Annual Report of SPL for the year 2017-2018 has been used for the formation of this report. From this report, the previous record and information of SPL can be obtained. This can also be used in case further research on the topic is carried out. From the report, we get to know that the company became the market leader in 1985 (Square Pharmaceuticals Ltd. Annual Report 2017-2018, pg-10). Also according to the annual report, SPL exports to 42 different countries worldwide (Square Pharmaceuticals Ltd. Annual Report 2017-2018, pg-18). We also find that SPL has to import plant and machinery and almost all the raw materials from abroad, it maintains cordial and mutually beneficial relationship with its international as well as local suppliers. (*Relationship with Supplier*. Square Pharmaceuticals Ltd. Annual Report 2017-2018, pg-21). SPL maintains insurance business relationships with the highly reputed and publicly listed insurance companies namely Pragati Insurance Ltd. and Pioneer Insurance Co. Ltd. (*Insurer*. Square Pharmaceuticals Ltd. Annual Report 2017-2018, pg-23). From the report we also see that during the last year, exports amounted to Tk. 1,450.53 million with an increase of 4.59% compared to previous year (*Export*. Square Pharmaceuticals Ltd. Annual Report 2017-2018, pg-28).

It is also important to know an overview of the supply chain network of SPL before constructing the purchase process model. Especially when we take into consideration, any large company, it is crucial for them to have a SMART (Specific, Measurable, Attainable, Relevant, Timely) and efficient supply chain network. Given that Square Pharmaceuticals Ltd. is the

largest pharmaceutical company in the country and that they hold the highest market share, it is understandable that they have a very intricate supply chain network that supports their leadership position. Therefore, background information regarding the matter has been collected and incorporated into the report. This is discussed further below.

The Supply Chain is a crucial part of the whole running of SPL and they have a very intricate Supply Chain network so that they can supply lifesaving medicine all around the country.

- Supplier- Like any supply chain network, it beings from the supplier end from where SPL buy their RM and PM. Most of their RM comes from abroad. India is the largest supplier, supplying as much as 40% of all RMs. China supplies 30% of the materials and the rest 30% comes from rest of the world from places such as Thailand, Taiwan, Korea, Europe, Australia, USA etc. SPL buys both active ingredients and excipients from these suppliers. Most plant equipment are also bought from reputed and qualified suppliers outside based in Europe, Taiwan, & Korea etc. However, SPL depends almost fully on local supplier for PMs and almost 95% are sourced locally with the exceptions for new PMs which are not yet available in the country. They give utmost importance to maintaining a good relation with their suppliers as these suppliers have gone through several test trials and have successfully been added to the Approved Vendor List that the SCM department maintains which is a list of vendors with details of who produce which item.
- Manufacturing- RM and PM from these suppliers then go to Manufacturing part of the supply chain. The manufacturing and production take place in two different sites. [3] The Formulation Site at Pabna as they call it, is their first manufacturing plant which contains manufacturing units for Oral Solid Dosage (tablet & capsules), Hormone and Steroids, the liquid unit, the small volume parenteral & ophthalmic unit and the penicillin unit. This plant started operations in 1958 and follows the WHO GMP (Good

Manufacturing Practice) requirements. [2] The Formulation Site based at Dhaka is 50km away from the Northern Dhaka city. It contains the Solid Dosage Unit- 1, Solid Dosage Unit- 2, Cephalosporin unit, Small volume parenteral & Ophthalmic unit, Insulin unit, Large volume parenteral unit and the MDI unit. In addition to that Square Pharmaceuticals is setting up a manufacturing plant in Kenya which is yet to start operation.

- <u>Distribution-</u> The distribution network of Square Pharmaceuticals is very strong which allows them to be at top of the market. They supply and distribute their products directly to almost all parts of the country. They have their main distribution center located at Pabna where all the products come after manufacturing from where it is transported to different distribution sites in the major divisional cities of the country. From these centers, they go to the even smaller district sales centers for easier dispatch of products. They are also very responsive in supplying to the countries they export to.
- Retailing- Next in the network is retailing. SPL has a very strong retailer network all over the country. From their district distribution centers, the products are sent to the different Whole Sellers, retailers & Medicine shops across the division via smaller transports. Even so, there are still some places in the country which are not yet reachable by the transportation network of SPL and there they have to supply through external help but they are working on improving this situation. Retailers also help them by providing valuable information on the prevalence of counterfeit products in the market which helps SPL to take cautionary measures.
- <u>Customer-SPL</u> provides utmost importance to customer satisfaction and wellbeing for which they constantly work on making their product portfolio wider. The customers also respond in a positive way to this which is evident from the fact that SPL is the

largest pharmaceutical company in the country holding as much as 17.73% of the market share.

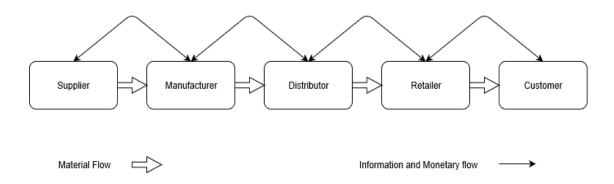


Figure 1- Typical Supply Chain Network

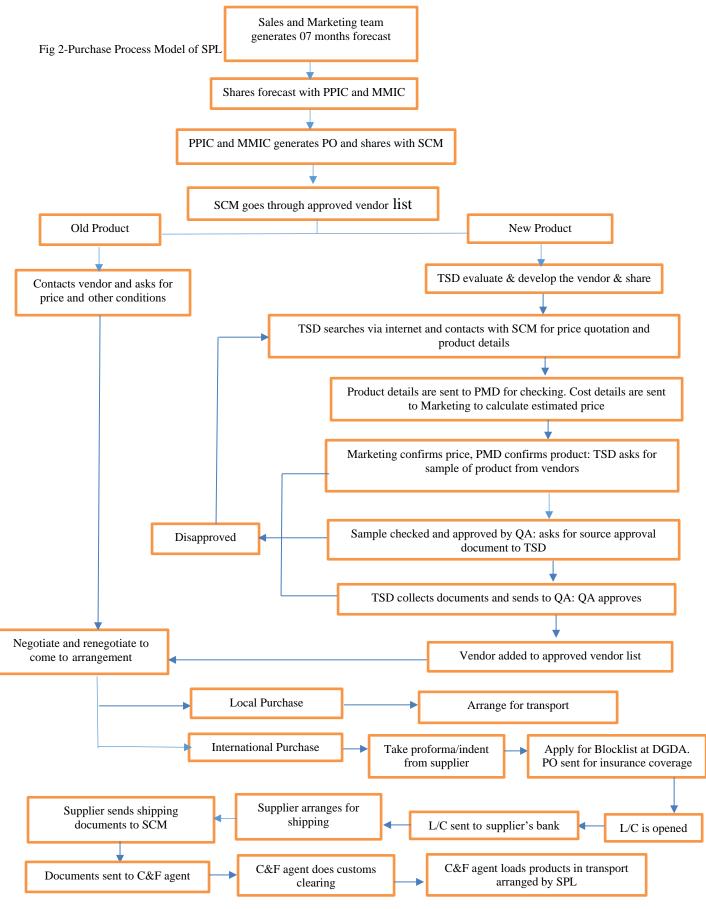
From the above-mentioned Supply Chain network, the report focuses on the purchase process between SPL and the supplier. This is the process of buying Raw Materials from supplier to be used in the manufacturing process. This report attempted to create a model based on the whole purchase process for SPL for both local and international purchase of old and new products. The model will be discussed further onwards in the report.

Chapter 3

Framework

The purchasing process is one of the most crucial parts of managing a supply chain network. The process is of even more significance when we take into account live-saving products such as pharmaceutical raw materials. Such materials are not only highly sophisticated but also are responsible for providing medicines related to human health. Therefore, it only adds to the significance of choosing a suitable supplier and transport system so that the best quality products can be obtained in the safest possible way. The purchase process is also of major significance because the quality of the RMs and PMs will determine the efficiency of the medicines that these will be used to produce and in the highly competitive and specialized market of pharmaceutical products, the efficiency of the drugs in the treatment of the disease will determine the market position of the company. This in turn determines the revenue generation of the company. SPL has been on the top of the market for a very long time and to maintain this position, they have come up with a very efficient model for purchase for both their local and international purchase. Their purchase process is aimed towards finding the best quality raw materials at the minimum cost and to find the best alternative of transport system to carry these materials. A purchase process which has stood the test of time has given them the upper edge over all their competitors and this report from here onwards will explain in details how each of the individual steps in the process work.

3.1 Purchase Process Model



3.2 Purchase Process

- 1. The Sales and Marketing team keeps track of the market demand of each product and about possible fluctuations in demand that may happen over the following months. For example- demand of paracetamol increased due to dengue outbreak. Using this market analysis data, they generate a demand forecast for the next 7 (06 months including current month's). This forecasting information is then shared with PPIC (Production Planning and Inventory Control- Pabna Unit) and MMIC (Material Management and Inventory Control- Dhaka Unit).
- 2. Using this forecasting data, PPIC and MMIC figure out what products are needed to be made in the following months and the availability of RM (Raw Materials) and PM (Packaging Material). According to that, they make a requisition of the RM and PM required. This is called the purchase order (PO).
- 3. Raw Material (RM) and Packaging Material (PM) PO is given to SCM by PPIC and MMIC each month. While making such requisition, it is very important to mention the following:
 - Order Quantity Which is determined by looking into the forecasted requirements of the PMD (Product Management Department), stock available in hand, market demand from forecasting data and goods in transit.
 - Ordering Time- This depends on the set time frame of the PPIC and MMIC that is based on the time consumed by the 3 modes of transport that can be used-Air, Road and Sea.
- 4. SCM checks the approved vendor list for purchasing the RM and PM. This approved Vendor list is created beforehand through careful selection of suppliers based on factors such as quality of the products, quality, reliability, service level, etc. From here, there can be two possibilities. Both are discussed below.

- 5. If the RM or PM needed is an old Product that SPL has been using for a long time, SCM goes through the approved vendor list to find suitable suppliers. When such suppliers are found, SCM contacts vendors via email to ask for price quotations, quantity, time and conditions of delivery, payment terms and other details about product conditions. SCM authorities then negotiate and re-negotiate with the suppliers to come to arrangements regarding price, quantity and quality of product and delivery and payment terms. Upon reaching acceptable terms, SCM confirms the order.
- 6. However, when there is a requirement for a new product, especially for a new product development, SCM authorities contact another department known as the Technical Services Department (TSD) which is responsible for developing new vendors for new RM or PM, to complete the development activities. When TSD search via the internet to find suitable suppliers and later they contact them for price quotation and other product details.
 - i) The product details are sent to Product Manufacturing Department (PMD). This contains information such as the production conditions in the supplier's factory, the amount of impurities in the products, storage conditions, concentration and volatility of the product and other relevant information. PMD checks these documents to see if they match with the requirements and standards of SPL or not based on which they either approve or disapprove the products.
 - ii) At the same time, the pricing details are sent to the Marketing department so that they can calculate a probable price of the product based on the cost of production. This is very important because the Marketing department needs to calculate the estimated price of the product and match it with the demand forecast to see if the product will actually yield substantial profit or not. Upon calculating the price, they either approve or disapprove the product.

- iii) If both Marketing and PMD are satisfied with the vendors, then TSD asks for sample of the product from them. Vendors send sample for free most of the time due to high reputation of SPL in the market. However, sometimes the samples maybe costly or the vendor may have trust issues, in which case TSD buys the samples from them.
- iv) The sample is then sent to the QA (Quality Assurance) department where it is checked for quality measures. This sample is checked based on the previous product documents that were sent by the supplier to see if the actual product matches the details or not. Also, in case of a new product development, QA also uses the product along with PMD to make test batches of new products to see how they perform.

 Based on this checking, QA either approves or disapproves the product. If in this case QA approves the product, they ask TSD to collect source approval documents from vendor. This document contains the details of the manufacturing process and the sources of raw materials for the chemicals. If QA approves, the vendor is added to the existing Approved Vendor List.
- v) In any of the above steps, if the product gets disapproval, TSD starts over by searching through the internet to find suitable vendors again and the above process continues.
- 7. Upon adding a vendor up to the Approved Vendor List, SCM can now contact them and come to terms regarding price, transport, payment, etc. From here again there can be two possibilities. The first being if the purchase is from a local vendor inside the country and the second being if it is an international purchase.
- 8. In case of local purchase, the process from here onwards is very simple. SCM authorities have negotiated earlier about the transportation of the products. The supplier disposes products according to that. The transport can either be arranged by the supplier

- or by the SPL authorities. From the supplier end they load the products in the transport and send it to the Sales office in Tejgaon Dhaka, from where it goes to the approved destination either in Pabna or Gazipur.
- 9. However, the process is more complex when it comes to international purchase. The process is discussed below.
 - i) When SCM comes to an acceptable terms with the supplier, they take Proforma/Indent from the supplier. Indent is only required when the supplier has authorized and legal agent in Bangladesh. The Proforma/Indent includes specific information such as quantity, price, Importer's Address, Factory Address, description of material, Freight charge, mode of shipment, payment method and the HS (Harmonized Standard) code.
 - ii) SCM department then applies for a Block List/ import permit to DGDA, which is a list that is needed for the import of RM and PM. The block list includes- time of arrival of products, quantity of product, product name, name of supplier, price and currency, mode of shipment, new product information and new vendor inclusion information. The block list is submitted online for approval. DGDA head holds meetings twice every month where block lists get approval. Without the approval of this block list or if the information of the supplier does not match the statement on the block list, the customs authority will not give clearance to the imports.
 - iii) At the same time, the PO (Purchase Order) is sent for insurance coverage to compensate for any unfortunate events. SPL uses two insurance companies- namely Pioneer Insurance and Pragati Insurance.
 - iv) The Proforma/Indent received beforehand is now used for L/C opening. SPL opens L/C with the bank with sufficient fund and the L/C is typed in the letterhead of the bank and sent to the bank along with PO, Block List and Insurance papers. The L/C

- is then verified by the bank based on the Proforma/Indent, Block List, Insurance papers and processing time. The L/C is now generated.
- v) The L/C document is then sent to the supplier's bank. The supplier arranges for shipping the goods as a result. The supplier is required to send a set of shipping documents to SPL which includes the following:
 - <u>Commercial Invoice-</u> Containing the price, quantity and other relevant commercial information
 - Packing List- Document containing information about the packaging. For example- Each kind of ingredient have different storage and shipment conditions. Factors such as- container quality, temperature requirements, handling instructions, etc. all must be mentioned in this document.
 - Certificate of Origin- Shows what criteria the listed products need to maintain. It is generated by the exporter and needs to be submitted to customs authority to justify the eligibility of the products to be imported into the country.
 - <u>Certificate of Analysis-</u> Result generated from Quality Control test performed by supplier. They generate this document based on specification that SPL has provided before about physical appearance, parameter, etc.
 - <u>Bill of Lading/ Airway Bill/Truck Receipt-</u> Information about the mode of transport, port of destination, costs of transport, etc. are written in this document.

In case of sea transport, the supplier is required to send the set of original documents to SPL. This is because in case of sea transport there is sufficient time to send the original documents as it takes about 30 or more days for the imported products to arrive. However, in case of air transport, the products usually arrive

within approximately 3 days and there is not enough time to send the original documents. So copies of the documents are sent via Email to SPL.

vi) The documents are then sent to the C&F (Clearing and forwarding) agents who are responsible for releasing the materials from sea or air ports. SPL uses two C&F agents. Akbar and Brothers for sea port in Chittagong. Khan Tradings for air port in Dhaka. The C&F agent then ask for requisition with the customs office for clearance. The clearance activities include Drugs Clearance, Bank Clearance and Customs Clearance. Upon clearance of the products, the C&F agent sends the products to the destination via the carrier of SPL. This product is again sent to the Dhaka Sales office located in Tejgaon from where it is dispatched to the manufacturing location.

Additional Steps in the process:

- Upon receiving the goods, SCM department authorities then calculate the lead time
 of the product. They analyze previous records and make necessary amendments to
 that based on arrival of the products and delivery commitments.
- In case there is a sudden change in the product specification, SCM authorities inform the supplier immediately to make the necessary changes.
- When PPIC or MMIC send a requisition, SCM authorities try to negotiate and renegotiate with the suppliers for lowering price or to increase quality. SCM department is also responsible for strengthening relationships with suppliers. All these bring about purchase savings for the company.
- Upon receiving a material in the factory, a sample is sent to the QC department for quality check. They check the material to see if it matches the specifications needed for the manufacturing process or not. Based on that, they either accept or reject the product.

The SCM department is also responsible for dealing with rejected material and they inform suppliers immediately regarding any rejections and come to necessary arrangements with the supplier about compensations.

3.3 Cost Minimization in the process

- Automation in warehousing- After a product is received by the factory management, if it is cleared by the QC department they are stored in racks of the warehouse. Storing materials in the warehouse comes with costs of its own such as material handling and holding costs. Given that they are pharmaceutical products, most of the time they need to be stored under specific conditions which increase costs even more. Therefore, it is very important to keep these costs at bay. SPL do this by using the SAP software. The software monitors where the product is stored, how much of it is stored, storing conditions, which manufacturing process needs which product and keeps track of the BMR (Batch Manufacturing Record) and BPR (Batch Processing Record). Using the SAP software, the whole warehousing process is automated which ensures a lot of cost can be minimized.
- Streamline ordering process-The whole ordering process is very well coordinated in SPL. It starts from the marketing and sales department where forecast is generated which is shared with the PPIC and MMIC. They have the SAP software which already has a list of which ingredients and how much of it is needed in the manufacturing process with which they can generate PO. This is then released by plant head to the SCM department and they carry out the ordering process. Without proper coordination and communication among all these departments, this process would not be very efficient and

miscommunication would lead to a lot of monetary loss for the company. For example- if there was no proper coordination between the sales and manufacturing divisions, then that would lead to a shortage(loss of potential sales) or surplus(increased inventory cost and potential loss due to expiration), both of which would be bad for the company.

- Monitoring market conditions- The sales and marketing team constantly work on analyzing the market conditions and calculate the demand of the products. This is a very extensive process that needs a lot of precision as demand for some products maybe fairly constant whereas some may fluctuate very often. Therefore, by generating a better forecast, SPL can balance between supply and demand in the market.
- Order Quantity- While ordering, cost can be minimized by ordering by EOQ (Economic Order Quantity) or MOQ (Minimum Order Quantity). EOQ is when order is placed on the basis of creating a balance between the Holding Cost and the Ordering Cost. The Holding Cost is the cost of carrying the inventory that includes costs of maintenance, storing, etc. The Ordering Cost is the cost related to ordering the product that includes Insurance cost, cost of opening L/C, etc. While it may be financially beneficial to order large quantities to minimize the Ordering Cost, it will increase the Holding Cost of storing that large quantity of inventory. Hence, the EOQ aims to come to a suitable quantity that will provide a balance between the two costs. On the other hand, MOQ aims to order based on the minimum quantity that will be needed by the production process so that there is not an excess cost of storing inventory. So by going with either of the two, cost can be minimized.

Packaging- When it comes to pharmaceutical products, it is very important to take care of proper packaging as some materials can be prone to damage (maybe especially fragile, sensitive to temperature, highly volatile, etc.). Accordingly, proper instructions are given to suppliers so as to ensure there is no damage during transport which may lead to wastage. As a result in the process, loss due to wastage and damage can be mitigated.

3.4 Risk Management

- In the import process one of the largest risk is the risk of loss during transport. This can be due to natural disasters or accidents and often nobody has any control over it. Thus, to mitigate this risk SPL opts for insurance coverage of the imports. Therefore, if there is a loss of such nature, they get insurance coverage to minimize loss.
- Receiving fake or low quality material is also a major risk. That's why the SCM department always collects samples from suppliers and gets them tested with the QA department before approving a supplier into their vendors list. SPL takes into account many considerations to find a better fit between the suppliers and their manufacturing process. All factors such as lead time, capacity of supplier, reliability, quality, etc. are taken into consideration so that they don't end up ordering from a supplier who cannot deliver according to commitment.
- The risk of damage during transport process can also be of worry. This is especially true for pharmaceutical ingredients as they can be extremely fragile or volatile at times and need very specific temperature and humidity conditions to be maintained during the shipment. Hence, all such conditions and packaging instructions are provided beforehand to the suppliers and the companies that will transport the products.

Chapter 4

Discussion on Findings

SPL is the largest and the most renowned Pharmaceutical industry in the country. With the sheer size of the company, there are many points that can be identified for further improvement.

Based on the way the Purchase Process in SPL works, there are points that could be left for further discussion. There are some key findings I have identified in the whole process of gathering information. Discussion on these findings are given below.

4.1 Departmentalization of TSD

Departmentalization in SPL was set apart from its competitors in a unique way with the introduction of the TSD (Technical Services Department) a few years back. This department is closely involved with the development of new products and it manages matters related to finding new vendors, buying innovator products (new products that have been introduced in the market by a certain company which are bought by SPL to develop a product similar to that), solving technical issues, documentation and pricing issues, cost balancing, etc. The TSD department works alongside the Marketing department, Supply Chain Management department and the PMD to help in the introduction of new products and providing Technical assistance to manufacturing facilities. Currently, there are 29 employees working in the department that includes Pharmacists, Chemists, Engineers (Civil and Electrical) and Architects.

Advantage of TSD- Commonly, the work done by TSD is considered to be a part of
SCM department in other organizations. But having a separate department in SPL has
a major advantage. With a department that solely focuses on the developmental factors
of introduction of new products, they achieve higher efficiency of work in a

considerably shorter amount of time. Along with that, the employees in the department can master the work properly because their concentration will be on a specific side and not divided among varies other works.

• Disadvantage of TSD- Even so, having a separate department also comes with its disadvantages. The most prevalent one is the communication gap that occurs due to the division. This is because TSD works with SCM, Marketing and PMD at the same time. So keeping coordination among all these departments may not always be possible. Thus, communication errors may occur that can result in major problems. Along with that, another major problem is that, since other companies do not have a separate department as such, employees face problems if they are willing to switch jobs. Since they focused on a single aspect all these days, when they want to switch to another company, they cannot implement the learnings and will have to start from scratch all over again.

4.2 Issues to deal with

Even though the purchase process in SPL is very much efficient, there are some issues however that SCM department and/or TSD has to deal with frequently.

- SCM faces technical issues regarding materials sometimes. For example- a certain material may need to be stored at a certain temperature which may not be attainable in the conditions of our country. In that case, procurement will not be possible. So, they will need to find other materials for the development of the product.
- Meeting requirements of SPL may sometimes also be of a problem. SPL gives utmost
 importance to maintaining their high standards. That may sometimes prove to be a
 problem for SCM because vendors who can provide such high standard raw materials

may not be available. In that case, procurement of the raw materials may come to a standstill for a prolonged period of time.

• Balancing between price offer of vendor and price requirements of Marketing department may also be a challenge for TSD. Sometimes the Marketing department disapproves the Product or Vendors if they see that buying raw materials at such price will increase the price of the products to a point where it will not yield as much profit. In that case, TSD has to find other vendors or has to re-negotiate with the existing vendors. This process can be very time consuming and leaves room for inefficiencies.

Chapter 5

Limitations and Conclusion

Running of any business comes with some limitations of their own. While constructing the report it was evident that the purchase process has a few limitations that they could work on. The first limitations come from the fact that they face occasional miscommunication when dealing with different departments. The sheer size of the company leaves room for many inefficiencies when it comes to communication among the departments. This can be solved by having a clearer line of command through which they communicate among departments. Moreover, when it comes to decision making, they need approval from the top management occasionally which can lead to time delays to come to a decision. This can be mitigated by giving decision making power to other top-level employees at least in the absence of the top management so that they can take faster decision. One other limitation can be that they have to buy almost 100% of their raw materials and packaging materials from elsewhere. Given that SPL is a huge company, they can ease this problem by going for vertical integration for example by buying a company that makes packaging materials locally. By doing this they can reduce and procure faster in the future.

To conclude, the report was written with the aim of shedding light on the purchase process of Raw Materials and Packaging Materials for both local and international purchase in the largest pharmaceutical company of the country Square Pharmaceuticals Limited. From the report it is seen that they have an efficient chain of processes that has proved to be highly efficient in buying materials whenever they need. The different departments coordinate among themselves, Marketing to generate purchase requirements, Supply Chain to negotiate with suppliers, TSD to find new vendors and QA to check for quality. The report also shows how inner departmentalization in SPL has made work regarding the purchase process much easier and

less time consuming compared to similar other organizations. Having the responsibilities divided among the SCM department and TSD has made the process more structured, however, it also brings in occasional problems of miscommunication. However, the employees are always careful to mitigate any such barriers and therefore keeps the whole process running as smoothly as possible.

To conclude, SPL is a very efficient company when it comes to their purchase process and any new company can highly benefit from looking into their model to devise a model of their own.

References

- [1] Annual Report of Square Pharmaceuticals Ltd. 2017-2018. Retrieved from:

 http://www.squarepharma.com.bd/Square%20Pharma%20Annual%20Report%202017-18_.pdf
- [2] Formulation Site Dhaka. Square Pharmaceuticals Ltd. Retrieved from: http://www.squarepharma.com.bd/formulation-unit-dhaka.php
- [3] Formulation Site Pabna. Square Pharmaceuticals Ltd. Retrieved from: http://www.squarepharma.com.bd/formulation-unit-pabna.php
- [4] Hayes, A. (2019, November 18). Supply Chain Management (SCM): What You Need to Know. Retrieved from: https://www.investopedia.com/terms/s/scm.asp.
- [5] Barrington, E. J. W. (2019, February 7). Hormone. Retrieved from https://www.britannica.com/science/hormone.
- [6] Steroids. (n.d.). Retrieved from https://www.versusarthritis.org/about-arthritis/treatments/drugs/steroids/.
- [7] Newman, T. (2019, January 9). Penicillin: Function, history, and resistance. Retrieved from https://www.medicalnewstoday.com/articles/216798.php.

[8] Sukumar, D. (2018, June 5). HS Codes: Everything you need to know about harmonized codes. Retrieved from https://freighthub.com/en/blog/harmonized-commodity-description-and-coding-system/.

Appendix A.

Vision of Square Pharmaceuticals Ltd.: We view business as a means to the material and social wellbeing of the investors, employees and the society at large, leading to accretion of wealth through financial and moral gains as a part of the process of the human civilization.

Mission: Our mission is to produce and provide quality & innovative healthcare relief for people, maintain stringently ethical standard in business operation also ensuring benefit to the shareholders, stakeholders and the society at large.

Objective: Our objectives are to conduct transparent business operation based on market mechanism within the legal & social framework with aims to attain the mission reflected by our vision.

Corporate Focus: Our vision, our mission and our objectives are to emphasize on the quality of product, process and services leading to grow of the company imbibed with good governance practices.

Highlights of operations for the year 2017-2018

Highlight	Amount
Gross revenue	BDT 45,887 million
Net Revenue	BDT 39,654 million
Export	BDT 1,451 million
Contribution to National Exchequer	BDT 7,687 million
Gross Profit	BDT 19,564 million
Net Profit (AT)	BDT 11,606 million
ESP	BDT 15.72
Net Asset value	BDT 57,817 million
Dividend Payout in cash	BDT 2,655 million

Countries Square Pharmaceuticals export to:

Asia	Afghanistan	Azerbaijan	Bhutan	Cambodia
	Georgia Hong Kong		Iraq	Jordan
	Laos	Macau	Malaysia	Maldives
	Myanmar	Nepal	Singapore	Sri Lanka
	Tajikistan	The Philippines	Vietnam	Yemen
Africa	Burundi	Cameroon	Kenya	Libya
	Mauritania	Mauritius	Mozambique	Somalia
	Tanzania	Uganda	Sudan	South Africa
Oceania	Fiji	Papua New Guinea	Palau	
Europe	United Kingdom			
Central	Belize	Costa Rica	Jamaica	Panama
America				
South America	Nicaragua		Suriname	

Appendix B. Demography of Interviewee Persons

Name	Position	Department	Duration of work
Md. Shahedur Rahman	Executive	Supply Chain Management	2 years
Rezaur Rahman	Executive	Technical Services Department	2 years
Iftekher Haider	Senior Executive	Supply Chain Management	7 years