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# Supply Chain Mapping: From Production to Distribution

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**ABSTRACT**:

Production and distribution points are critical elements in the supply chain management of businesses operating in domestic and international markets. This chapter provides a concise overview of the significance and considerations associated with production and distribution points. It explores the role of production points in manufacturing goods, optimizing efficiency, and ensuring product quality. The chapter also examines the importance of distribution points in delivering products to customers, managing inventory, and meeting customer demands. Additionally, it highlights key factors to consider when selecting production and distribution points, such as proximity to suppliers and markets, transportation infrastructure, cost considerations, and regulatory compliance. By effectively managing production and distribution points, businesses can enhance operational efficiency, reduce costs, and improve customer satisfaction.

**KEYWORDS**:

Automation, Bottleneck, Capacity, Demand Forecasting, Distribution Channels, Efficiency, Inventory Management.

## I. INTRODUCTION

Single Stage Sales Tax: Single Stage Sales Tax is tax that is collected just once throughout the production and distribution process. Unless the ultimate buyer purchases the merchandise, single stage sales taxes are often not collected [1], [2]. This is a multi-stage, non-cumulative consumption tax that is imposed at each level of the production and distribution system as well as each stage of value addition. Every time the product moves from one hand to another through the marketing channel, a tax must be paid. However, rather than taking into account the whole value of the product up to that point, the tax that is collected at each step is based on the value addition performed at that stage. The seller collects the VAT from a customer via the marketing channel, subtracts it from the VAT the customer has already paid for the goods, and sends the remaining money to the government. The VAT is seen as non-discriminatory since it is applicable to both domestically produced items and imported commodities. Aside from that, VAT complies with WTO standards [3], [4].

Cascade taxes include taxes paid by the product at previous stages of the production and distribution process as well as taxes assessed on the whole value of the product at each phase. India had a long-standing system of cascade taxes, in which additional taxes were imposed above those previously paid by the product at a later point in the marketing channel. A taxing structure like this makes products more expensive and less competitive on the market [5], [6]. Excise tax is a one-time fee assessed on the sale of a particular item. Most nations have higher excise taxes on alcoholic drinks and tobacco products. A turnover tax, also known as an equalization tax, is applied to make up for comparable taxes imposed on domestic goods. The equalisation or turnover tax has an unequal effect on local and imported goods, despite the fact that it seldom ever equalizes prices [7], [8]. Marketing Barriers Other Than Tariffs. Non-tariff trade restrictions impede commerce on a discriminating basis and are opaque. Since the WTO arrangement requires binding tariffs, which prevents member nations from unilaterally raising the tariffs, non-tariff barriers in creative forms are becoming more effective instruments for discriminatorily limiting imports. The following are the main non-tariff marketing obstacles:

Government Involvement in Trade. Government procurement laws and state trading are often employed as a covert means of protecting national interests and as a barrier to foreign marketers, offering regular consultations to international corporations. A government-provided financial contribution that imparts a benefit may be made directly or indirectly and is referred to as a subsidy. Subsidies occur in many different forms, such as cash payments, interest rate discounts, value-added taxes, corporate income taxes, sales taxes, insurance, freight, and infrastructure, among others. Direct subsidies are prohibited under the WTO trading framework because of their discriminatory character [9], [10]. Entry and Customs Procedure. Customs categorisation, value, paperwork, different kinds of licences, inspection requirements, and health and safety laws are often used to obstruct free flow of commerce and to discriminate against exporting nations. Therefore, they represent significant non-tariff marketing obstacles. The WTO regulation does make an effort to rationalise these restrictions, however.

When choosing overseas markets to launch a new firm, cross-country comparisons should be made. Product prerequisites. Product standards and specifications, laws that largely address packaging, labelling, and branding, and product testing are regularly utilised by high-income nations as creative trade obstacles. For instance, the EU's decision to outlaw azo dyes greatly impacted India's exports of cotton fabrics and ready-to-wear items to Europe, forcing businesses to turn to vegetable dyes. In August 1994, the US Consumer Product Safety Commision prohibited the importation of rayon and cotton-blend skirts produced in India because they constituted a fire risk and were deemed to be extremely flammable. For safety reasons, the Commision outlawed Indian skirts despite their being no recorded instances of fire.

These are the quantitative export limitations put in place to safeguard local businesses and save foreign currency. These quotas are the strictest since they place an absolute cap on the volume of imports allowed during the quota period. No more imports are permitted when the amount of the import quota has been reached. This permits the import of a certain number of items at a lower rate of tariff. A higher rate of import duty may apply to excess amounts that exceed the quota. Combining quotas and taxes in this way makes imports easier while also discouraging imports in excess via higher rates. In terms of a legal agreement between nations or between a government and an industry, voluntary quotas are unilaterally imposed. These agreements typically outline the product, country, and volume import restrictions. The Multi-fibre Agreement, the greatest voluntary quota system, was imposed on economically weaker nations by richer nations in order to artificially safeguard their home businesses. In order to preserve the foreign currencies that are limiting their markets, national governments often adopt a range of financial limitations. Exchange controls, multiple exchange rates, previous import deposits, credit limitations, and limits on the repatriation of earnings are a few examples of such restrictions. India has long maintained a strict system of exchange controls to protect foreign currency.

## II. DISCUSSION

### Profitability

In addition to market potential and growth, a market's profitability must also be considered. The cost of transportation, government subsidies to local businesses, pricing restrictions, import tariffs, and other legal requirements of the target market may all have a substantial impact on a market's profitability. In addition, there are other hazards related to the target markets' stability, the currency rate, and the importing company's capacity to make payments. Latin America is a highly accessible and high-potential market, but since logistics are more expensive, it is not always profitable.

### Market Potential Analysis

More than half of the world's population, a sizable portion of global production, and a very high growth rate in emerging economies all point to significant market potential. The second-largest market among developing markets, according to the Centre for International Business Education and Research at Michigan State University, is India, followed by China. However, India has been ranked as the ninth most attractive market while China is ranked as the fifth most attractive market due to relatively lower rankings on other parameters of measuring market potential, such as market growth rate, market intensity, market consumption capacity, commercial infrastructure, economic freedom, market receptivity, and country risk. The total market potential index is calculated by taking into account a number of factors, including the urban population, power consumption, commercial infrastructure, etc. However, a company's selection criteria could also be market- or product-specific. A Jaipuri artisan has to choose a market with higher discretionary income levels, a sizable educated population with free time, and low trade impediments.

For the chosen few markets short-listed via preliminary screening, a product-specific evaluation of market size is established utilising the following techniques for the final selection of overseas markets. The examination of a country's trade statistics is one of the simplest and most efficient ways to determine the size of its market. Theoretically, one may calculate a country's market size by adding up all domestic production and imports, then deducting all exports for the relevant product category. Achieving an appropriate market size requires taking stock changes into account. Market size estimates in less developed nations are often inaccurate due to a lack of sufficient information. Different sorts of analogy tactics may be used in these circumstances. In the analogue technique, a nation with comparable consumer behaviour and economic growth is chosen whose market size is known. Alternately, it is possible to examine comparable demand trends in two distinct nations using the analogy approach for different time periods.

**Tools for Analysing International Markets**

In order to implement unique tactics for various segments, international marketing planning and strategy creation requires the usage of market analysis tools. Two of the most popular methods for studying global marketplaces are covered:

**Development-Share Matrix**

About 30 years ago, BCG created the Boston Consulting Group matrix as a guide for categorising an organization's major business divisions. To make it easier to separate the items into the following major categories, such a matrix may be created for the exports of either a nation or a company.

tremendous-development High-Share Products: These markets have a tremendous potential for development, but maintaining market share in high-growth markets requires significant resources. This category includes 42% of India's total exports. The main exports from India include ready-made clothing, medicines, and ready-to-use medications.

**Products with Low Growth and High Share**

Despite having a modest market growth rate, products in this category result in greater earnings. This sector, which accounts for 26% of India's exports, includes marine items, leather and manufacturing, oil meals, etc. About 9% of India's exports fall into this category, which includes petroleum products, tea, cosmetics and toiletries, glass, glassware, and ceramics. These products are sometimes referred to as problem children because they are high-risk and have an uncertain future. In order to get to the category of stars by gaining a larger market share, a strategic choice must be made to spend resources in this fiercely competitive sector. Low market share and low growth often don't need resource investment. Handicrafts, carpets, tobacco that hasn't been processed, coffee, basmati and non-basmati rice, cashews, castor oil, and other items are among India's exports in this category. The growth share matrix may be used to develop distinctive marketing plans for each product category's overseas sales.

**Matrix of Market Attractiveness and Company Strength**

A study is conducted to assess a company's competitive strength and the attractiveness of global markets. Market attractiveness is affected by a number of variables, including market size, market growth, customer purchasing power, average trade margins, seasonality and market fluctuations, marketing barriers, competitive structures, governmental regulations, economic and political stability, infrastructure, and psychic distance. Market share, familiarity with and understanding of the nation, pricing, product fit with the market, needs, image, contribution margin, technology position, product quality, financial resources, access to distribution channels, and their quality are all factors that affect a company's ability to compete. An analysis that gives each of these criteria a certain amount of weight may be done. This analysis might be used to create the following matrix.

**Principal Markets**

For a high degree of marketing commitment, these nations give the highest marketing incentives. Companies with a consistent marketing presence in these areas.

**Primary Markets**

For long-term, irreversible investments, the perceived political-economic dangers in these markets are just too great. A company must investigate and pinpoint the perceived risk factors or firm restrictions in these areas and then use customised tactics, such joint ventures, to address the marketing constraints.

**Third-Level Markets**

Because there are many perceived dangers in these markets, little of the firm's resources are allocated to them. In these areas, a company often has no long-term commitments, and opportunistic marketing techniques like licencing are frequently used.

According to the study shown above, a business should concentrate its market-targeting and growth plans on the top-left countries of the matrix, where both the attractiveness of the country and the company's competitiveness are extremely high. However, the corporation should concentrate on gathering/divesting its resources from nations where both the market attractiveness and corporate strength are quite low. However, a business may employ licencing as a low-resource way of operation while still earning royalties. The countries at the very top of the matrix on the extreme right indicate more enticing markets but weaker companies. In these markets, a company should recognise its competitive deficiencies and work to strengthen those areas. In order to strengthen its competitive position, it may also form a joint venture with other businesses, most of which are local and have complementary skills. Market conditions must be thoroughly examined before a corporation can develop an effective strategy in marketplaces where it has a medium level of competition strength and marketing attractiveness.

Ford, for instance, utilised the matrix of country attractiveness and business strength for its tractors and put India at the top of the extreme right side of the matrix, where nation attraction was extremely high but company competitive strength was low. Products with large levels of difference and innovation, and hence a considerable competitive advantage, are considered breakthrough products. The practise of assessing several market segments and concentrating marketing efforts on a nation, area, or population that has a substantial potential for response. The formal restrictions placed on the entry of certain commodities and services in the form of customs duties on goods travelling across borders. Tariff surcharge: A temporary levy imposed by the importing nation.

**Entry into Global Markets**

Businesses, whether operating domestically or internationally, are always looking to seize new possibilities. There are several methods a corporation may use to enter a foreign market when it makes the decision to do so. These possibilities differ in terms of price, risk, and the degree of control that a company may have by selecting any one of them. Understanding the individual nation's culture, habits, demands, business practises, and unstated regulations is essential when entering a new market since they will either directly or indirectly influence your choice. Exporting is the most straightforward way to enter the global market, while joint ventures and foreign direct investment are the most challenging. Every overseas market requires a different entrance approach. Exporting may be a good approach for certain markets, while putting up a manufacturing facility may be preferable in others. The most appropriate strategy is chosen based on the pertinent company- and country-specific business-related aspects.

**Motives for Entering Global Markets**

There are many reasons why a company joins the global market, but each company's goal in doing so is to grow its clientele, look for new markets, and do business. A few significant causes are listed:

1. Growth and success.
2. the benefits of scale.
3. diversification of risks.
4. dividing up R&D expenditures.
5. Sources and Suggestions.
6. Employees.

**Techniques for Entering the International Market**

For the business to turn a profit and expand sustainably, the choice of which market to join and how to do so are crucial decisions. Based on the nature of the industry, the capabilities of the company, and the circumstances in the host nation, many businesses choose various entrance methods. Companies with plans to expand internationally have a variety of entrance possibilities. These often include of totally owned subsidiaries, licencing and franchising, joint ventures, and exporting.

**Exporting**

The easiest and most popular way to access international markets is by exporting. Exporting may be defined as the process of shipping or bringing things overseas, particularly for commerce and sales. With export entry mechanisms, a company's goods are produced for the home market or a third nation, and then are exported directly or indirectly to the target market.

**Using Indirect Export**

Exporting goods to a foreign nation indirectly entails sending them there in either their original form or a modified one via a different local business. For instance, a number of publishers in India, such as Himalaya

Publishing House, sell their books to a number of exporters in India, who then export them to a number of other nations.

**Immediate Export**

Through its distribution networks or through a firm in the host nation, a corporation engaged in direct exporting sells its goods directly in a foreign country. However, compared to indirect exporting, this type of market access does provide the organisation more control over its distribution networks. This is true even if direct exporting operations need a higher level of skill. For instance, in 1990, Baskin Robbins first sold their ice cream to Russia, where it subsequently collaborated to build 74 stores. Finally, it opened an ice cream factory in Moscow in 1995.

**The Benefits of Exporting**

The following are a few of the main benefits of exporting, which should be enough justification for a business to think about doing. Sales and income are boosted by selling products and services to a market the business has never served previously. Long-term growth in international sales increases total profitability after export development expenditures are paid for. Prior to entering the global market, the majority of businesses become competitive at home. Companies may develop certain tactics that will benefit them in the global market by being competitive in the local market. Companies that expand internationally will take part in the global market and increase their portion of the vast global marketplace. Companies may diversify their operations and spread their risk by selling to other markets. Businesses won't be dependent on shifts in the home market's or a single nation's economic cycle. Usually, expanding output to satisfy international demand requires securing an extra overseas market.

Increased output often results in cheaper per-unit costs and higher utilisation of available resources. Businesses that enter the exporting sector often need to have a presence or representation in the international market. This might necessitate hiring more people and result in growth. Going global may provide useful insights and knowledge about cutting-edge technology, fresh advertising strategies, and overseas rivals. Both a company's local and international operations might benefit from the improvements. Numerous items experience four different life cycles introduction, growth, maturation, and decreasing stage, which marks the end of their usefulness in a particular market. The same product may be presented in a new market where it has never been promoted before after it achieves the last stage, maturity, in the current market.

**Implications of Exporting**

Even while there are much more benefits to exporting than drawbacks, small and medium-sized businesses, in particular, confront significant difficulties when entering the global market. The upfront costs for creating new promotional materials, allocating staff to travel, and other administrative costs associated with marketing the product can strain the limited financial resources of small size companies. It takes longer to develop additional markets, and the payback periods are longer. Companies may need to alter their goods before exporting them in order to comply with import limitations as well as foreign nation safety and security requirements. To fulfil the labelling or packaging regulations of the importing nation, change is often the bare minimum required. The techniques that are accessible make collecting payments more difficult and time-consuming than they are for domestic transactions. Therefore, businesses must carefully consider the financial risk associated with doing global transactions. Despite the trend towards less export licencing regulations, some businesses are less competitive since they must get an export licence in order to export their products. The paperwork needed for exports is often more complicated than for domestic sales. Finding and analysing information on global markets takes significantly more time and effort than doing the same for native markets. For instance, trustworthy data on business procedures, market traits, and cultural obstacles may not be accessible in less developed nations.

## III. CONCLUSION

In conclusion, Important components of the supply chain management process are the manufacturing and distribution sites. To increase productivity, save costs, and satisfy consumer requests, businesses must carefully evaluate a variety of criteria when choosing production and distribution locations. Businesses may achieve operational excellence and acquire a competitive edge in both home and foreign markets by properly controlling these factors. Businesses may increase customer happiness, save costs, and optimise their supply chains by strategically managing their production and distribution sites. Success depends on efficient communication between the places of production and distribution, technological integration, and ongoing market and consumer trend monitoring.

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