Distribution Channel Selection

Subjects: Transportation

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The selection of the appropriate distribution channel is crucial for the success of any business dealing with physical goods. When dealing with this selection, it is crucial to have an effective decision support system (DSS) that can assist with such decisions.

distribution channel distribution logistics

1. Introduction

Distribution channels are an essential part of any business operation that deals with the distribution of physical goods. They represent a complex network of entities responsible for facilitating the flow of products from producers to consumers. However, the selection of the appropriate distribution channel is critical for the success of a business, as it directly impacts the efficiency of delivering products to the end consumer and ultimately affects profitability and customer satisfaction [1][2].

Effective decision-making in distribution is becoming increasingly important in today's fast-paced business environment. To ensure the success of any business, it is crucial to make timely decisions based on information that leads to the efficient flow of goods from producers to consumers. Therefore, there is a growing need for decision support system (DSS) that can provide decision makers with the necessary tools to make quick, efficient, and accurate decisions. This is even more pronounced in situations of uncertainty that are always present in distribution channels because of sudden changes in the demand, quantities, delivery addresses, etc. Although there are various approaches to DSS in the literature, not all of them are practical for real-world applications [3].

2. Distribution Channel Selection

Distribution is a concept that refers to the efficient transfer of goods from production to consumption with minimal costs and a satisfactory level of service. It includes all methods by which goods are shipped from the manufacturer to the end consumer. Without the distribution process, people would not have a way to obtain desired services and products, such as food, clothing, footwear, etc. Distribution can be direct (products are shipped directly from the manufacturer to the end-user), indirect (through the distribution centers (DC) of the manufacturer), or via intermediaries (distributors or logistics providers, trade companies (wholesalers and retailers), agents, etc.).

The selection of a distribution channel is a crucial decision that directly affects a company's ability to achieve its goals. Management must carefully consider the company's goals when selecting a distribution channel. This

decision has a significant impact on the overall business success as it determines how the products will be placed and sold in the market. Choosing the right distribution channel can help a company achieve its targets, such as increased market share, improved profitability, and customer satisfaction. On the other hand, selecting the inappropriate distribution channel can lead to inefficiencies, increased costs, and a negative impact on the company's bottom line. Therefore, it is essential for management to take a strategic approach when selecting a distribution channel and consider the company's goals, market conditions, and customer needs to ensure the most effective and efficient product distribution to the end consumer.

A distribution strategy is a strategy or plan that determines how a company intends to enable end-users to use its products or services through the supply chain. The goal of a distribution strategy is to maximize product sales and minimize distribution costs. A production company can distribute through its own distribution channels or the distribution channels of companies with which it collaborates [4].

In order to survive in the market and be competitive, a production company must have an appropriate distribution channel. The distribution channel can be defined as the path through which the products are transferred from the manufacturer to the end consumer, and it includes various activities and decisions. Choosing the appropriate distribution channel is not an easy task and there is no unique solution that every company can use, as it varies from case to case. Many factors can influence whether a particular distribution channel is the right choice for the manufacturer, and the most common ones are product availability, customer satisfaction, order consolidation, order tracking, supply reliability, delivery speed, reverse logistics, etc. By choosing the appropriate distribution channel, a company can achieve many advantages, such as significant cost savings while maintaining a high level of service for customers [5].

Distribution channels can be physical and trading (also known as transactional) [6]. The physical distribution channel represents a set of methods and means by which a product or group of products are physically transported from the place of production to the point where they are made available to the end customer. This endpoint can be a factory, a retail store, or the customer's place of residence. The trade or transactional channel deals with non-physical aspects of product distribution from the manufacturer to the end consumer, and these aspects relate to the negotiations, purchase, and sale of products, as well as ownership of the goods in the process of their transfer through various distribution systems [6].

Distribution channels can be seen as a way to overcome differences in time, quality, place, quantity, and space between production and consumption. Distribution channels provide the following, among other things:

- availability of products on the market;
- cooperation and collaboration in the chain;
- concentration of companies on the core business;
- a certain service level;

- minimal logistics and total costs;
- exchange of accurate and reliable information in direct and reverse flows;
- transactional efficiency resulting from reducing the number of connections and activities.

Having all previously said in mind, it is necessary to choose an appropriate distribution channel to ensure profit, reduce costs, increase customer satisfaction, and even create loyal customers. In the paper, physical distribution channels will be discussed in more detail. There are different alternatives when considering physical distribution channels, from direct delivery of the goods to the end-user, via indirect distribution, to the use of the Internet and home shopping [6].

The importance of selecting the appropriate distribution channel has been widely recognized both in practice and literature. Fu et al. [7] considered agency, reselling, and hybrid channel types for green supply chains. Xie et al. [8] examined equilibrium pricing and ordering decisions in the hybrid channel for a capacity-constrained supplier facing a retail platform, and further analyzed the impact of limited capacity on the supplier's distribution channel selection. Bian et al. [9] investigated distribution channel selection under environmental taxation. Luo et al. [2] addressed the problem of distribution channel selection on a hybrid platform for a supply chain with a manufacturer selling a product to consumers. Serbest and Vayvay [10] used the Fuzzy AHP for the selection of the most suitable distribution channel, whereas Zhao et al. [11] employed a game-theoretic-based model for a comparative study of the environmental impacts of single-channel and dual-channel supply chains. Đalić et al. [12] proposed the FUCOM-MARCOS (Measurement of Alternatives and Ranking according to the Compromise Solution) model for selecting a distribution channel, whereas [1] used the PCA (Principal Component Analysis)—DEA (Data Envelopment Analysis) approach. Galkin [13] developed a model for calculating distribution channel functioning efficiency in different regions. Hatami et al. [14] proposed an MCDM (Multi Criteria Decision-Making) approach for the evaluation and selection of distribution channels in the FMCG (Fast-Moving Consumer Goods) industry. Kabiesz and Kuboń [15] evaluated distribution channels in a selected meat processing company. Mikušova et al. [5] proposed an ANP-based (Analytic Network Process) model for selecting an appropriate distribution channel for high-value stones. A combination of FMEA (Failure Mode and Effects Analysis) and QFD (Quality Function Deployment) methods was applied by Pajić et al. [16] for risk assessment in distribution processes. Risk analysis was performed for warehousing and transportation processes, and based on the obtained results, corrective—preventive actions were defined. Pant et al. [17] applied the AHP method to determine the best way to monitor health management practices. Prabhuram et al. [18] evaluated four distribution network configurations of Omni-channel using MCDM methods. On the other hand, Ampountolas et al. [19] examined the influence of social media (SM) on demand, where SM was observed as a distribution channel. The selection of the distribution channel for a closed-loop supply chain was addressed by Jia and Li [20]. Similarly, Modak et al. [21] analyzed a closed-loop distribution channel including recycling facilities. In their case, the channel consisted of manufacturers, retailers, and third-party collectors. Zhu [22] examined the problem of designing a distribution channel strategy by simultaneously providing a product quality control strategy. Three types of distribution channels were taken into account (direct channel, retail channel, and mixed channel).

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