

Study and Analysis of Groceries and Food Wholesalers Industry – A Case Study

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ABSTRACT

Purpose: *The purpose of this research is to identify the most critical factors for selecting a catering provider and to pick the most appropriate source. Thirty experts completed a semi-structured questionnaire to help determine the criteria for choosing a provider. Excluding industries with narrowly defined technological bases, few studies have examined how industries evolve. Even fewer studies have been conducted on wholesalers. Given that service businesses are likely to operate differently from manufacturing industries and that wholesaling is a crucial function of many economies, these aspects are intriguing. When it comes to choosing a provider, just looking at price isn't enough. Other characteristics, such as quality, dependability, crisis management, and green product should also be taken into account by managers. An MCDM issue, supplier selection involves both qualitative and quantitative considerations. One of the MCDM methodologies, the Analytic Hierarchy Process (AHP), was used in this investigation. This survey was designed by specialists based on the criteria they came up with, and it was administered to six supply chain managers from six different catering companies.*

Objectives: *The primary goal of most grocery store corporations is to sell as many items as possible in order to maximize earnings. Retailers such as restaurants and mass merchandisers compete with grocery store proprietors. According to a poll conducted by the Bureau of Labor Statistics in December 2009, one strategy that grocery stores use to combat the effects of competition is to increase the number of take-out meals that they provide. Customers who are looking to cut down on their cooking time will appreciate the convenience of these ready-to-eat meals. For the purpose of increasing revenue and maximizing profits, some smaller grocery store businesses also rent movies, provide check cashing services, and sell non-food items. This strategy focuses on clients that prefer to purchase at a single location.*

Design/Methodology/Approach: *Processing, synthesizing, treating, changing or manipulating food, especially food crops or their constituents. Examples of manufacturing/processing activities include: drying/dehydrating raw agricultural commodities to create a distinct commodity, evaporating, eviscerating, extraction of juice, formulation, freezing, grinding, homogenising (including irradiation), labelling (including modified atmosphere packaging), milling (including pasteurising), peeling and pasteurising. Operations that are part of harvesting, packing, or holding on farms or farm mixed-type facilities are not considered to be manufacturing or processing activities and are thus excluded from this definition.*

Finding / Result: *Innovation of food package industry in commercial distribution and supply chain power connections have undergone substantial upheaval in the second half of the twentieth century, wholesale operations have remained an essential activity in many economies. Wholesalers, on the other hand, seem to be under serious danger in certain supply networks, and their companies are regarded to be diminishing. Suppliers with supply chain-*

focused business models compete with traditional wholesalers in many countries, which operate under distinct business models yet provide many of the same services as wholesaling.

Originality/Value: *Prices for fixed inputs like electricity water gas are also rising, placing pressure on the cost of doing business and stimulated.*

Paper type: *Case Study.*

Keywords: Food Packaging Industry, Product Innovation, New product development, Food stocks & Grocery.

1. INTRODUCTION :

Every kind of food product has the potential to be developed, manufactured, transported, distributed, promoted, and sold by a diverse group of actors, including intermediaries. A product on a grocery store shelf has travelled many miles and been touched by numerous individuals before it reaches its final destination [1]. The product has been thoroughly examined and studied by each individual in order to determine the potential risks and benefits. It is safe to say that all of these factors have been taken into account. This item has been thoroughly evaluated by all parties involved in its production and distribution [2] chain before it is acquired by the end-user, who sees its worth in its viability and profitability. Demand is driven by population increase and customer preferences. This means that profits are directly linked to the number of sales and efficiency [3] of each company's operations. In addition to their buying power, distribution, marketing [4], and financial resources, large corporations can provide a wider range of items [5]. Specialty items, local service, or excellent customer service may help small businesses compete successfully. The sector in the United States is highly consolidated, with the 50 biggest firms accounting for over 70% of total revenue. Retail grocery sales [6] have been vigorously sought by warehouse clubs and discount retailers like Wal-Mart, which now sells more food than anybody else in the United States. Specialty food shops, convenience stores, drugstores, dollar stores, and restaurants are some of the other sources of rivalry. As a direct result of this pattern, businesses have been forced to place a greater emphasis on the quality of their products rather than their internal efficiency, as well as quickly identify shifting consumer preferences, develop more complex goods to meet those requirements, and provide a higher level of customer care and support [7]. As a direct result of this, a larger emphasis has been put on the creation of new products (NPD).

A significant percentage of the food sector is being captured by non-store merchants such as Amazon Fresh and Fresh Direct. In comparison to brick-and-mortar supermarkets, online grocery sales are likely to climb by around 21% yearly through 2018, while only representing about 5% of total US food sales, according to statistics from BI Intelligence, which was published by the Internet Retailer. This study discusses an example of a successful NPD process in light of the information presented above. There are many areas in the literature study that deals specifically with the success of new product development (NPD) [8]. There is also a short discussion [9] of the preservation of NPD findings in this section. A small food packaging firm is the subject of a case study in part 3, while the outcomes of that case study are presented in section 4. Additionally, some economic numbers are included as a summary of the setting in which this study was conducted and how it was connected to the development of a new product. The case study concludes with a discussion of the management implications [10] and possible future research paths that may be drawn from the findings. When it comes to creating a long-term competitive advantage, firms must embrace innovation as an intrinsic element of their company strategy and deliver goods that meet the demands of their specific target consumers [11].

A supply-chain programme is not necessary for brokers, produce aggregators, food distribution companies, or cold storage facilities since these organisations are neither manufacturers or processors [12].

Examples of receiving facilities are:

- a) A facility that converts raw agricultural commodities (RACs) into bagged salads via the procedures of manufacturing and processing;
- b) Wheat being ground into flour at a milling plant.
- c) A cookie factory that uses flour, sugar, and other components to produce cookies.

Examples of suppliers are:

- a) a producer of RACs like lettuce for a packaged salad business; A farm that grows wheat that is supplied to a miller; and

b) Milling and flour production plant used to supply cookie makers.

Global food costs have risen because catering companies [13] are always lowering their pricing in order to compete. Agricultural input costs rise as a result of climate change's impact on productivity. Prices for fixed inputs such as electricity and water [14] gas are also rising, placing pressure on the cost of doing business. Catering is one of the few industries where the generally held concept that "you earn when you purchase, not when you sell" is universally recognized [15]. Catering businesses [16], in particular, need a well-functioning supply chain. With the findings of this research, caterers will be better able to pick their suppliers. Risk management and long-term sustainability are crucial in today's competitive global markets when selecting suppliers. A cyber-physical system (CPS) toolkit was explored to see how certain engineering approaches may be used to aid automated systems in [17-18], respectively.

2. METHODOLOGY :

The information and data utilized in the examination come from many sources. Standard reference textbooks on cyber security, numerous articles, websites, and literature reviews on virtual world, cyber security, and machine learning algorithms are among the resources.

2.1 Database searches: The following are a few examples of online and World Wide Web sources that are repositories of various conference publications and peer-reviewed journals.

- Google Scholar search engine
- IEEE Explorer
- Research Gate

3. RELATED WORKS :

Analysis of the industry of groceries and food wholesalers. The available literature is collected using Google Scholar on the articles published between years 2009 to 2022. Keywords 'Food wholesalers', "Groceries" are used to perform searches. Articles are further filtered by considering discussions about the food and groceries industry. Details of the related work are listed in the Table 1.

Table 1: Related paper on Analysis of the industry of groceries and food wholesalers

S. No	Field of Research	Contribution	Reference
1.	E-Commerce	AHP pair-wise scale is shown in full details	Alemanno, A., (2020).[19]
2.	Food Industry	A new product, service, or concept that is regarded as such by a consumer	Arslan, D., & Sevim, E. (2022).[20]
3.	Food Industry	"Process innovation" refers to both the modification and installation of new manufacturing lines.in general, new goods may be created by the adoption of infrastructure and new technologies;	Gebre et al., (2021). [21]
4.	Groceries and Whole sale	creative firms can adapt to environmental concerns more quickly and effectively than non-innovative ones	Velasquez, M., & Hester, P. T. (2013). [22]
5.	Food Industry	Both normative and descriptive, have been suggested in an effort to define the processes to be taken in the development of a new product. For example, the works may be cited as normative models	Aastrup, J., & Kotzab, H. , (2010). [23]
6.	Food Products and cellulosic Materials	Cellulosic materials have been largely replaced by synthetic ones (such as EVOH or EVA), permitting the decrease of food scent losses during packing and the extension of food product shelf life	Agatz et al., (2011). [24]

7.	Food Packaging	In this result, the study's primary objective is to uncover best practises in NPD for small businesses in the food packaging sector via the use of case study research	Asdemir et al., (2009). [25]
8.	Food Packaging	Largely stagnant industry for many years, the food business has lately shifted its attention to new marketing and distribution strategies as well as product development and packaging advancements	Nam & Sim, (2013). [26].
9.	Food Products	Everything is said and done, it is clear from Figure 4 that the NPD did not make any money in years one through two. Indeed, the NPD	Azi et al., (2010). [27]
10.	Groceries and Whole sale	The AHP creates a hierarchical structure with unidirectional links between the various layers of a decision-making issue. Achieving the choice problem's main objective means reaching the top of the hierarchy	Breugelmans, E., & Campo, K., (2016). [28].

4. RESEARCH AGENDA :

Between October 2019 and July 2020, an iterative process that included the following steps was used to develop the research agenda:

- Establishing a scientific advisory panel [29].
- Initiating one original research project and five systematic reviews of food retail practices and interventions [30-31].
- A meeting of experts and stakeholders in person [32-32].
- Developing research questions and conducting a thematic analysis of meeting notes [33-34].
- Follow-up overview of gathering members; and putting together the final research schedule [35].
- At each stage of the process, the scientific advisory committee provided input. Methods were the foundation of this procedure for setting agendas [36-37].

5. OBJECTIVES OF THE STUDY :

- (1) One key showcasing strategies recognizing the opposition in an industry [40]. A small business needs to know what its competitors are doing in order to use its own advertising strategies to compete with those promotions [38].
- (2) There are numerous goals for small grocery store companies. These goals are typically outlined in their business plans well in advance of the beginning of each new fiscal year. By remaining focused on their customers and providing the goods and services that they want, these businesses can achieve their goals most effectively [39].
- (3) To achieve their primary goals, the majority of grocery store businesses also develop comprehensive marketing strategies [40]. The owners are able to better define their target customers and store concepts with the assistance of marketing plans, such as whether or not they cater to niche markets like those who consume organic food. The majority of grocery store businesses' primary goals are to sell products and make the most money possible [41].
- (4) Little organizations should frequently recover these costs to item more items. On the other hand, a low-cost strategy for marketing new products is a price penetration strategy. Price skimming is used to quickly expand a company's customer base or increase its market share [42].

6. METHODOLOGY :

If a risk is present in small quantities, your strategy should check to see if it is evenly distributed throughout the lot. When choosing an analytical method, you should also think about how food components can interact with the method. Lately, food makers and enormous global store companies have both moved into arising countries. Private retail brands, which are particularly popular in such areas, drive the demand for food in some locations. Producers of baby food, breakfast cereal, and soup

each hold at least 40% of the market in their respective regions. Figure 1 depicts the various building stages.

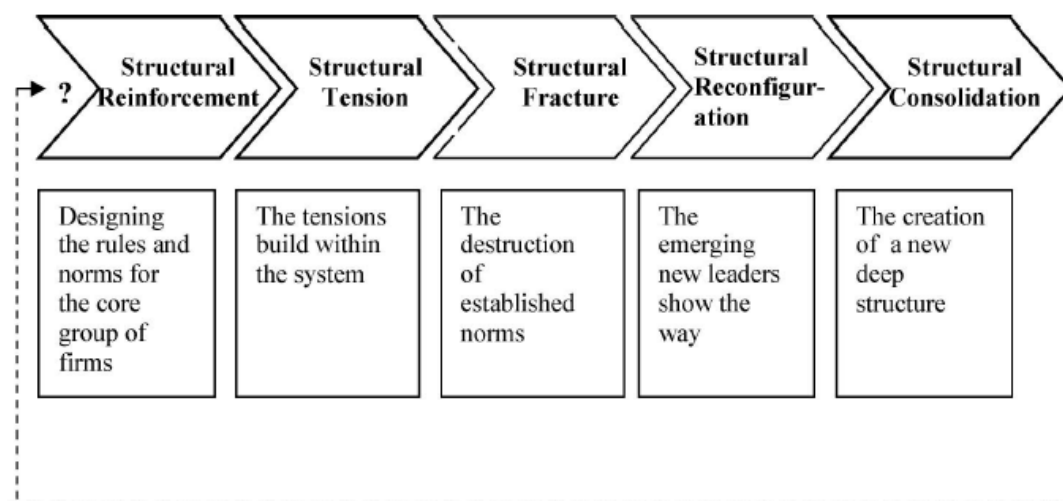


Fig. 1: The path of industry changes in grocery wholesaling [43].

Supplier selection was formerly centred purely on price, which led in numerous short-term agreements with suppliers that offered the lowest price proposal. As time develops, greater emphasis has been placed on various other variables other than the price owing to changes in manufacturing methods and consumer expectations. An increasing number of factors must be taken into consideration when evaluating and selecting providers nowadays.

Table 2: AHP pair-wise scale [44].

Importance Scale	Definition of Importance Scale
1	Equally Preferred
3	Moderately Preferred
5	Strongly Preferred
7	Very Preferred
9	Extremely Preferred
2-4-6-8	Intermediate values between two neighboring judgments

Numerous factors must be taken into consideration when determining which vendor is the best fit. As a result, managers cannot rely only on their intuition or previous experiences to come up with a solution. Businesses using a variety of methodical and scientific ways to handle challenges like those in table 1 above get more accurate outcomes [45]. This study provides a scientific approach to the supplier selection issue and seeks to discover the variables that catering organizations emphasise when choosing suppliers. There is a detailed description of the developments that have taken place in the grocery wholesale market throughout the years [46].

6.1 Overview of Structural Fracture:

As the number of people calling for a shift grew and the amount of pressure mounted, the old system started to crumble [47]. As the government intervened to remove the old leaders' grip, new possibilities arose for others to assume control [48]. Due to their cost structures, long-established grocery wholesalers were unable to resist the kind of price competition and margin erosion that had been commonplace in the industry. The 'breakthrough' occurred sooner in the United Kingdom than in the Republic of Ireland [49]. Group trade and cash and carry are two examples of wholesale innovations that were immediately implemented. The major trade group in Ireland resisted the reforms that were

taking place. International developments influenced businesses in both nations. As a second step, if we want to understand how wholesaling (or other service sectors) evolve, we need to build the necessary glasses. In addition to this, highlighted the fact that other, more established methodologies within organisation theory on an ecological level may also be relevant in the conceptualization of industrial change. There is a need for multi-faceted views on wholesale sector change [50].

6.2 Structural Reconfiguration:

The shift from the old order to the new one took some time to complete. A number of forward-thinking wholesalers sought to resurrect their businesses by bringing in new concepts, formats, and service technologies when the industry was in turmoil. The decline of trade groups in both nations was one of the notable aspects of this time period. Any sense of greater unity was undermined by an increased emphasis on the business side of relationships [51]. Some wholesalers and independent merchants were able to benefit from economies of size and breadth thanks to this new business emphasis. Despite some significant new arrivals, many of the organisations that were successful during this time were based on long-established players from the conventional wholesaling groups of companies. Consolidation and reorganisation were more common throughout this time period, as seen by the many mergers, acquisitions, strategic alliances, and divestitures that happened [52].

6.3 Structural Consolidation:

As new wholesaling models grew increasingly prevalent, the new order began to consolidate. Both nations originally had a high preference for cash and carry, but as convenience shopping became more prevalent, this preference shifted. Also to consider: how much time do you have? It takes time to build a network of buildings and the companies that operate inside them. Most constructions, on the other hand, contain the germs of their own demise. As a result, preserving the status quo requires significant resources. There seems to be a propensity for structures to be destabilised if this isn't done, It's inevitable that firms and managers will wear out over time [53].

6.4 Identification of supplier selection criteria:

To begin, a thorough literature research was performed, and all factors that may be used to pick a supplier were identified. In order to get the most out of the data, a list of questions and a semi-structured questionnaire were put together.

More than 30 Bursa-based catering specialists with at least five years of experience in their jobs participated in the interview, which was conducted in Turkish. The interview material was explained to the participants in advance [54].

7. FOOD AND GORICERIES WHOLE SALE INDUSTRY :

However, there is no universal definition of the word "innovation," resulting in more uncertainty in the literature. However, innovation may be defined as the effective introduction of anything new and beneficial, including but not limited to new processes, techniques, or practises as well as items and services that are either new or have been updated in some manner, there are four distinct types of innovation that interact with one another.

- (1) A new product, service, or concept that is regarded as such by a consumer;
- (2) In this context, "process innovation" refers to both the modification and installation of new manufacturing lines.in general, new goods may be created by the adoption of infrastructure and new technologies [55].
- (3) Changes in marketing, purchasing, sales, administration, management, and employee policy are examples of organizational innovation [56].
- (4) Using new territories and expanding into previously untapped market segments are two ways to describe what we mean when we talk about "innovation in the market."

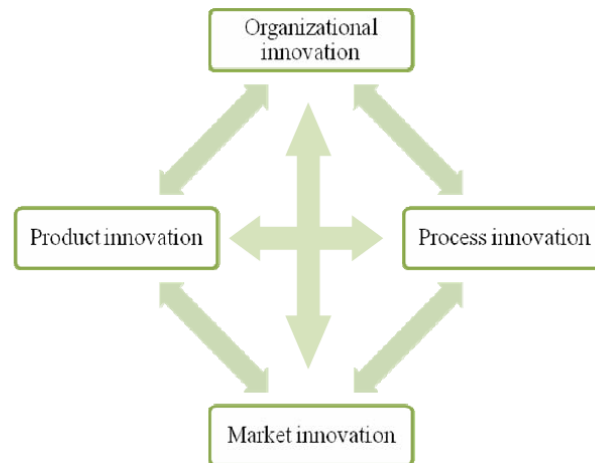


Fig. 2: The four types of innovation [56].

The creation of a commercial product is the last step in the innovation process, which may be considered as a continuum beginning with fundamental or applied research (IRI, 2000). However, most innovation projects don't go through all the stages of this continuum; rather, they follow a particular route based on the sort of project and the type of process they're developing. Product development, also known as new product introduction (NPI), The sale of fuel may make up a large portion of total sales Fuel sales accounted for 13.5 percent of Kroger's total revenue in 2015. National and regional chains as well as small stores, are part of the sector [57]. It's not uncommon for large corporations to run many chain restaurants under various names. Companies closely examine demographics when picking store sites for grocery shops since they generally service clients within a one- to two-mile radius of the store. As a convenience to their customers, grocery shops often arrange comparable items into aisles. Bakeries, delis, pharmacies, and florist shops are examples of common store features Preparation areas cater to clients who like to eat on the go. For example, some companies include departments devoted to ethnic or organic items. Why? Because creative firms can adapt to environmental concerns more quickly and effectively than non-innovative ones.

In-store restaurants, banks, coffee shops, and petrol stations may all be provided by third parties for corporations. Most supermarkets feature numerous checkout lines to handle orders and bag products. Self-checkout lanes are available at a number of stores. High volume/low profit businesses like grocery retailing need good supply chain management. Big chains may keep their pricing low because of volume discounts. Manufacturers generally contribute extra trade funds, which enable grocery retailers to discount or advertise particular items without jeopardising profits. In most chains, product is received in distribution hubs and then redistributed to individual locations [58]. Truck fleets may either be owned or leased by companies to deliver products. Big chains may choose to send large orders directly from manufacturers to their shops in order to save money on transportation and distribution. that although the operations of a wholesale company may have value, the firm itself is not stable and cannot be relied upon for success. The key to understanding how and why wholesalers thrive and survive is to understand how, why and where they carry out a set of activities that are both helpful, important, and financially rewarding.

8. SWOC ANALYSIS :

SWOC analysis is used for identifying the strengths, weaknesses, opportunities and challenges for individuals and organizations [59]. In this section, the strengths, weaknesses, opportunities and challenges of the grocery wholesaling industry are listed:

8.1 Strengths:

- The fastest-growing sector globally is the food and beverage industry. By the end of 2025, an estimate projects that the food market will have a volume of approximately 2,782,974 m kg. By the end of 2022, its growth volume would have increased by 0.7% [58].

- Global brands like McDonald's, Starbucks, Burger King, Nestle, and Unilever have expanded their market. We can establish a global brand by consistently expanding your market if the food or beverage has a distinctive flavor and is memorable [58].

8.2 Weakness:

- Not all of the food and beverages are selling evenly. Some have more sales, while others have fewer, and it also varies greatly by region. A newcomer, on the other hand, is unaware of how various food items are sold in a different market. The novice faces a very difficult decision.
- Any business won't become profitable immediately. Although the sale may appear to be higher, your net profit would be significantly lower when you subtract all expenses from your net income [60].

8.3 Opportunities:

- The expansion of the food industry and the tourism industry are intertwined and complement one another. As a result, a businessperson should use the tourist destination to their advantage.
- Choosing the right combination of ingredients saves money when you have experience in the food business, not experience. By preparing the right amount of food at the right time, you can cut costs associated with waste. Your business's expansion is accelerated by cost-effectiveness [60].

8.4 Challenges:

- The lockdown and higher unemployment have reduced people's purchasing power as a result of the COVID-19 pandemic. They are now looking for food that costs less. Your profitability increases when you provide cheap food.
- Dietary and health trends are encouraging people to eat at home and steer clear of processed foods. Fast food is being called junk food by a lot of influencers. Unless you sell organic food, these trends are bad for the food industry [61].

9. RECOMMENDATIONS :

9.1 Create an Organizational Understanding of the Quality Cost:

The cost of fixing a defect after it reaches a customer is significantly higher than the cost of fixing the problem at its source. After all, studies have shown that dissatisfied customers typically tell between 9 and 15 people about their negative experience, and they frequently post negative reviews or complaints on social media, alerting hundreds or thousands of additional people and causing damage to your reputation that can sometimes be irreparable.

9.2 Implement Automated Statistical Process Control Systems:

Statistical Process Control (SPC) continues to provide food manufacturers with value by reducing defects and waste. It was developed at the beginning of the 1920s as a method for recording data to alert manufacturers to deviations in process performance. We now have automated SPC systems, whereas previously, the data in SPC charts had to be recorded manually, introducing the possibility of human error. Using real-time data, high-quality SPC software helps teams find and fix nonconformances by keeping an eye on operations to make sure results stay within predetermined limits.

9.3 Develop a Food Safety Program:

According to the Food Marketing Institute (FMI) and Grocery Manufacturers Association (GMA), a recall typically results in direct costs of \$10 million for food companies, in addition to brand damage and lost sales. Even worse, the World Health Organization reveals that contaminated food causes 600 million illnesses and 420,000 deaths annually [62].

9.4 Use Accurate Labeling:

More than half of all Americans believe that food labels are occasionally deceptive, and more than 80% believe that nutrition labels have misled them. The FDA is in charge of ensuring that food marketed in the United States is properly labelled [62]. The importance of accurately labelling ingredients, raw materials, countries of origin, nutritional information, and allergens is highlighted by Mintel's 2018

Global Food & Drink Trends report, which states that consumers today want "complete and total transparency from food and drink companies." This is because consumers are becoming more aware of dubious claims of "natural," "organic," and "GMO-free [62].

10. CONCLUSIONS :

To begin, we are of the opinion that the wholesale sectors that were discussed in this article demonstrate, once again, that the patterns and procedures of industrial growth in this service market are unique from those that exist in manufacturing or technology-based businesses. Wholesaling, for example, has evolved in a way that is distinct from the evolution of many manufacturing industries. Again, it appears that the management and achievement of industry consolidation and concentration are very different. We concentrated our efforts on the NPD process and the factors that determine how successful it is in small and medium-sized food packaging businesses, areas in which this aspect of business has gotten a comparatively low amount of attention. The research that has been done in the past on typical procedures for new product development (NPD) and an analysis of an actual situation have provided the basis for our efforts to develop a framework for the NPD process. The purpose of this research was to accomplish this objective by analysing a successful industrial NPD example in order to present the lessons that can be learnt from the real scenario. In this body of research, both NPD and NPD success in particular have been subjected to a diverse array of interpretations.

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