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Management from the Nova School of Business and Economics.

STRATEGIC BUSINESS MODELS IN THE ONLINE FOOD DELIVERY INDUSTRY IN
EUROPE – IN-DEPTH ANALYSIS OF THE HYBRID DELIVERY MODEL

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Abstract

This research provides an overview of the food delivery industry, focusing on the key traits of traditional and contemporary business models. The thesis includes an in-depth analysis of the Hybrid Delivery Model, which exists within the OGD field and leverages the advantages of Brick-and-Mortar establishments along with the flexibility of Pure-Play Online platforms. Additionally, it assesses both strengths and weaknesses. The paper proposes strategic recommendations to tackle current challenges and leverage opportunities in the OGD sector, specifically examining how hybrid business models can successfully merge various elements to improve customer experience, operational efficiency, and ultimately, profitability.

Keywords

Strategic Business Models, Online Food Delivery, Online Grocery Delivery, Hybrid Delivery Model, Strategic Recommendations

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List of Abbreviations

AI – Artificial Intelligence	D2C – Direct-to-Consumer
API – Application Programming Interface	IT – Information Technology
BM – Business Model	OFD – Online Food Delivery
BMI – Business Model Innovation	OFP – Order Fulfillment Process
CVP – Customer Value Proposition	OGD – Online Grocery Delivery
	POS – Point of Sale

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1. Introduction

Food delivery has existed for numerous years; however, it is not an exaggeration to claim that it underwent a significant transformation during the pandemic. An industry already progressing swiftly due to technological advancements faced considerable pressure as new opportunities emerged during the COVID-19 pandemic. The pandemic, in conjunction with technological advancements, profoundly influenced customers' lifestyles, preferences, and purchasing behaviors. The food industry experienced a revolution during the lockdown, as customers were unable to visit restaurants and supermarkets, thus creating new, previously unrecognized needs. To face this, online food delivery (OFD) played a crucial role in maintaining a sense of normality for consumers by allowing them to enjoy the restaurant experience from the comfort of their homes, reminiscent of pre-pandemic dining. Or by conveniently bringing groceries into their home. Fueled by the maturation of a generation that grew up with the Internet of Things and are tech adopters – Gen Z and Millennials –the OFD industry has broadened its customer base and grown in value (Mason 2019, 365). Once a niche market, OGD has seen rapid expansion in recent years, driven by evolving consumer behaviors and needs (Hübner, Kuhn, and Wollenburg 2016). This promising market is projected to experience a steady growth rate of 10.05% annually (CAGR 2024-2029), resulting in a market volume of €137.40bn by 2029. The Grocery Delivery market in Europe is expected to generate a revenue of €85.80bn by 2024, with Retail Delivery as the main revenue driver with €72.18bn (Statista 2024e).

This thesis aims to showcase the main features of the most widely adopted business models in the OFD sector, developing strategic recommendations for the Hybrid Model, after evaluating strengths and vulnerabilities. Firstly, it presents a conceptualization of the business model

definition and frameworks, followed by a review and composition of the methodology used to develop this work. Next, the size and configurations of this industry are assessed followed by the evolution over the last 40 years of the different business models. Furthermore, the different business models are defined and explained comprising the meal and grocery delivery segments. This thesis provides an in-depth analysis of the Hybrid Retail business. This research narrows its focus to the Hybrid Model, which is characterized by a partnership between Pure-Play and Brick-and-Mortar platforms. This emerging business model will play a pivotal role in transforming the entire grocery industry, facilitating the shift from the traditional routine of visiting supermarkets to a more technology-driven approach while providing European consumers the familiarity of supermarkets' products. The advantages and vulnerabilities of this BM are evaluated, forming the initial basis for recommendations. This work provides further insights into the OFD literature with a practical-oriented approach, identifying drivers of change in this environment and market trends among consumers which will shape how BMs operate in the future. The strategic recommendations outlined in this report aim to eliminate entry barriers for non-users, tailoring the process to meet consumer needs while enhancing business profitability.

The macro-factors depend on geographical choice, for which the research focuses on the European market, where significant differences in market maturity and penetration rates are evident. The UK, France, and the Netherlands are considered more advanced online grocery markets, with higher penetration rates compared to countries such as Portugal, Italy, and Spain (Caine and Koetter 2018). The UK, a pioneer in e-grocery, saw major supermarket chains adopt online shopping as early as 2006, resulting in a more mature and developed market with established players and sophisticated logistics networks. Consequently, each recommendation provided in this study

should be viewed as a guideline and tailored to the specific characteristics and needs of the market where it is to be implemented (Saskia, Mareï, and Blanquart 2016).

Moreover, although the market's significance and growth have been previously discussed, the authors are very interested in new technologies and the industry's adaptation to such a competitive landscape. The inherent difficulties of slim margins and limited revenue streams have further fueled the authors' interest in this topic. The diversification of business models and the different nuances within each of them was an interesting topic to study, learning about how companies uniquely harness and develop specialized technological competencies. Additionally, grasping the reasons behind the limited adoption of the OFD concept in Europe was vital for crafting recommendations to develop a superior business model. While it may be hard to envision a world without food delivery services, change is always necessary to thrive and remain competitive.

2. Strategic Business Models Conceptualization

To compare various business models, it is essential to first grasp the concept of a business model itself. In the mid-1990s, the term “business models” entered management discussions, leading to a swift evolution in its definition, resulting in over 500 related articles by 2000 (Shafer, Smith, and Linder 2005, 200). Strategist Michael Porter described business models as part of the “Internet's destructive lexicon” (Michael Porter 2000 cited in Shafer, Smith, and Linder 2005, 200). However, most management scholars disagree, considering it to be a valuable tool in corporate management and innovation. The concept of a business model lacks a universally accepted definition, with interpretations varying across different business perspectives (Shafer, Smith, and Linder 2005, 200). According to Afuah (2014), a business model serves as a framework or blueprint for revenue generation by creating and capturing value. Magretta (2002) describes business models as “stories

that explain how enterprises work,” which outline the target customer, the value offered, and how this value is delivered. Osterwalder and Pigneur (2010) define a business model as the foundational logic by which organizations create, deliver, and capture value. While the terminology surrounding business models may differ, existing literature agrees that a business model reflects the operational logic of a firm without explicitly addressing market competition – this is the role of strategy. It portrays the core logic behind a firm’s strategic choices for value creation and capture within a value network (Shafer, Smith, and Linder 2005, 202). This representation can be developed in various manners based on different frameworks. Numerous analytical frameworks have been developed for studying and evaluating business models, each emphasizing distinct key components. Notable frameworks include the Business Model Canvas (Osterwalder and Pigneur 2010), which consists of nine elements, and Amit and Zott’s (2012) Why, What, Who, and How Framework. Afuah’s (2014) framework simplifies the components into five core building blocks: Customer Value Proposition, Market Segment, Revenue Model, Growth Model, and Capabilities, which will be utilized in this thesis. Generally, these frameworks’ components are consolidated into four main themes as shown in Figure 1.

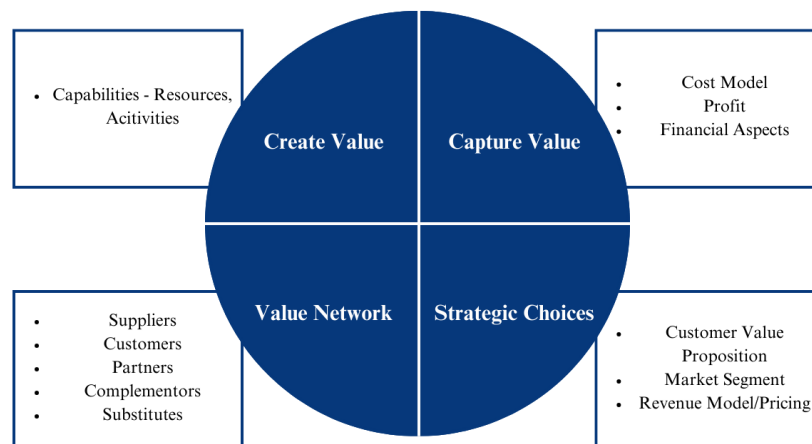


Figure 1 – Clustering Business Model Components (Adapted from Shafer, Smith, and Linder 2005)

BMs delineate how firms create value by differentiating from competitors and leveraging capabilities, resources, and potential advantages. They also illustrate how companies capture a share of this value creation through revenues. Moreover, both processes depend on a value network comprising partners, customers, distribution channels, and suppliers (Shafer, Smith, and Linder 2005, 202).

It is important to note that strategy and business model are not synonymous. As Michael Porter (1996) states, the “essence of strategy is choosing to perform activities differently than competitors,” which aims to create and sustain a competitive advantage. Conversely, the business model aids in analysing, testing, and validating strategic choices, while reflecting their impact on operations. It helps illustrate cause-and-effect relationships between strategy and company operations. For instance, when constructing a house, there are numerous decisions related to design, floors, furniture, etc. These choices are strategic; the business model emerges from these decisions as a detailed floor plan created by the architect. The integration of strategy and business models helps explain the varying profitability of companies. Both aspects are necessary for maintaining competitive advantages by tailoring their customer value propositions, establishing mechanisms for delivering that value, and defining isolating mechanisms to protect the strategy from being compromised (Teece 2010). Taking this into account, a strategic business model comprises what should change in the BM to remain competitive in the future, considering drivers of change and its impact on the future environment of its value network (Betz 2002).

Business model innovation (BMI) is crucial for success. According to Afuah (2014), innovation often stems from disruptions to conventional practices and arises through the alteration of established norms. BMI can be obtained by designing a new BM or by reconfiguring an existing one (Massa and Tucci 2013). The main point that distinguishes the BMI types is the nature of the

challenges faced. BM reconfiguration faces challenges that are idiosyncratic to businesses such as management processes, modes of organizational learning, and organizational inertia which new BMs do not face (Massa and Tucci 2013). BM design requires the creation and elaboration of the content, structure, and governance of how a company operates (Amit and Zott 2001 cited in Massa and Tucci 2013). According to Afuah (2014), BMI is commonly linked to product or service features. However, it usually pertains to identifying and leveraging opportunities that enhance value creation or capture (Afuah 2014). It can be obtained by being the first mover in changing the rules or by coming in later but employing a better business model. Innovations often focus on changing the customer value proposition, influencing customer preference for one firm over another. Additionally, it can be derived from how firms interact with the market, particularly in sales or revenue models. During the innovation process, it's important to assess which elements to modify and how these modifications influence other components. As mentioned earlier, the business model operates within an external environment shaped by both industry and macro factors. Innovation typically stems from capitalizing on the opportunities and threats present in these environments. This thesis will provide strategic recommendations for BM reconfiguration aimed at leveraging macro and micro-opportunities while minimizing vulnerabilities within the analysis of BM.

3. Methodology

This thesis presents a qualitative examination of strategic business models in the OFD sector. A comprehensive review of academic literature, industry reports, company websites, media sources, and journal articles was performed to clarify the distinctions among various business models and draw insights from industry size and configuration. To analyze the different BMs, Afuah's (2014) academic book "Business Model Innovation: Concepts, Analysis, and Cases," was used to identify

and define the different BMs in this industry. Afuah (2014) categorizes BMs into five fundamental components: Customer Value Proposition, Market Segments, Revenue Model, Growth Model, and Capabilities. Afuah's (2014) framework serves as a streamlined version of the business model canvas, presenting components that are more precise and easier to grasp. In this analysis, the growth model correlates with the cost model, recognizing that OFD BMs frequently operate on slender profit margins, often lacking profitability. Thus, the focus shifted toward understanding operating costs.

Afuah's framework was employed to highlight essential characteristics of relevant BMs in OFD as well as drawing advantages and disadvantages from the identified BMs – Aggregator Model, Direct-to-Consumer Model, Full Stack Model, Pure Online Player, Brick-and-Mortar, and Hybrid Model. Additionally, it is the framework used for the in-depth analysis of the Hybrid Delivery BM. To gather further insights into industry trends and the current landscape of different BMs, a survey (Survey_1) was conducted (Appendix 1). It aimed to evaluate general customer behavior in the OFD industry, gathering 146 responses. Collecting primary data is crucial for generating in-depth analyzes and strategic recommendations, supplementing insights from secondary data. Two primary data types were used to establish a strong foundation of findings for the in-depth analysis. Firstly, interviews were conducted with six industry experts from various companies and roles (refer to Appendix 2). Participants were recruited through personal networks and the professional networking platform LinkedIn. The interviews lasted between 45 minutes to one hour following a pre-established plan consisting of three primary sections: the first aimed to grasp how they define the industry and their general vision about its dynamic, the second explored BM elements concerning customer value propositions, revenue models, resources and capabilities, market segments, and cost structures, and the final part included open-ended questions about industry

opportunities and challenges, fostering brainstorming for potential innovations and changes in the BM. This method aimed to promote unbiased opinions and innovative ideas grounded in participants' expertise rather than explicit suggestions. Furthermore, targeted questions regarding potential recommendations were posed to assess their viability.

Secondly, a survey (Survey_2) specifically regarding OGD was developed to gain a nuanced understanding of consumer behavior and preferences regarding OGD, encompassing both users and non-users of the services (Appendix 1). For users, purchase behaviors, pain points, and service preferences were examined, while non-users provided insights on their reasons for non-adoption and future usage possibilities. For both groups, questions addressed areas for improvement, the likelihood of adopting future recommendations, and suggestions through open-ended queries.

Upon these insights, the strengths and vulnerabilities of the hybrid delivery BM were identified. To compose actionable and suitable recommendations, macro and micro trends were identified and key drivers of change were evaluated. According to Afuah (2014), BM's performance depends on the external environment and strategic BMs are an adaptation of current BM into the foreseen future, so scenario planning tool was elaborated. Scenario planning tool is crucial to improve strategic decision-making and align recommendations with the most probable and plausible scenario by analysing drivers of change and understanding what the future of OGD might be. After comprehending the critical uncertainties in the environment along with insights from experts, the information base for the recommendations was supported by two additional sources of primary data. Due to Europe's low levels of OGD adoption, 20 customer interviews were conducted to explore in detail the needs, concerns, perceptions, and preferences of individuals who do not regularly use e-grocery services (Appendix 1). Furthermore, a dynamic focus group session with

e-grocery users to interact with each other and derive key insights (Appendix 1). Promoting interaction among participants—viewing the focus group as more than just a group interview—proved effective in facilitating idea exchange and ensuring a smooth discussion flow. By comparing and integrating insights from user interviews with findings from non-user interviews, we sought to identify both differences and similarities that will inform robust strategic recommendations to assist companies in attracting new customers, enhancing retention rates, and improving the overall customer experience. The combination of insights from customers, industry experts, and environment drivers allowed for the development of strategic recommendations that not only align with customer demands and expectations but also anticipate adaptation to potential shifts in macro factors. To evaluate the relevance of these recommendations, the DVF framework was applied to analyze each recommendation's desirability, viability and feasibility. These were rated on a Likert scale from 1 (very low) to 5 (very high) to prioritize the recommendations with the highest scores. Finally, the impact of each recommendation on every component of the BM was assessed.

4. Strategic Business Models in the Online Food Delivery Industry

Convenience, speed, variety, and ease of order became imperative when discussing the food industry (Ahuja et al. 2021). COVID-19 was a pioneer in changing the landscape of the strategic BMs in this industry. The need for ultra-fast and ultra-convenience has shaped the last few years (Ahuja et al. 2021). OFD consists of ordering groceries or ready-to-eat meals through an app or website from restaurants, supermarkets, or local markets with variable delivery times from scheduled to instant (Statista 2024d). Platforms can either deliver ready-to-eat meals for direct consumption (Meal Delivery) or non-prepared food and beverage products, household, and

personal care products (Grocery Delivery) from supermarkets or retailers (Statista 2024d). All BMs feature the same customer journey, which consists of six key touchpoints as depicted in Figure 2. This journey begins with the initial step: the recognition of a need for fast and convenient food delivery.

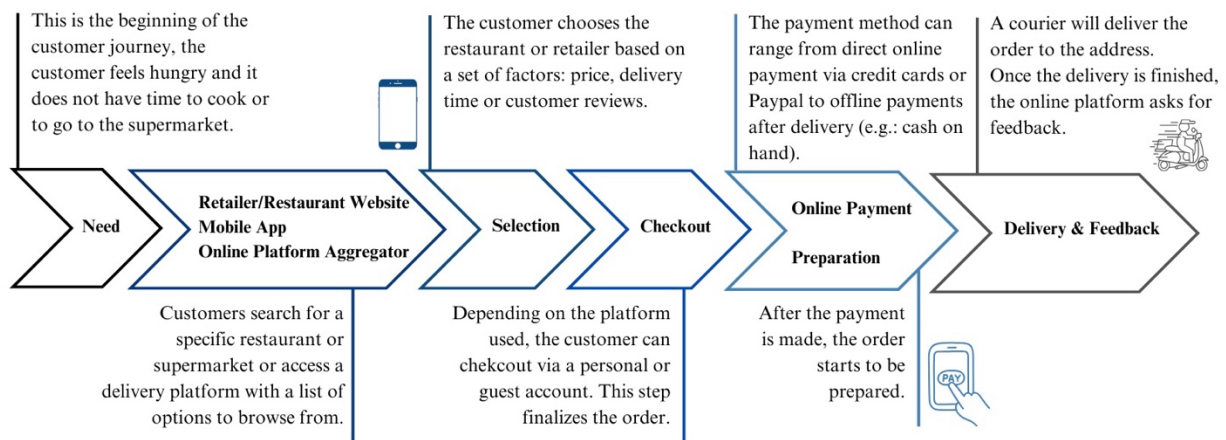


Figure 2 - Customer journey in the OFD industry (Adapted from Statista 2024d)

Tong et al. (2020) defined OFD platforms as a system “that connects not only merchants and drivers but also customers and merchants, which we name as a dyadic two-sided market structure”. The industry functions in a two-sided market, requiring a balance between meeting the needs of both end consumers and restaurant or retail partners. The Country Manager of Mercado (2024) even classifies it as a three-sided market, adding the courier as a stakeholder. This creates intricate challenges in managing networks and ensuring satisfaction across the three sides (Eisenmann, Parker, and Alstyne 2006). Christopher Payne, the chief operating officer of DoorDash, mentioned to the *Wall Street Journal* that OFD business is a “cost-intensive business that is low-margin and scale driven.” (Ahuja et al. 2021). As players act as intermediaries between these three agents, their profit margins remain minimal, making it challenging to develop differentiation strategies that require substantial investment capital.

4.1. Market Size

Over the years, Europeans have increasingly adopted technologies to promote convenience and ease in daily life (Ahuja et al. 2021). To accurately assess the market prospects of the OFD industry, it is essential to analyze its positioning within related industries, such as e-commerce and food tech. The OFD sector leverages advancements from these industries to foster its growth and technological progress. The OFD industry is a subset of the e-commerce sector, specifically focusing on the online ordering and delivery of food and beverages. As the largest segment within the food-tech industry, OFD integrates digital technologies to enhance food delivery services.

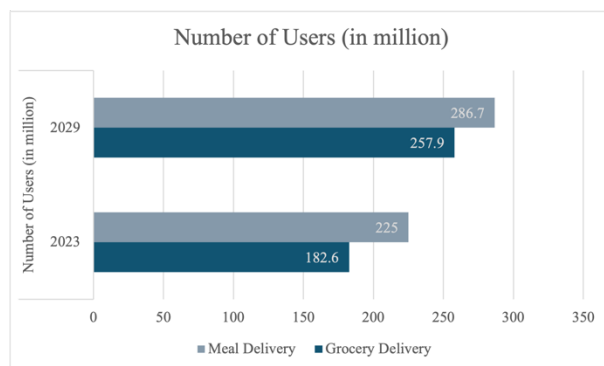
Firstly, OFD is deeply connected to the e-commerce ecosystem, relying heavily on technology and mobile apps to manage orders and deliveries, process payments, and connect platforms with couriers and clients. This connection allows for more streamlined operations, optimized last-mile logistics, and personalized customer experiences through data-driven insights. It has been growing over the years through digitalization and globalization and is supported by Millennials and Gen Z, who are very comfortable with the use of technology (Hirschberg et al. 2016). In Europe, the e-commerce sector was valued at US\$566.08 billion in 2023. This sector is expected to grow by 9.09% (CAGR 2024-2029) (Statista 2024a). The anticipated expansion of the e-commerce sector, alongside the innovative omnichannel strategies employed by major players such as e-commerce leader Amazon, is expected to further drive the adoption of online services. These advancements will shape the future of the industry by improving logistics efficiency and enhancing the personalization of customer experiences, leading to unforeseen developments that will continue to redefine consumer expectations and service delivery (Caine and Koetter 2018).

Furthermore, the food tech industry is the result of the emergence and adoption of innovations in the food industry. It comprises companies that use technologies to turn agri-food into a modern

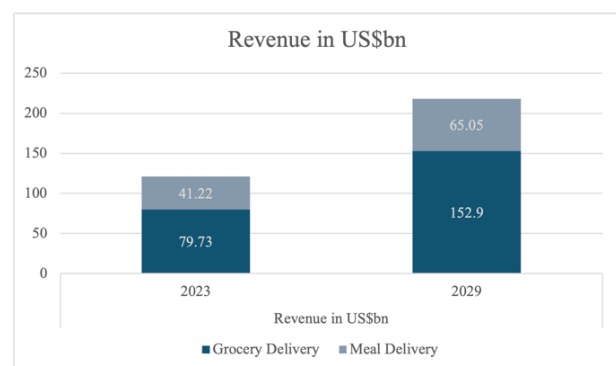
sector, from production to distribution (Iberdrola 2024). In 2022, the sector within the European food tech industry with the largest venture capital investment was food delivery, with US\$3.2bn, followed by online supermarkets, with US\$1.7bn (Statista 2024c). This reveals that in the upcoming years, the industry will grow based on investment in innovation and efficiency. It will become an even more relevant sector in consumers' lifestyles, reaching a wider base of customers by answering emerging concerns and issues.

The OFD industry is growing rapidly, reaching a market size of US\$1.02 trillion worldwide in 2023. In 2024, the largest country consumer of online delivery is Asia with 63.85% of worldwide users followed by Europe with 12.30% (Statista 2024d). The United Kingdom is ranked third worldwide in terms of revenue, generating US\$44.76 billion in 2024 (Statista 2024d).

Their dominance is attributed to their early adoption of food delivery services and the establishment of major industry players. The European OFD market reached a value of US\$120.95bn in market share in 2023 (Statista 2024b). It is expected to have an annual growth rate of 8.78% (CAGR 2024-2029) and is projected to reach a market volume of US\$217.95bn by 2029 (Statista 2024b). The OFD market comprises grocery and meal delivery with the key data insights regarding segment value and penetration rate displayed in Graphs 1 and 2.



Graph 1 - Number of Users in million per segment (Adapted from Statista 2024b)



Graph 2 - Revenue in US\$bn per segment (Adapted from Statista 2024b)

The grocery delivery segment comprises retail delivery, quick commerce, and meal kit delivery (Statista 2024b). It is an important part of OFD growth in Europe, with a projected revenue growth of 15.40% by 2025, fueling market growth (Statista 2024b). The leading countries in European grocery delivery share in 2021 were the United Kingdom (12.0%), followed by France (8.6%), The Netherlands (7.5%), and Sweden (7.3%) (Simmons et al. 2022a). Meal delivery includes platform delivery, such as Uber Eats, and restaurant delivery, such as Domino's Pizza. This segment has remained stable over the years, being the one with a higher penetration rate. These numbers reflect that the grocery segment is growing and forecasts the biggest innovation opportunity with higher revenues but also more complexities in adoption rates, still being a future adoption for certain market segments. Additionally, Simmons et al. (2022a) state that “fueled by evolving customer expectations, increased competition, and technological advancements, OGD could account for up to 18 to 30 percent of the food-at-home market in some leading European countries by 2030”.

4.2. Multi-sided Market

The OFD industry can be considered as a three-sided market, where network interactions occur between the three main participants: customers, suppliers, and drivers. Unlike traditional single-sided markets, multi-sided markets exhibit cross-side effects, meaning the value each participant derives is influenced by the active involvement of all sides. The utility of customers, suppliers, and drivers is interconnected (Bahrami et al. 2023). For instance, customers benefit from a wider range of options when there are many suppliers, suppliers can fulfill more orders when there are more customers, and drivers can complete more deliveries, thus earning more when the demand for orders is high. Customers pay a delivery fee, suppliers pay a fee to list themselves on the platforms,

and drivers earn a wage for each completed delivery. Furthermore, platforms can adjust these fees to influence the market dynamics (Bahrami et al. 2023).

The industry is dominated by a few well-established players, that are associated with widely recognized restaurants, brands, and supermarkets, making it difficult for new entrants to compete. Entering the industry requires significant capital investment in the development and maintenance of the online platform, as the sector is heavily reliant on IT expertise (Shetty 2023). Securing and retaining personnel may also pose a challenge, as workers tend to prefer companies offering higher compensations, which is only possible in big players due to their higher margins. A potential advantage for new entrants is the low brand loyalty among end-customers in this industry, that switch between platforms easily. Given the high number of available choices, customers can choose the provider that offers the lowest price and the highest quality. This behavior is facilitated by the lack of significant differentiation among industry players, allowing consumers to switch providers without incurring additional costs. To improve customer retention, companies have responded by high spending in marketing and offering discounts or subscription models (such as Delivery Plus or Glovo Prime) to reduce delivery fees. Different players have applied different business strategies, such as Glovo endorsing a low-price strategy and charging lower fees to capture a low-end market segment (Head of South of Portugal at Glovo 2024). Despite fierce competition among big players, local and regional players compete effectively by serving niche markets or specific needs of customers such as Thuisbezorgd in The Netherlands (Statista 2024b). The points of differentiation include the delivery speed and the range of suppliers affiliated with the delivery app (Shetty 2023).

5. In-Depth Hybrid Delivery Model Analysis

The importance of Grocery Delivery within the OFD Industry has been increasing throughout the last decade, with no signs of slowing down. According to Statista (2024b), Grocery Delivery's penetration rate is forecasted to grow with an average CAGR of approximately 3.65% per year between 2024 and 2027, compared with an average CAGR of 1.43% per year within the same period for Meal Delivery. The European Retail Delivery market is expected to generate a revenue of US\$78.65bn by 2024. With an anticipated annual growth rate (CAGR 2024-2029) of 10.56%, the market is projected to reach a volume of US\$129.90 billion by 2029. Due to the presented reasons and insights from industry experts, the Hybrid BM was chosen for further study.

5.1. Business Model Innovation

The next section will apply Afuah's (2014) framework to analyze the Hybrid Delivery Model. The Methodology section has previously described this framework, while the growth model component has been modified to align with the cost model, as attaining profitability poses significant challenges (as illustrated in Figure 3).

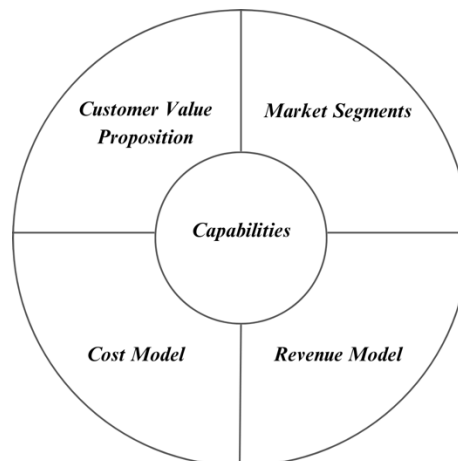


Figure 3 – In-depth business model framework (Adapted from Afuah 2014)

5.1.1. Customer Value Proposition

According to Afuah (2014), customer value proposition describes “how a firm's products or services can effectively address customers' problems or needs more successfully than those of competitors”. It comprises what a firm offers to attract customers and how customers perceive these products/services as valuable. Companies shape needs and online delivery is a prime example of a need customers might not have recognized before the pandemic. The pandemic shaped customer preferences and value perceptions towards low prices, convenience, fast delivery, fresh products, easy access to a wide range of products, and access to discounts or promotions (Survey_2 2024). The creation of value in grocery delivery is very peculiar and different from meal delivery due to its product nature. Groceries are mainly classified as experience products instead of search products, where customers obtain product information by consuming/experimenting (Kervenoael et al. 2006). Grocery shopping is part of every household routine and demands a full-sensory experience. This experience includes odor, touch, and physical appearance of fruits/vegetables and meat products, as well as the feeling of immediate gratification, making the online experience challenging (Hansen 2005). The research conducted by Hansen (2005) shows that customers who had previously bought groceries online perceive e-grocery differently from those who either had never shopped online or had only bought non-grocery items. It highlights *perceived compatibility* – the degree to which the online shopping experience is similar to their typical shopping habits – as the primary factor that distinguishes the perceptions (Hansen 2005). Another important factor highlighted by Hansen's (2005) study is the purchase as a household instead of an individual choice, meaning that customers value simple and effective order procedures that are easy to understand and do not require high skills. The hybrid model streamlines the process of searching for items, making payments, and arranging delivery, enabling customers to shop efficiently from

their preferred supermarkets at any time and from any location. According to the Country Manager of Mercadão (2024), OGD provides an attractive, easy-to-try alternative for those who would prefer to avoid grocery shopping altogether. On the other hand, replicating and translating this online for those who enjoy shopping involves various key valuable factors that need to be fully exploited. Hybrid delivery enhances customer value by addressing the essential need to simplify regular and high rates of replacement purchases (Kempiak and Fox 2002). To maximize this value, it is critical to deliver a high-quality experience across all customer touchpoints. Key factors include competitive pricing, user-friendly ordering and payment systems, fast and reliable delivery, and hassle-free refund processes (Ankar, Walden, and Jelassi 2002). It solves the problem of pushing carts up and down the aisles, waiting in queues to pay, and finding parking spaces while replicating the shopping experience by partnering with supermarkets.

CVP for End Customer:

The key components of the customer value proposition for the end customer are illustrated in Figure 4.

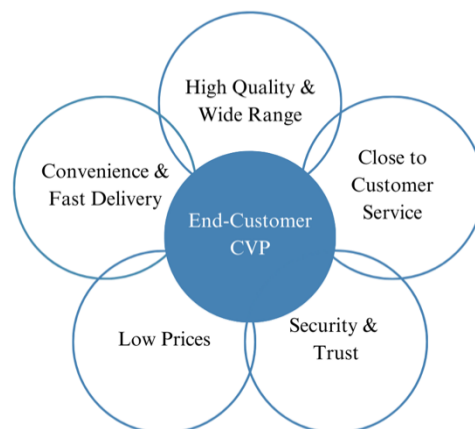


Figure 4 - Customer Value Proposition of the Hybrid Model for End-customer (Authors' illustration)

i. High Product Quality & Wide Range

The hybrid model focuses on delivering fresh and high-quality products to its customers, replicating the in-store quality. OGD often involves a significant proportion of perishable products

that require careful handling due to their sensitivity to time and temperature during transit (García et al. 2022). According to the survey conducted, customers typically order packaged snacks and beverages, fresh products (vegetables, fruits), dairy products, meat, and seafood. The perishable nature of these products requires minimal storage time and controlled environments for both fresh and frozen items, creating strict constraints on delivery windows (García et al. 2022). Platforms typically break delivery schedules into one- or two-hour time slots to address these challenges, which is a method broadly preferred by customers (Survey_2 2024). Additionally, grocery orders are usually larger than non-grocery ones, which makes them more prone to logistical issues and human error, such as missing items or spoiled products (García et al. 2022). Hybrid companies address this by partnering with supermarkets for in-store, personalized grocery selection with quality control measures or dark store storage. This approach helps reduce spoilage and shortens the time between producer and consumer, which is essential for perishable items. The quality of the products is also reinsured by reviews and ratings within the platform, which promotes a more informed shopping experience. However, this model still has room for improvement as product quality is still one of the main pain points for customers using this service (Survey_2 2024; Focus Group 2024). To ensure the delivery of high-quality products, logistics efficiency is paramount (García et al. 2022). Some hybrid companies implement weight restrictions and minimum order requirements to streamline logistics operations and enhance customer satisfaction (García et al. 2022). Hybrid models, by partnering with brick-and-mortar stores, provide a broad selection of groceries, ranging from food to personal care items and essential household goods. They also cater to specialized dietary needs, offering gluten-free, vegan, and lactose-free options (Ankar, Walden, and Jelassi 2002). For example, Continente collaborates with platforms such as Glovo and Uber Eats, enabling access to an extensive online product range of over 40,000 items (Head of E-

commerce of Continente 2024). Additionally, platforms extend their partnerships to specialty stores, including pharmacies, local butchers, and organic markets, broadening their appeal and convenience for diverse customer needs (Anckar, Walden, and Jelassi 2002). With this extensive selection, customers feel confident that the online offerings match the variety and availability they would find in-store.

ii. Close to Customer Service

Service quality is a key differentiator in the hybrid model, blending the expertise and reputation of brick-and-mortar stores with advanced information insights. By collaborating with brick-and-mortar retailers, hybrid platforms create a perception of superior service quality (Head of E-commerce of Continente 2024). The experience provided on platform design and grocery shopping offered by hybrid grocery platforms is crucial. While physical supermarkets intuitively organize products in-store with sensorial tricks, online platforms need to adapt by personalizing the service. This model enables customers to pick their typical and well-known items from brick-and-mortar stores and specify preferences (e.g.: green bananas) by employing personal shoppers trained to pick high-quality products (The University of Tennessee 2021).

Platforms try to create a personalized and unique grocery experience through personal shoppers. Some platforms use their drivers to go in-store and pick up the groceries according to specifications and then deliver them to customers' houses. If some item is missing or does not correspond to expectations, the customer can directly discuss it with the responsible person. This fosters a greater sense of responsibility in the driver and builds familiarity and trust in the customer, leading to a more satisfying experience overall (Country Manager of Mercadão 2024). Establishing a personal connection and relationship between the delivery worker and the customer also plays a significant role in improving service quality. The Country Manager of Mercadão (2024) said that the company

tries to ensure that the same delivery person picks up and packs the groceries, fostering a sense of continuity and comfort for the customer.

iii. Convenience & Fast Delivery

Millennials and Gen-Zers deeply value ultra-simple and ultra-fast services. On-time delivery dominates customer satisfaction, and it is critical for customer choice and referral even after succeeding in product quality (Survey_2 2024). This is the biggest motivator to switch from supermarkets to online delivery. Nevertheless, meeting customer delivery expectations is one of the main problems in retail delivery when balancing fresh products and time delivery (García et al. 2022). A broad product assortment and varying temperature requirements necessitate faster deliveries, enhancing customer value by reducing wait times and making delivery slots a significant factor in customer choice (García et al. 2022). Delivery times vary by modality, including instant, same-day, next-day, multi-day, and click-and-collect options (Aull et al. 2021). Instant delivery (within thirty minutes) is gaining popularity, with 33% of European customers in France, Germany, the Netherlands, and the UK valuing it for its ultra-convenience, as shown by Simmons et al. (2022a). Hybrid models reduce delivery times by utilizing physical stores as fulfillment centers and dark convenience stores, such as Glovo and Uber Eats, to provide express delivery (Keane 2021). For instance, Ocado offers one- to two-hour delivery, while Glovo promises deliveries of up to thirty minutes. However, such rapid service is impractical for larger orders due to distribution challenges (Simmons et al. 2022b).

Some hybrid companies, such as the partnership between Deliveroo and Aldi in 2022, offer click-and-collect services (Houlton 2024). Click-and-collect or “buy online, pick up in-store” has seen increased adoption, especially in the French market, as it allows customers to shop online and pick up in-store at their convenience (Galante, García López, and Monroe 2013). This option provides

added flexibility, as it doesn't require the extensive logistical scaling needed for same-day delivery or a wide range of delivery vehicles to handle different basket sizes. With the demands of fast-paced lifestyles, waiting at home for a delivery can be inconvenient, whereas pick-up allows customers to collect their orders at their preferred time, making it a more flexible choice for many (Galante, García López, and Monroe 2013). However, the adoption of this model is limited by supermarkets' storage capacities for click-and-collect orders, making broad implementation challenging.

iv. Low Prices

Customers have multiple forms of perceiving value in online shopping: timesaving, convenience, and competitive pricing (Mason 2019). The transparency of online platforms allows customers to easily compare prices and select the most cost-effective options, leading to increasingly price-sensitive behavior (Mason 2019). This is especially relevant in OFD services, where many customers weigh delivery fees against personal savings in time, fuel, and effort. Palmer et al. (2000) divided customers into two segments: service seekers and price/efficiency seekers. The latter group values low prices and efficient purchasing processes, preferring options that offer the best balance of cost, time, and effort—not necessarily the lowest delivery fees, but the overall lowest cost. This preference is largely aligned with what the hybrid delivery model offers.

According to Aull et al. (2021), customers are generally willing to pay for convenience up to a certain point. During the COVID-19 pandemic, e-grocers promised to offer the same in-store grocery prices with low delivery fees, leveraging a circular BM connecting supermarkets, drivers, and end customers to achieve scalability (Aull et al. 2021). However, increased demand and logistical challenges led to higher operational costs. Consequently, despite the model's potential for scale, delivery fees have sometimes increased, which can frustrate customers. To maintain

profitability within the customer value proposition, some e-grocers set mandatory minimum basket sizes, such as Mercadão with a minimum basket of 100€, balancing customer expectations with operational sustainability (Aull et al. 2021; Country Manager of Mercadão 2024). For instance, Glovo offers subscription models that include discounts and promotions on groceries, along with free delivery options, to enhance perceived value for customers (Head of South of Portugal at Glovo 2024).

v. Safety & Trust

Hansen's (2005) study found that customers generally do not perceive e-grocery shopping as risky and are willing to shop online. However, trust issues regarding product quality and the purchasing experience remain a pain point (García et al. 2022). The hybrid model addresses these concerns through partnerships with renowned brick-and-mortar retailers that have strong brand awareness and loyalty. For example, Continente is one of the most well-known supermarket brands in Portugal, with almost 100% awareness; when platforms such as Uber Eats and Glovo partner with them, it increases trust in the purchase process due to positive brand perception and familiarity (Head of E-commerce of Continente 2024). Additionally, specific platform features such as self-service access to stock information and tailored substitution offers are critical in building customer comfort and trust in the platform (Aull et al. 2021). Furthermore, after the COVID-19 pandemic, consumers have exhibited panic buying behavior, making real-time tracking essential for reducing uncertainty about order statuses (Kumar et al. 2023). Moreover, the hybrid model mitigates perceived security risks through in-app payments with contactless payments, e-wallets, and in-store payment choices for click-and-collect services or cash on delivery (Kumar et al. 2023). To foster customer trust in e-grocers and encourage repeat purchases, platforms offer a money-back

guarantee and easy return processes at the outset of the transaction (Hübner, Kuhn, and Wollenburg 2016).

CVP for Brick-and-Mortar:

i. Network Effects

The relationship between supermarkets and platforms benefits from direct network effects in a three-sided market, as illustrated in Figure 5 (Chu and Manchanda 2016). As the number of customers, supermarkets/retailers, or couriers on the platform grows, each group experiences increased value. Platforms with a larger customer base attract more supermarkets/retailers eager to partner and boost their order volume. As the number of customers, supermarkets/retailers, or couriers on the platform grows, each group experiences increased value. Platforms with a larger customer base attract more supermarkets/retailers eager to partner and boost their order volume. Higher order volumes, in turn, create more delivery opportunities, drawing more couriers to the platform. Similarly, when supermarkets' products meet customer demand on the platform, it attracts even more customers, reinforcing the cycle of growth for all stakeholders (Strategy and Operations Manager of Bolt 2024). As the utility of the platform increases by all stakeholders, the value of the service and the willingness to pay increases. The attractiveness of the platform increases, which increases its network size, bringing volume sales potential for the partner (supermarkets/retailers).



Figure 5 - Network Effect Cycle on Hybrid Delivery Model (Authors' illustration)

ii. Digital Efficiency & Long-term Sustainability

Platform partnerships empower brick-and-mortar stores to attain digital efficiency and scalability by leveraging the logistics established by these platforms. They manage crucial operational tasks, particularly the last mile of logistics, which encompasses route and fleet management, utilizing their sophisticated delivery software systems and expertise. Platforms represent a more cost-effective solution for supermarkets looking to expand their online presence without heavy investments in digital infrastructure, logistics, or hiring delivery personnel (Kamel et al. 2022). Additionally, this collaboration helps supermarkets broaden their customer base and reach younger consumers, particularly Gen Z, who are adept at using these platforms and favor online shopping. By being present on platforms favored by this generation, brick-and-mortar stores can foster customer loyalty within this emerging market segment (Food Delivery Consultant 2024).

Although brick-and-mortar stores will always maintain a physical presence, it is vital to adapt to shifting market trends. Pure-play online platforms are growing rapidly and capitalizing on grocery opportunities by improving customer experiences (Kamel et al. 2022). By partnering with these platforms for last-mile delivery, brick-and-mortar stores can stay competitive, enjoy better profit margins, and increase scalability. This partnership addresses the challenges of entering the quick-commerce space, where speed and efficiency are paramount. By utilizing advanced logistics from platforms such as Glovo or Uber Eats, supermarkets can effectively respond to the soaring demand for ultra-fast delivery services, positioning themselves to excel in the quickly expanding quick-commerce sector (Kamel et al 2022).

5.1.2. Market Segment

The market segment of a BM focuses on identifying the distinct groups of customers a company serves or aims to serve, as well as understanding the size of these groups, their willingness to pay, and the appeal of each segment (Afuah 2014). Figure 6 summarizes the market segments identified.

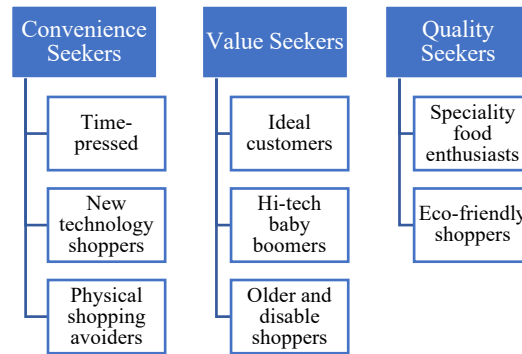


Figure 6 - Market Segments of the Hybrid Delivery Model (Authors' illustration)

The Covid-19 pandemic has broadened the customer base for OGD. Previously, OGD customers were mainly young, urban, and affluent families looking for the convenience of having large-basket deliveries brought to their homes. Today, the service has expanded to cater to a more diverse range of segments (Simmons et al. 2022b). The first market segment was identified: “convenience seekers” – the set of customers who purchased groceries online before the pandemic. These are customers who value speed, ease, and flexibility in their shopping experience. Typically, younger, urban, and tech users. This group prioritizes fast delivery services and is often willing to pay a premium for this benefit. Within this broader category of “convenience seekers”, three subcategories emerge. The first is the “time-pressed” consumers, who are relatively insensitive to price changes because they prioritize saving time (Bauerová and Zapletalová 2023). This group is largely made up of busy professionals juggling work, family, and social obligations. Due to their hectic schedules, they frequently use such services and prefer same-day delivery services for moderate to large grocery orders. Another subcategory consists of “new technology shoppers”,

typically younger individuals who are highly comfortable with digital platforms (Bauerová and Zapletalová 2023). They often opt for subscription-based services or meal kits, with regular deliveries of moderately sized grocery orders. Finally, there are the “physical shopping avoiders” who prefer to avoid visiting supermarkets in person (Bauerová and Zapletalová 2023). Instead, they seek services that offer ultra-fast delivery options or convenient pick-up alternatives. Another key customer segment is comprised of “value seekers”, individuals who are highly price-conscious and focus on budgeting. This group tends to include older, suburban, and family-oriented shoppers who make purchases frequently and often plan their shopping in advance. Their willingness to pay is generally lower, so they actively seek deals, discounts, and rewards, such as coupons and loyalty programs. The primary subcategory within this segment is referred to as the “ideal customer”, typically representing suburban families with dual incomes and at least one child (Bauerová and Zapletalová 2023). However, elderly shoppers also increasingly benefit from and engage with these services. They fall into two distinct subcategories: “hi-tech baby boomers” and “older and disabled shoppers” (Bauerová and Zapletalová 2023). The first one is drawn to online grocery services for the convenience of shopping from home and, in some cases, for the novelty of using such technology. On the other hand, the second category of older shoppers is characterized by lower incomes and often living alone. Their primary motivation for using these services stems from health-related challenges that make traditional in-store shopping more difficult (Bauerová and Zapletalová 2023). Disabled shoppers are people who rely on the assistance of home-helpers for daily tasks and use online platforms for the convenience of the service (Heikkilä et al. 1998 cited by Anckar et al. 2002). The last category encompasses the “quality seekers,” who are quality-conscious and health-oriented customers. Their demographics include middle-aged, high-income, and educated consumers. They are loyal to the brands and stores they trust and look for quality,

freshness, and sustainability. They have preferences over delivery and are willing to pay a premium to enjoy quality and variety. The first subcategory is called “specialty food enthusiasts”, who are consumers who seek unique and specialty foods and may purchase moderate to large baskets only from niche grocery retailers. The “eco-friendly shoppers” are the second subcategory and incorporate customers who prioritize sustainable and ethical practices, such as rescuing surplus, reducing food waste and supporting ethical sourcing practices, that are delivered at their homes frequently.

In summary, segmentation is going towards psychology and behavioral factors, disregarding demographic factors. Purchasing from OGD platforms divides customers into three factors such as converted to the online purchases, benefit-focused (due to the easiness, convenience, and timesaving of purchasing their groceries online), and fearful (Bauerová and Zapletalová 2023).

5.1.3. Revenue Model

The revenue model comprises how many customers get to pay, how much for what products/services, when and how. It is about reaching the maximum number of customers who like the customer value proposition enough to pay a price close to their willingness to pay (Afuah 2014). The grocery delivery sector operates with thin profit margins, making it essential for hybrid models to carefully balance and optimize both revenue and expenses by seeking reliable revenue sources. Hybrid models derive income from two main customer tiers: end customers and brick-and-mortar (partners) as showcased in Table 2.

End Customer					Brick-and-Mortar			
Delivery Fees			Service Fees		Commission Fee		In-App Advertising	
Distance	Basket Size	Speed	Personal Shoppers	Couriers	Average Ticket Price	Volume of Orders	Level of Visibility	Ad Type
Per-Order Model			Subscription Model		Revenue-Sharing Model	Exclusive Partnership Deals	Tiered Listing Fees	

Table 1- Revenue Sources of the Delivery Model according to Customer Tier (Authors' illustration)

End Customers fees

As previously stated, customers are willing to pay for convenience until a certain point, being very price-sensitive regarding delivery fees (Galante, García López, and Monroe 2013). This sensitivity often leads consumers to compare platforms and select the one offering the lowest overall cost (Aparicio, Metzman, and Rigobón 2023). In this hybrid model, delivery fees are a primary revenue source. According to survey results, 45.20% out of the 115 respondents indicated they are willing to pay between €2 and €4 per delivery transaction. With these values, profitability may seem hard to obtain. The delivery fee structure is often based on factors such as distance, basket size and availability of nearby people (speed) (Head of South of Portugal at Glovo 2024). Belavina's, Girotra's, and Kabra's (2017) study highlights the price variation on geographic distance, with urban deliveries often being less expensive due to shorter travel distances, while suburban deliveries incur higher costs. Delivery fees also adjust according to the amount spent; smaller orders may have proportionally higher fees relative to their order value, while more expensive orders often benefit from reduced delivery fees (Head of South of Portugal at Glovo 2024). The mode of transport also influences this model: smaller orders may be delivered by motorcycles, which cost less to operate, while larger orders require cars, resulting in higher operational costs and, subsequently, higher delivery fees (Country Manager of Mercado 2024). In addition to the delivery fee, customers pay a service fee for gig drivers or personal shoppers, often ranging from

5% to 10% of the total order value (Digital Enterprise 2023). These personal shoppers are typically gig drivers who work with the platform, carefully selecting grocery items based on customer specifications (Country Manager of Mercado 2024).

The delivery fees usually comprise two different models: the *per-order model* where customers pay per usage and the *subscription model* where customers pay a membership fee monthly or annually for free home delivery or exclusively access to discounts during a given period (Belavina, Girotra, and Kabra 2017). The subscription model may also include access to exclusive discounts or prices, which increases the size of the basket by spending more monthly and purchasing more frequently, as shown in a study by Wagner, Pinto, and Amorim (2020). This represents a solid and predictable source of revenue, which companies can personalize the packages of features and benefits to cater to the different customer segments. For example, Ocado's "Smart Pass" subscription service offers two options: a midweek plan, covering deliveries only from Tuesday to Thursday, and an anytime plan, which includes delivering during weekends. Subscription fees range from \$3.99 to \$8.99 per month, aligning with the average charged by other major platforms (Ocado 2021).

Brick-and-Mortar fees

Platforms generate revenue through commissions charged to their partners, with commission rates adjusted based on factors such as order volume and average ticket size. Partners with higher order volumes and larger ticket prices often negotiate lower commission rates due to their stronger bargaining power (Head of South of Portugal at Glovo 2024). Conversely, independent and local stores generally pay higher rates. For instance, in France, Uber Eats applies lower commission fees to Carrefour supermarkets than to smaller, local businesses, reflecting Carrefour's greater negotiation leverage.

The revenue models comprise sharing revenue and exclusive deals. In the revenue-sharing model, both platforms and partners/retailers receive a percentage of the order value for each transaction through the platform (Head of South of Portugal at Glovo 2024). For each transaction, the platform receives a pre-agreed commission fee ranging from 15% to 30% of the order value (Food Delivery Consultant 2024). Additionally, platforms might charge a 6% fee for pick-up orders (Uber Eats n.d.d). This model fosters long-term relationships as both partners and the platform benefit from increased sales. Some hybrid models also use exclusive partnerships, working closely with selected retailers to create unique offerings tailored to their customers' needs. In such cases, commission structures may involve marked-up prices, but these deals offer retailers a dedicated platform presence and targeted customer engagement, which can foster stronger brand loyalty and drive higher sales (Afuah 2014). An example is Mercadão, which works exclusively with the retailer Pingo Doce, negotiating an exclusive commission fee (Country Manager of Mercadão 2024).

These delivery platforms serve as digital marketplaces for retailers, giving them increased visibility and a broader customer reach. Retailers often invest in in-app advertising or pay for premium placements on these platforms to enhance their brand awareness. Companies employed tiered pricing to supermarkets, fomenting pricing tailored to different businesses (Afuah 2014). Platforms such as Uber Eats offer low-cost to premium packages with different delivery and advertising advantages. For example, the low-cost package includes lower delivery fees but less visibility within the app, being only visible if searched by the customers (Uber Eats n.d.d). The premium package includes higher commission fees, monthly ads, and user subscription benefits (Uber Eats n.d.d). Retailers must pay higher prices to enjoy increased visibility within the platform, fostering brand promotion. Such promotional features allow retailers to appear higher in search results, appear more frequently in advertising slots, and show up in suggestions and recommendations,

which can significantly boost brand awareness and drive sales. According to the Head of South of Portugal at Glovo (2024), this kind of exposure is becoming a critical revenue stream for delivery platforms, reflecting a broader trend where platforms capitalize on their marketplace status by offering prioritized visibility to retailers who are willing to pay.

Pricing Strategies

According to Afuah (2014), a company's pricing model is essential for the definition of its revenue model. Pricing determines how much the customer will pay for the customer's value proposition. Companies need to set a price point near customers' reservation price (willingness to pay). Setting the right price is crucial to converting customer value propositions and maximizing revenues. This makes carefully structured pricing models essential to a hybrid platform's revenue strategy. Hybrid platforms elaborate delivery fee pricing models to cater to different customer segments as shown in Figure 7.

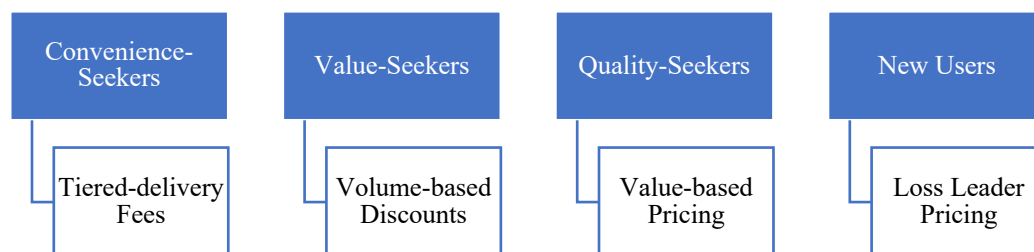


Figure 7 - Pricing Strategies according to Market Segment (Authors' illustration)

Firstly, for the convenience-seekers segment, time is critical for their value recognition. As suggested by Belavina, Girotra, and Kabra (2017, 1782), tiered delivery fees apply for this segment, with higher prices charged for instant and same-day delivery options, while lower fees are applied to less time-sensitive choices. Additionally, click-and-collect options—where customers pick up orders themselves—are often priced more affordably, representing a more sustainable delivery approach.

For the value-seekers segment, hybrid grocery platforms leverage volume-based discounts as part of their pricing strategy. This approach rewards frequent users by offering discounts and promotions for larger basket sizes, encouraging customers to increase their average spending per order. By driving higher transaction values, this model helps offset operational costs and boosts profit margins. Volume-based discounts are often integrated within subscription programs, such as Ocado's Smart Pass, which provides additional benefits and savings to customers who make frequent purchases, enhancing loyalty while supporting sustainable revenue growth (Ocado 2021). Pricing can also be tailored according to delivery zones. Price sensitivity is heterogeneous, as household price sensitivity is inversely related to the distance to the closest physical store. For instance, customers in remote areas are generally less sensitive to price changes due to the higher costs associated with in-person grocery shopping, making them more likely to accept higher delivery fees (Cebollada, Chu, and Jiang 2019). A hybrid might offer *subscription models* for locations near dark convenience stores or fulfillment centers due to operational optimality, while for dispersed locations, the *pre-order model* is the most efficient pricing strategy, charging higher fees (Belavina, Girotra, and Kabra 2017).

For the quality seekers segment, the hybrid model includes value-based pricing applied to specialized products or services. Customers who follow a special diet and are interested in organic, vegan, or gluten-free groceries from specialty stores may be willing to pay a premium for these products (Survey_2 2024). In addition, eco-friendly shoppers can choose click-and-collect delivery with lower fees and promote green practices on delivery logistics.

To attract new users, platforms often use loss-leader pricing by offering either a discount or free delivery on the first grocery order, provided a minimum spending threshold is met (Afuah 2014; Ocado n.d.). Initially, this approach may result in losses, but by partnering with retailers, platforms

can cap those losses. This strategy can effectively boost customer acquisition and foster brand loyalty.

These different revenue streams support the hybrid model by creating value for both customers and partners, increasing their willingness to pay by offering an exclusive and reliable service in which quality is ensured through partnerships. Among these, *subscription models* have emerged as a highly stable and promising revenue source for long-term business sustainability, as noted by Belavina, Girotra, and Kabra (2017). Additionally, positioning the platforms as marketplaces has become a critical revenue stream. The demand for in-app promotions and advertising will become even more relevant in this model's revenue sources as both the partner and the platform benefit from increased sales and the potential to leverage shared interests and market synergies.

5.1.4. Growth Model & Cost Structure

Companies operating within the OGD sector have found profitability challenging to achieve. While some firms have managed to reach break-even points or record modest profits, profitability remains elusive for most (Simmons et al. 2022a). The Head of E-commerce of Continente (2024) highlighted that the retail industry typically operates with very thin profit margins. When factoring in the additional operating costs required for delivery services, these margins are further reduced, creating significant challenges for profitability in the grocery e-commerce sector. Due to the reason mentioned, the further analysis is more focused on the costs companies incur, i.e., the cost structure, instead of how the companies within the BM grow profitable, i.e., the growth model. A McKinsey study further illustrates the impact of delivery on profit margins: when customers purchase groceries directly in-store and handle their own transportation, retailers achieve an approximate profit margin of US\$4 on a US\$100 grocery basket. Conversely, when the same basket is delivered to the customer's home, this profit margin shifts to a loss of around US\$13 (Simmons et al. 2022a).

When delivering the goods, companies must overcome the logistical problem, which is influenced by the fluctuation in demand, that impacts the efficiency of both order picking and home delivery (Kämäräinen and Punakivi 2010): the two primary cost drivers in the e-grocery BM as referred by the Head of E-commerce of Continente (2024). Achieving cost-effectiveness in this model can be accomplished by either providing consumers with alternative methods for receiving the goods or by enhancing the efficiency of picking processes and home delivery. On the one hand, in terms of the picking process, store-based picking is not cost-efficient since the store is not designed for the picking but for sales (Kämäräinen and Punakivi 2010). However, they are an opportunity to offer the full product range to customers and to easily change the product choice when the initial one is not available (Country Manager of Mercado 2024). On the other hand, home delivery, the other big cost driver, has been offered using different models and time windows. To address the mentioned costs, supermarkets have directed themselves to a *Team up Strategy* (Afuah 2014), increasingly pursuing strategic partnerships, acquisitions, and alliances to leverage shared resources and improve operational efficiency. This approach reflects a concerted effort to enhance the financial sustainability of OGD services. Some retailers have prioritized partnerships with companies encompassing the hybrid BM to help reduce operating costs and provide increased flexibility for both them and their customers (Rougès and Montreuil 2014).

For the companies operating within the hybrid model, although they do not incur any direct inventory or delivery costs, they lose the flexibility of setting the market prices. Their costs are minimal: warehousing and inventory expenses are outsourced to local stores, delivery costs are shifted to gig-economy workers, and transportation relies on the personal vehicles of the personal shoppers (Li, Chan and Levallet 2022). According to the Food Delivery Consultant (2024), the

personal shopper or driver is the platform's largest recurring expense, receiving approximately €3 in compensation per order, based on an average order value of €30. No initial investment in physical assets is required, only in the online platform, which is the most current cost to maintain the proper functioning. However, despite these lower operational costs, revenue levels remain insufficient to offset them, resulting in low net margins for companies operating within this model. Apoorva Metha, founder of Instacart, highlighted that higher service fees were necessary to cover the significant costs of maintaining the technical infrastructures required for virtual transactions, which involve a workforce of engineers, designers, and technicians (Sorvino 2021).

5.1.5. Capabilities

Capabilities consist of both resources and activities. Every entrepreneur faces the challenge of building the right set of capabilities to take advantage of the available opportunities. This combination of resources and activities is designed to create and capture value, which is then applied to deliver an effective customer value proposition, target the appropriate market segments, support the revenue model, and enable the firm to grow profitably (Afuah 2014).

Interaction of Resources and Activities

Considering the specific context of grocery delivery, and within the companies adopting a hybrid BM, the interaction between resources and activities assumes relevance in four main areas: Technology, Data and Analytics, Logistics and Brand and Customer Relationship.

i. Technology

Technology is a crucial asset for OFD companies. The need to stay competitive through technology is underscored by the industry's high rate of digitalization. The focus on technology arises from the need to efficiently handle high transaction volumes while meeting customer expectations for

convenience and reliability, through the platform (Dubosson-Torbay, Osterwalder, and Pigneur 2002). Technology enables platforms to offer a user-friendly experience, offering a wide product selection, convenient delivery options, and features such as real-time order tracking and integrated payment systems, greatly enhancing the user experience and broadening the service accessibility (Hübner, Kuhn and Wollenburg 2016). Hays, Keskinocak, and de López (2005) highlight that a key differentiator for each platform is the integration of e-commerce and logistics systems. For instance, Amazon in the UK utilizes AI and robotics to provide a smooth shopping experience, merging physical and online shopping into one cohesive platform. The partnership between the brick-and-mortar and the pure player can provide comprehensive service offerings, helping traditional retailers to stay updated with technological advancements and gain customer trust, while minimizing the need for large-scale infrastructure investments (Chambers 2018; Short et al. 2022). For instance, as mentioned earlier, Ocado has created a distinctive AI-driven technology alongside its proprietary software and hardware (Ocado Group n.d.a). The “Ocado Smart Platform” serves as a comprehensive e-commerce solution designed to enhance efficiency in fulfilment centres, ensuring the consistent delivery of fresh products to customers (Ocado Group n.d.a). It utilizes AI and automation to navigate complex supply chains, effectively managing large volumes and perishability. For example, “Ocado Intelligence Automation” incorporates robotics that proficiently handles stock management and retrieval from storage (Ocado Group n.d.a). Since 2013, Ocado has partnered with Morrisons in the UK, providing the technology to its partner, enabling Morrisons to leverage Ocado’s fulfilment center capabilities and increase order volumes (Wright 2024).

ii. Data & Analytics

Data is a powerful resource to be collected by platforms, to ensure the correct strategic decisions and to enhance the service offerings. With the help of predictive analytics and AI, companies can forecast future demand, optimize inventory levels, and improve delivery logistics (Manyika et al. 2011). Each company can rely on two fundamental types of data: customer data and operational data. According to Chintala, Liaukonytė and Yang (2023), customer data can be categorized into three main types. The transactional data, which includes historical purchases and frequency, across both online and offline stores. This type of data provides insights into what customers buy and how often they shop. Secondly, behavioral data, collected through online platforms and loyalty programs, reveal preferences, browsing patterns, and responses to marketing campaigns, offering a deeper understanding of customer engagement. Lastly, demographic and psychographic data provide valuable insights into customer lifestyles, needs, and motivations, helping businesses tailor their offerings to meet diverse expectations.

Operational Data provides real-time visibility into the efficiency and effectiveness of the entire supply chain (Liashenko and Yakymchuk 2023). It can consider the inventory data, consisting of real-time tracking of inventory levels across warehouses and physical stores, which is vital for effective stock management. Order flow data plays a crucial role in understanding customer behavior and preferences by analysing order volume, timing, and composition. This insight helps retailers understand demand patterns, optimize resource allocation, tailor the user interface and product selections, and improve the overall shopping experience (Pramudito et al. 2021). By leveraging the data from delivery performance, platforms can track delivery times and optimize routes, ensuring timely deliveries and managing customer expectations. Singh and Söderlund (2022) emphasize the consumer preference for home delivery, making efficient delivery

performance a key factor in customer satisfaction. Lastly, financial data, keeping track of costs related to picking, packing, delivery, and returns provides better control over operational expenses and supports profitability analysis. Liashenko and Yakymchuk (2023) consider the narrow profit margins as the major financial challenge in e-grocery due to high delivery and collection costs.

In the e-grocery business, data-driven decision-making represents a golden rule to create value.

Utilizing advanced analytics helps inform decisions regarding assortment, pricing, and promotions, which can boost sales and enhance profitability (Sawall et al. 2024). Additionally, a strategic decision support system that leverages financial and operational data facilitates informed decision-making, optimizing delivery processes and further improving profitability (Liashenko and Yakymchuk 2023).

iii. Logistics Network

A strong logistics network is an essential resource for grocery delivery services. However, various strategic challenges need to be addressed to ensure smooth operations. Efficient logistics not only reduce delivery times but also reduce operational costs and their environmental impact, which are becoming increasingly critical factors in customer decisions (Boyer and Hult 2005). All the activities from the pick-up to the last-mile delivery are part of the Order Fulfilment Process (OFP), which can be observed through the strategic planning framework adapted from Hübner et al. (2016). The OFP has two key phases: Back-End Fulfilment and Last-Mile Distribution. The framework in Figure 8 emphasizes that the strategic choices made in both phases directly impact the efficiency and profitability of the business.

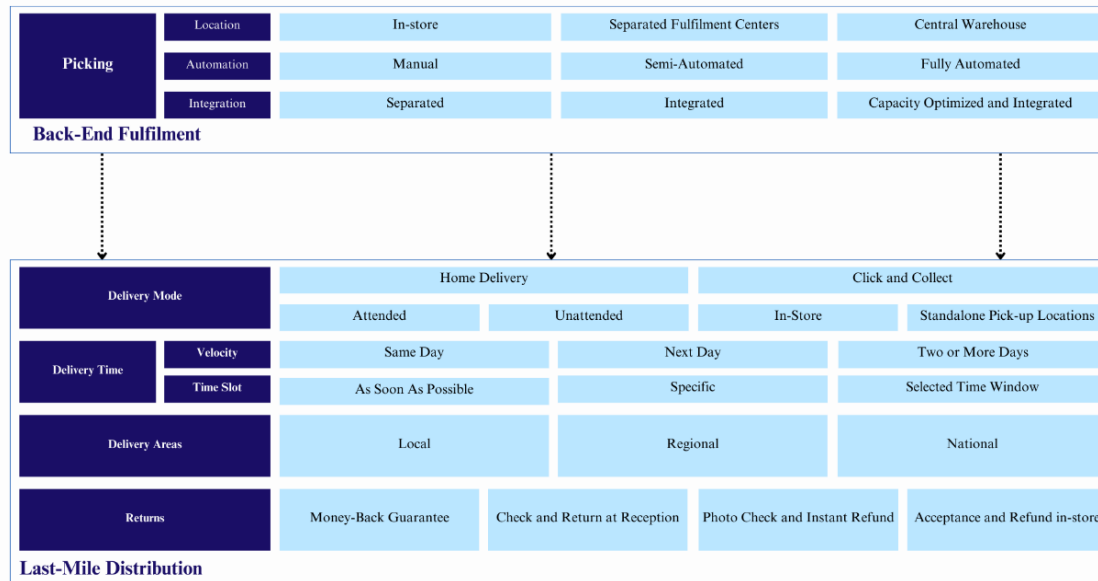


Figure 8- Order Fulfilment Process Strategic Framework (Adapted from Hübner, Kuhn, and Wollenburg 2016)

The primary challenge to which the OFP is highly relevant is the designing of the distribution network, which consists of the area each distribution center will serve and the designing infrastructures, such as stores, specialized fulfillment centers, central warehouses, or a combination of these, where online orders are fulfilled. The most straightforward and resource-efficient approach for a brick-and-mortar retailer to enter the online grocery market is by offering a click-and-collect service. In the hybrid model, order picking at the store can either be performed by the retailer's in-house staff or outsourced to couriers who are integrated into the platform's system. To capitalize on this approach, stores adjusted their layout to facilitate in-store pickup, designating dedicated pick-up areas and fully integrating store inventory with online platforms. Existing brick-and-mortar stores serve as valuable resources for fulfilling orders and enabling customer pick-ups. However, dedicated fulfillment centers are significantly more efficient and often become essential for companies that have been operating online grocery channels for a while. These centers allow for streamlined operations, enabling scalability and sustained growth within the industry (Hübner,

Kuhn, and Wollenburg 2016). Strategically locating the centers has a positive impact on transportation costs due to higher proximity to consumers' homes, with a consequent reduction in delivery time and increased customer satisfaction. Another way to leverage the warehouse network is by utilizing it for both online sales and traditional store distribution. This approach enhances efficiency through several benefits: increased opportunities for risk pooling, which lowers inventory levels and reduce stock-outs; shared resources, which cut overhead expenses; and decreased inbound transportation costs (Beamon 2001). A significant challenge of using a warehouse to manage both online and in-store orders lies in integrating the systems for handling, inventory, and storage (Hays, Keskinocak, and de López 2005). Regarding Last-Mile Distribution, the first condition to manage this phase efficiently is to optimize delivery routes and manage time windows. High demand for specific time frames, travel uncertainties due to traffic, and tight schedules further complicate the process (Hays, Keskinocak, and de López 2005). Platforms operate proprietary software that allows freelancers to register as couriers. As customers place orders, the system automatically dispatches them to available couriers, who can then choose to accept or decline the assignment (Country Manager of Mercado 2024). With this system, the platform automatically assigns couriers to the orders. However, platforms possess a lack of control over them, which might create schedule lapses.

6.3. DVF Framework

To give a more objective evaluation of the recommendations, the Design Thinking (DVF) framework is going to be used. The DVF framework is used to evaluate solutions by analyzing whether they are desirable by the customers, viable with regards to returns and long-term potential as well as feasible, i.e., whether they can be implemented leveraging the existing capabilities (Alejo 2023; Orton 2017). Desirability analyzes the main pain points and needs of the customers and evaluates whether the proposed solution will be in line with those needs. Viability assesses the current and long-term profitability aspect of the new venture as well as the sustainability impacts. Feasibility analyzes whether the operational strengths can be utilized to implement the proposed solution. The less related the solution is to the company's core capabilities, the riskier and less feasible it will be (Orton 2017). Lastly, each of the 3 aspects is going to be analyzed on a Likert scale of 1 to 5, to provide an easier understanding of the assessment as detailed in Appendix 8 (SurveyKing n.d.). Table 3 showcases a summary of the scores concerning the three aspects of each recommendation.

Number	Recommendation	Desirability	Viability	Feasibility	Score
1	<i>Personalize the In-app Experience</i>	5	4	4	13
2	<i>Seamless Omnichannel Experience</i>	5	5	4	14
3	<i>Streamline Returns and Refunds</i>	5	4	4	13
4	<i>Implement Temperature-controlled Containers and Pickup Points</i>	5	4	4	13
5	<i>Implement Automation in Operations</i>	4	4	4	12
6	<i>Improve Dynamic Pricing</i>	5	5	4	14

Table 2 - Scores Attributed to Recommendations (Authors' illustration)

Action 1: Personalize the In-app Experience

The first action addresses the lack of personalization and an engaging experience that many customers often refer to as a big drawback in OGD according to the literature about the topic and the primary data. This solution can significantly enhance the CVP and create a distinctive shopping experience. It appears that consumers are indeed looking for more personalization and improved

shopping experience and it aligns with current trends of convenience, personalization, and social interactions among customers (Head of South of Portugal at Glovo 2024; Purta et al. n.d.). Hence the desirability of this action is evident.

For analyzing the viability of this suggestion, there is a need to look at long-term impact and value chain implications (Tardi 2024). This recommendation is going to be beneficial, as the demand for personalization is going to remain relevant. It is a very established trend, as previously mentioned (Haan 2024). This means that these features can potentially allow companies to increase customer satisfaction and loyalty in the long run. It helps enhance the customer experience and improve the value proposition, which can indirectly improve sales by increasing market share and customer loyalty (Expert Panel 2023). Since it also requires some upfront costs, a more detailed profitability overview metric such as return on investment can be used (Beattie 2024). Nonetheless, it is a recommendation that will not only impact the short-term performance but is also likely to be a significant value-adding feature in the long term as well.

The recommendations leverage technology through AI and machine learning for advanced personalization, requiring platforms to implement real-time data analysis and pattern identification. Technologies such as Apache Kafka can process and deliver data in real-time, integrating seamlessly into existing databases to handle inputs from multiple sources such as mobile apps and GPS tracking (Villalba 2024; Apache Kafka 2023). Additionally, tools such as Microsoft Power BI utilize machine learning to analyze customer behavior, enhancing the ability to offer personalized product suggestions and automated reordering (Microsoft Learn Language 2024). Integrating a Chatbot or Voice Assistant allows customers to interact directly with the platform through speech or text, facilitating tailored suggestions and automated addition of items to their shopping cart. This not only caters to specific customer needs but also streamlines the shopping

process, reducing search times and increasing efficiency. According to the Strategic and Operations Manager of Bolt (2024), there is significant potential for app development to help users efficiently navigate the extensive choices available in European markets. Chatbots significantly enhance the online grocery shopping experience by offering functionality that includes locating specific products, suggesting alternatives when items are unavailable, and providing customized recipe ideas, thus saving time and offering personalized recommendations (Wamba et al 2023 cited by Chakraborty et al. 2024). Digital voice assistants have also transformed shopping with advanced speech recognition that captures and processes user inputs effectively (Aw et al. 2022). Consumer acceptance of these assistants has risen, indicating potential benefits for businesses, especially those operating in hybrid models (PwC study, 2018). These technologies not only meet functional needs but also add relational value, enhancing customer satisfaction and trust in AI solutions (Vlai et al. 2021 cited by Aw et al. 2022). A study by OC&C Strategy Consultants revealed that voice shopping in the UK generated approximately US\$5 billion in 2022, underscoring the impact of voice-assisted devices as a transformative force in retail (OC&C Strategy Consultants). Uber Eats in the US exemplifies this trend, having integrated an AI assistant powered by the Uber Large Language Model and built using Google PaLM. This tool helps customers find new meal ideas, complete tasks, and discover deals by analyzing the merchant catalog and utilizing search engine technology. Uber also collects customer feedback to continuously refine the assistant's capabilities (Uber n.d.c). Individuals with vision impairments often face challenges when shopping both in-store and online. Voice assistants offer a tailored solution that enhances accessibility, engagement, and autonomy for these shoppers (Villegas-Ch, Amores-Falconi, and Coronel-Silva 2023). These tools are particularly beneficial on platforms adopting a hybrid model, as they can serve a broader audience. Digital voice assistants provide detailed product descriptions, pricing, personalized

recommendations based on past purchases, and streamline the checkout process, improving inclusivity and user-friendliness for customers with vision problems (Villegas-Ch, Amores-Falconi, and Coronel-Silva 2023). However, companies will encounter some challenges in integrating advanced intelligent solutions into the platforms. Managing and processing the vast amounts of data generated from customers' previous purchases and interactions necessitate scalable infrastructure and advanced computing techniques to ensure timely and efficient analysis (Thippanna, Albert, and Ramachandra 2023). This process also requires skilled professionals with expertise in the field. To provide customers with accurate and personalized suggestions, AI models must be trained to process data in real-time, a task that is both computationally intense and time-consuming. Moreover, platforms must prioritize data privacy and security, adhering strictly to the regulatory requirements and ethical guidelines. Implementing such technologies demands substantial investments in infrastructure and computational resources. Therefore, companies must carefully evaluate the associated costs and weigh them against the potential benefits to determine the feasibility and value of adoption (Thippanna, Albert, and Ramachandra 2023).

Action 2 – Seamless Omnichannel Experience

This recommendation is also highly desirable. Omnichannel has been a significant trend and utilizing it to its maximum advantage is key. By improving the omnichannel experience the companies can further increase the convenience and personalization options of online and in-store shopping (Briedis et al. 2021). Implementing these features will boost customer satisfaction and loyalty, likely leading to higher sales through increased order frequency and larger average purchases. Consequently, these enhancements can help companies, particularly larger chains, sustain long-term growth and enhance their brand image and market position (Briedis et al. 2021).

These QR codes would be managed through backend systems, linking the scanned code to product barcodes, promotions, and additional details. Platforms and physical stores can collaborate with GS1, a non-profit organization specializing in digital link technology, which provides QR codes compatible with barcode scanners and smartphones (GS1 2024). GS1 (2024) describes this technology as a “true revolution for supply chain management and marketing.” The QR code will contain information about the barcode, thus prompting platforms to integrate QR scanning libraries into the app (Caine and Koetter 2018). Implementing this tech-based strategy comes with specific risks and challenges that require careful management for a successful outcome. Integrating QR scanning libraries into existing systems can present compatibility issues, necessitating a robust technical setup. Additionally, the QR codes, linked to customers’ accounts and sensitive data, pose significant data security risks, demanding stringent security measures to comply with data protection laws. A major challenge is going to be convincing both less tech-savvy customers and those who are reluctant to share their data to adopt this new technology, potentially slowing widespread acceptance. Moreover, the strategy's success relies on the reliability of QR codes themselves. A poor scanning experience for the customers could lead to a negative response to this innovation, highlighting the need for precise quality control. A further risk factor is a reliance on external entities, given the importance of partnerships such as the one mentioned above with GS1 (Cocco and Demoulin 2022).

Action 3 - Streamline Returns and Refunds

The conducted focus group highlighted that complex refund processes are a significant drawback when purchasing online. The data suggests that companies using this model often have complex and inefficient return and refund processes, which can lead to customer dissatisfaction. Simplifying these processes could greatly enhance convenience and encourage more customers to shop online.

This may prove to be a strategic move in the long run since more convenient and streamlined returns and refunds will increase customer satisfaction and retention, as was highlighted in our research. It may lead to having a competitive edge over companies that have inefficient processes in place, while also increasing brand recognition and loyalty. At the same time, implementing an automated process may require significant process changes and an initial investment.

For an efficient refund process, platforms should integrate a robust issue reporting system in their app, focusing on common problems including inaccurate delivery times, incorrect product selection, and defective items. This system should compile past issues and feedback to fuel an algorithm that determines eligibility for automatic refunds based on photo proof and set criteria (Wagner, Pinto, and Amorim 2020). In complex cases, a dedicated team should manually review the issue. Additionally, using data analytics to monitor product margins and return rates can help refine policies. However, automation risks include potential fraud, as seen with Amazon's multimillion-dollar losses (Palmer 2024). To mitigate fraud, platforms could track frequent refund requests, require photo evidence under certain conditions, and rate couriers based on their performance in handling issues (Uber 2024). Real-time fraud detection using AI and machine learning could also be integrated, though this poses challenges with legacy systems and requires seamless API integration (Wheeler 2024). Scalability is essential for managing large data volumes and ensuring the performance of tech platforms. Protecting against cyber threats is crucial, necessitating strong encryption and data anonymization (Wheeler 2024). Finally, while optimal refund policies can control operational costs, offering only partial refunds may impact customer satisfaction and brand perception negatively (Li, Li, and Gharehgozli 2022).

Action 4 – Implement Temperature-controlled Containers and Pickup Points

Primary data pointed out that home delivery still has significant flaws in the eyes of consumers. Delays and inefficiencies in delivery also impact the choice to purchase groceries online. The temperature and climate-controlled containers could help to solve some of these problems, making the process easier and more convenient. It can help to make the delivery less unpredictable for the customers. Home delivery is the most expensive method and click-and-collect options are preferred (Tveraabak 2022). Having a convenient network of pickup points will have a positive impact in the long run leading to sustainable e-commerce operations. At the same time, the possibility of delivering the items unattended may also be a great additional feature for home deliveries. It will lead to higher customer satisfaction and an increased usage rate leading to increased revenue (Ladd 2020). They also have great potential from the sustainability point of view, further strengthening the case for long-term viability (Neerman 2022). Additionally, it will require a thorough analysis and finding the right partners, with potential upfront costs regarding real estate which could prove to be more challenging. To implement temperature and climate-controlled delivery containers, companies would need to expand their supply chain, potentially partnering with specialized providers or considering in-house production to handle logistics (XPO 2022). These containers would require integrated technology for GPS tracking and temperature monitoring to ensure product integrity (Bai et al. 2023). Security measures, such as security codes, must be in place to prevent unauthorized access. A pilot program could test the system's effectiveness and gather customer feedback (Wood, 2022), and a marketing campaign would educate consumers about this new delivery method (Smallwood, 2019). For container returns, solutions including designated drop-off points, in-store returns, or collection during subsequent deliveries could be explored, possibly supported by a deposit fee that is reimbursed upon return (Dublino 2024). This delivery

method introduces additional considerations such as ensuring data security, especially if biometric data is used, in compliance with GDPR and other regulations (European Commission n.d.). Food safety is another critical aspect, requiring adherence to regulations and effective monitoring of conditions, including temperature and humidity through IoT and sensor technology (Bai et al. 2023; European Union, n.d.a.). Dedicated pickup points could be established through rental or local partnerships, optimizing for high-density areas with easy access for cyclists and pedestrians (Carrefour 2021; Neerman 2022). These points must ensure secure order collection, potentially using biometric verification or security codes. The financial implications of acquiring real estate for these points necessitate a thorough cost-benefit analysis. Operations would need to adapt for efficient delivery, and customer education on the new pickup method is crucial (Twin 2024).

Action 5 – Implement Automation in Operations

This is a highly desirable solution for customers, and companies have been trying to automate their processes for years. Customers want convenience, speed, and accuracy. All of this is provided by effectively implementing automation (Eley and McMorro 2020). This would likely increase customer satisfaction. However, as previously mentioned, some of the options could lead to lower product range, which could be a downside (Chandra et al. 2022). Automation has been a relevant topic, especially in e-commerce, over the last decades. It may be able to significantly reduce the costs with personnel as well as faster and more efficient deliveries and grocery picking, it can potentially increase the low margins in the long term. The downside is that it is highly complex technologically and may require significant capital expenditures (Eley and McMorro 2020). A careful analysis needs to be performed to understand which degree of automation the companies need and in which geographic markets it would make more sense. When implementing automation, a comprehensive strategic analysis is essential to assess business needs such as geographic location,

product range, volume, speed requirements, and target audience to select the most suitable solution. Utilizing existing in-store warehouses or the company's current facilities can be less complex than third-party solutions, which may be more appropriate for advanced automation needs if in-house capabilities fall short (Head of South in Portugal at Glovo 2024; Chandra et al. 2022). Large-scale automation might be efficiently addressed through third-party providers such as Ocado, which licenses its technology and has completed multiple implementations (Eley and McMorrow, 2020). An initial pilot program can be beneficial in testing these technologies and refining processes (Wood 2022). Implementing complex automation systems will involve high upfront costs and require significant workforce training, leading to additional financial investment. It's also important to consider the potential displacement of jobs, necessitating careful analysis and communication during the transition.

Action 6 – Improve Dynamic Pricing

Consumers may not directly seek a solution such as dynamic pricing, but the price is one of the major factors in e-grocery shopping (Purta et al. n.d.). According to research findings, consumers would buy more if they had no delivery fees or if those were reduced. Loyal consumers will benefit from better delivery fees, and customers seeking value-added services will also be targeted accordingly. Tailored promotions according to the customer segment are also highly desirable as they would offer a more personalized experience and would increase grocery delivery usage.

The current subscription models are mostly inefficient. The proposed changes to the loyalty programs are a great alternative to reducing delivery costs and improving efficiency. Tailoring the delivery fees based on customer profile and usage frequency may further boost this proposition (Wagner, Pinto and Amorim 2020). It will likely lead to a more personalized offer, increased customer satisfaction and loyalty, and boost online grocery sales. The suggested changes to

leverage the items nearing the optimal consumption level make this a viable long-term solution to improve the environmental impact as well. To implement dynamic pricing effectively, platforms should utilize their data analysis and pattern recognition technologies to tailor subscription offerings and delivery fees based on customer profiles, which could include factors such as basket size and purchase frequency (Wagner, Pinto, and Amorim 2020). By analyzing real-time data, platforms can segment customers by price sensitivity, activity, inventory levels, competitor pricing, and time-based willingness to pay (Koch and Klein 2020). Additionally, platforms could employ dynamic pricing algorithms for perishables by partnering with technology providers such as Wasteless, which uses QR codes for real-time inventory tracking and adjusts prices based on expiration dates, demand, and competitor pricing (FT Strategies 2023; Kumar et al. 2021). Dynamic pricing is permissible under EU consumer law if platforms disclose that prices are based on automated decision-making, in compliance with the Omnibus Directive and Directive (EU) 2019/2161. Transparency about how customer data influences pricing is essential (European Union n.d.b.). However, adopting dynamic pricing carries risks, such as potential price discrimination and market impacts if competitors adjust their prices simultaneously (Mackay and Weinstein 2022). The controversy around the Wish platform demonstrates the pitfalls of undisclosed personalized pricing – which was prohibited of applying dynamic pricing in Europe (Heidary 2022). To avoid legal and ethical issues, platforms must comply with GDPR, ensure algorithmic fairness, maintain transparency, and define clear policies for the use of data in pricing decisions (Siau and Wang 2020).

6.4. Impact on Current Business Model

Based on the provided recommendations, a potential future BM is now going to be outlined. Concerning the value proposition of the Hybrid Model, evaluated through the DVF Framework, all proposed recommendations are assessed as highly desirable by customers, except for Automation with a score of 4. The enhancement of personalization will enable customers to perceive the platform as more intuitive and aligned with their specific needs, fostering trust and loyalty among existing users. Additionally, the development of a seamless omnichannel experience will expand the service's accessibility to a wider audience, making the platform more appealing across different customer groups. The simplification of refunds and returns will enhance customer confidence when purchasing groceries, thereby increasing their willingness to engage with and rely on the platform. Furthermore, innovations in logistics and delivery will provide greater flexibility and improve the overall customer experience, ensuring timely service without delays. The implementation of dynamic pricing strategies and value-added services, such as free delivery and promotional offers, will further incentivize customers to place orders more frequently, fostering long-term loyalty and engagement. These recommendations will also expand the range of customer segments the BM can serve. Quality-conscious customers, who prioritize the products they acquire, will find confidence in the 360° product view and real-time personal shopper interaction, reinforcing their trust in the platform. Younger generations, attracted to social media interactions, will be targeted through the integration of social features that align with their digital habits. Older customers, who often prefer in-store shopping, will find the option to scan products and schedule a delivery at a convenient time a practical bridge to online shopping, thereby broadening their adoption of the platform. Price-sensitive customers will benefit from the platform's dynamic pricing approach, perceiving it as more cost-effective and thus encouraging frequent purchases.

Collectively, these advancements aim to position the business as inclusive, adaptive, and capable of meeting the diverse needs of its customer base while driving growth and loyalty. The proposed recommendations will significantly influence the revenue model by diversifying revenue streams, enhancing customer retention, and optimizing pricing strategies. Personalization efforts, such as recommending products aligned with customer preferences, are expected to lead to larger basket sizes, as customers purchase more items online rather than offline. Additionally, enabling customers to visualize products more comprehensively will encourage increased online transactions. Integrating social media-style features into the platform will drive revenue growth by encouraging purchases influenced by recommendations from individual customers to follow on the platform. Collaborations with partner stores to integrate QR code features will target customers hesitant about online shopping, converting them to the hybrid BM. Similarly, introducing flexible pickup points will attract revenue from additional customer segments. Dynamic pricing mechanisms will adjust delivery fees based on demand, thereby optimizing revenue generation for the platform. Furthermore, segment-specific pricing strategies will maximize customer surplus and overall profitability. The implementation of these recommendations will also reshape the cost structure of the Hybrid BM. Initially, the development of necessary technologies will require substantial investment. For instance, algorithms designed for personalization will need to analyze purchasing patterns and manage data effectively. Other technological advancements, such as social media-style features, 360° product viewing, real-time shopper interaction, automated refund systems, dynamic pricing, and subscription models, will demand significant upfront expenditures. While these innovations may increase initial and maintenance costs, they will ultimately reduce inefficiencies and enhance margins. From a logistical and operational perspective, investments in infrastructure such as temperature-controlled containers and delivery lockers will make companies

incur high initial costs. However, these investments will reduce long-term delivery fees associated with personal shoppers, enhancing overall platform profitability. The technological, operational, and human capabilities of the BM will also experience substantial improvements. The company will need to deepen its expertise in AI and data storage to implement the proposed recommendations effectively. Advanced technological proficiency will become a core competency, necessitating comprehensive staff training to ensure the platform's operation. As delivery operations expand, the development of more efficient logistics systems will be essential, to improve inventory management and stock levels accurately. Operational excellence will be essential to deliver a great customer experience.

7. Limitations & Extensions

The research conducted and the recommendations suggested in this paper were prone to limitations. Firstly, it was limited by resource and time constraints. Due to these challenges, the number of research techniques used, and the amount of data gathered, was limited. Additional resources and time could have allowed for a more in-depth analysis of specific aspects of the BM studied and additional insights. Furthermore, the industry presents a complex pattern of BM and interplay between the different parties. Companies may present characteristics that allow them to be considered in several BMs simultaneously, for instance, Glovo operates its own dark stores, and serves as a platform for meal delivery as well as a platform for grocery delivery. This is also a dynamic industry which is deeply affected by technological advancements. Characterized by a rapid change, it may quickly make our recommendations obsolete. To attenuate this problem a Scenario Planning framework was used. The geographical scope of the paper is also limited since only the European market was analyzed. This market has some distinct players and has a dynamic

picture in terms of customer preferences as well as a strong regulatory landscape. However, there are markets that are often considered more advanced when it comes to OGD, such as the US market or China.

To extend this paper and provide additional insights on this industry several possibilities exist. Firstly, applying this analysis to other geographies could provide additional understanding of consumer behavior and a better understanding of future trends. Regulatory challenges, especially in the European market, are also a major force affecting this industry. Potential regulations on the status of gig workers could have profound impacts on many of the BMs studied. A more in-depth analysis of the current and potential regulations that may affect the European market could also prove insightful. Regulations on sustainability topics, as well as a broader analysis of the environmental impact of each BM, could also provide a better understanding of the long-term viability of each model. Lastly, an in-depth analysis of emerging technologies could help to further create a picture of this industry's outlook.

8. Conclusion

The OFD sector has rapidly evolved due to the global increase in digitalization and smartphone usage. In Europe, this transition has been more gradual, yet it has seen substantial advancements over the last decade. As a result, the industry features a variety of BMs, ranging from mature BMs as aggregators and direct-to-consumer to newer concepts such as quick commerce (Q-commerce). This sector has diversified significantly, with grocery delivery models emerging and showing promising growth, surpassing that of ready-to-eat meals. Given the projected growth in this area, together with experts' interest and the scarcity of research, the hybrid delivery model was selected for in-depth analysis based on its blend of brick-and-mortar and pure-play partnerships. Experts

interviewed expressed concerns and curiosity regarding the future of this BM. It offers multiple advantages through its unique partnership structure, which leads to cost reduction and shared risks while providing a robust customer value proposition that builds trust among European consumers. Nevertheless, it faces fierce competition, marked by price wars and struggles for cost leadership, compounded by narrow profit margins. Experts have expressed concerns about macroeconomic factors, including gig worker regulations, rapid technological advancements, and shifting behaviors among the emerging Generation Z. Additionally, customer personalization has emerged as a persistent theme in the interviews in the context of high inflation and slow economic growth. Furthermore, the vulnerabilities related to supply chain disruption and insufficient communication concerning inventory management, due to its partnership nature, present a significant challenge in meeting customer needs. To formulate reliable recommendations, understanding customer needs and desires was essential. Insights gathered from surveys, interviews, and a focus group enabled the development of suggestions that would meet consumer demands while addressing the issues highlighted by experts. To mitigate the challenges posed by slim profit margins, the recommendations focused on strategies to enhance and maximize profits by increasing purchase frequency, basket size, and fostering customer retention. Considering these insights, six main recommendations were drawn up, exploiting BM's main advantages of market reach and awareness as well as assessing vulnerabilities and external factors. The recommendations focus on two primary areas for profit maximization: improving customer experience and enhancing logistics and operations. They include: (1) Personalize the in-app experience; (2) Ensure a seamless shopping experience; (3) Streamline refunds and returns; (4) Implement temperature-controlled containers and pick-up points; (5) Implement Automation in Operations; (6) Improve dynamic pricing strategies. These recommendations address the main pain points identified by customers in their

in-app and shopping experiences, targeting the needs of European consumers while recognizing the prevalence of both online and offline shopping. Furthermore, they enhance the value proposition by leveraging convenience and technology. By increasing customer satisfaction and meeting current needs, these strategies are expected to foster customer loyalty and trust, ultimately improving long-term profits. According to experts, platforms are not only focused on their success but also the success of their partners. These recommendations enable the creation of an enhanced experience for both and leveraging network effects. After evaluating the recommendations based on desirability, viability, and feasibility, the most urgent ones to implement were identified based on the highest scores: (2) Ensure a seamless shopping experience and (6) Improve dynamic pricing strategies. The other recommendations also hold significant importance and urgency as the scores do not differ markedly. These recommendations empower hybrid platforms to increase the average ticket price and encourage customer retention, which will establish a superior BM for hybrid delivery with a strong emphasis on personalized service and an easy-to-manage platform, enabling the diversification of revenue streams and enhancing its offerings by targeting and segmenting different types of products. The research goal of this work was to propose changes to the Hybrid BM. The context and environment were carefully evaluated and studied, resulting in accurate and applicable recommendations.

In conclusion, market and macro trends are profoundly shaping changes in the OFD industry and its BMs. There is a strong need to develop personalized experiences and offer further customization and convenience to European consumers to formulate a differentiating proposition and have a chance to succeed in this competitive market landscape.

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Appendix

Appendix 1: List of customer interviews, surveys and the focus group

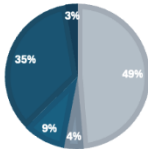
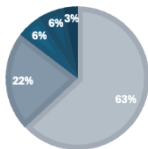
Interview Type	Objective	Age Group	Answers	Insights	Date
Customer Interviews	Understand the needs, concerns, perceptions, and preferences of who do not regularly use e-grocery services.	20-30	20	Identify barriers to adoption, uncover expectations and pain points, explore potential motivators, and analyse how non-users compare their in-store experiences with their perceptions of online grocery shopping.	01/10/2024 - 30/11/2024
Survey_1	Analyse insights from customers who have at least once used online food delivery services.		146	Information regarding purchase behavior, routines, pain points, most used platforms, and open ended questions for recommendations.	04/10/2024
Survey_2	Analyse insights from customer who use or do not use online grocery delivery services.		113	For users, understand motivations to use this service, pain points and purchase patterns. For non users, understand motives to not use and which factors would motivate them to use. For both, it was tested the adoption of potential recommendations and identification of areas of improvement.	18/10/2024
Focus Group	Encourage e-grocer customers to share their personal and professional backgrounds, fostering an informal atmosphere essential for full expression of opinions on areas of improvement.	22-27	5	Deepen the understanding of their preferences for online grocery shopping and specific pain points, drawing valuable information for strategic recommendations.	21/11/2024

Table 3 - List of customer interviews, surveys and the focus group (Authors' illustration)

Appendix 2: List of experts interviewed

Expert	Interviewee's Position	Company	Company Description	Gender	Date	Format
1	Head of South of Portugal	Glovo	Spanish multi-vertical platform established in 2014, now operating in 25 countries worldwide	Male	10/10/2024	Online
2	Country Manager in Portugal	Mercadão	On-demand marketplace for retailers, specializing in delivering large-size baskets for Pingo Doce	Male	10/10/2024	Online
3	Strategy and Operations Manager	Bolt	Technology company which provides mobility and food delivery services, present in 45 countries worldwide	Male	16/10/2024	Online
4	Head of E-Commerce	Continente Online	Renowned portuguese brick-and-mortar company	Male	04/11/2024	Online
5	Food Delivery Consultant	SAVOUR	Company which helps restaurants and supermarkets fully outsource delivery platform management	Female	22/11/2024	Online
6	Business Developer	HelloFresh	German company that delivers meal kits with fresh and high quality ingredients	Female	28/11/2024	Online

Table 4 - List of experts interviewed (Authors' illustration)

Appendix 8: Summary of the DVF Framework Applied to Recommendations

ACTION	DESIRABILITY	VIABILITY	FEASIBILITY
ACTION 1: PERSONALIZING IN-APP EXPERIENCE	5	4	4
	Highly desirable since personalized and engaging shopping experience is highly sought after	Despite the initial investment, it is expected to generate significant benefits in the long-term proving to be a viable option	The technological requirements including AI and machine learning can be complex but with the increasing availability and developments in the area it is a worthwhile investment
ACTION 2 - SEAMLESS OMNICHANNEL EXPERIENCE	5	5	4
	Highly desirable due to significant demand for a seamless omnichannel experience aligning with the trends for convenience and personalization	Highly viable providing a boost in customer satisfaction, loyalty and increased sales	QR codes technology despite having benefits requires careful analysing of the technical challenges as well as data security and customer adoption
ACTION 3 - STREAMLINE RETURNS AND REFUNDS	5	4	4
	Highly desirable since a complex refund process may curb online shopping and provide an unpleasant experience. The recommended process will boost customer	It is viable since it can increase customer satisfaction and loyalty, but at the same time may require significant investment and process changes	Implementing a robust issue report system may be feasible, but it can also present issues when it comes to scalability, data security and fraud prevention

	satisfaction and willingness to shop		
ACTION 4 - TEMPERATURE AND CLIMATE-CONTROLLED CONTAINERS AND PICKUP POINTS	5	4	4
	Very desirable since it helps to alleviate current problems with the delivery enhancing convenience and customer satisfaction	It is a viable long-term solution due to the benefits in sustainability, customer satisfaction and cost reduction. But may require upfront investment and careful planning and partnership selection	It is a feasible solution but will require a significant investment in terms of logistics and technology. Supply chain management, data privacy, food safety and efficiency will need to be considered.
ACTION 5 - AUTOMATION	4	4	4
	Desirable since a significant boost in efficiency can create a better customer experience but certain modalities may compromise on product range	Viable action, but despite allowing for a significant cost reduction and efficiency boost, it requires a significant level of investment	Feasible but involves a through strategic planning to select the right options and partners. The technology may also prove to be quite complex
ACTION 6 - IMPROVE DYNAMIC PRICING	5	5	4

Highly desirable. It can boost customer satisfaction and loyalty, while also improving the environmental impact	Highly viable leading to improved customer satisfaction, reduced costs and sales increase	Feasible solution but requires a thorough analysis of the legal framework and ethical considerations. Transparency and fair treatment become paramount
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Table 5 - Summary of the DVF Framework Applied to Recommendations (Authors' illustration)