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# STRATEGIC BUSINESS MODELS IN THE ONLINE FOOD DELIVERY INDUSTRY –

# INTRODUCING THE "ORDER – COOK – DELIVERY" BUSINESS MODEL

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# Abstract

**Strategic business models in the online food delivery industry – Introducing the "Order – Cook – Delivery" business model**

This work aims to analyze business models (BM) in the online food delivery (OFD) industry, specifically tailored to ready-to-eat food, and give clear recommendations for improvement. It introduces the business model innovation of the "order – cook – delivery" model. A detailed explanation of the business model and differences to the existing "order & delivery" and "fully integrated" business models will be highlighted. Furthermore, this thesis highlights advantages of the business model innovation and proposes a profound implementation to maximize benefits from the innovation. In addition, three strategic adjustments support this project to improve BM in the OFD industry.

# Keywords

Strategy, Business Model Innovation, Business Model, Online Food Delivery Platforms (OFDP), Multi-sided Platform, Network Effects, Value Chain, Ghost Kitchen, Virtual Brands,

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# List of abbreviations

**B**

BMC – Business Model Canvas

**C**

CAC – Customer Acquisition Costs

CRM – Customer Relationship Management

**O**

OD – Order & Delivery

OCD – Order & Cook & Delivery

OFD – Online Food Delivery

**P**

P2C – Platform to Consumer

**R**

R2C – Restaurant to Consumer

R&D – Research and Development

**S**

SEO – Search Engine Optimization

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# 1. Introduction

***"To eat is a necessity, but to eat intelligently is an art. "***

*(Rochefoucauld 1662)*

Although the quote is more than 350 years old, it still applies, even in more ways than ever before. When Rochefoucauld made this statement, he mainly referred to the nutrition and taste of food. But nowadays, consumers´ demands on food have enormously increased. Besides the taste and nutrition, consumers expect their food to be easily accessible, fast, and preferably available 24/7 (Jekanowski 2001). A challenge that is currently given a lot of relevance, not least because of the Covid-19 pandemic.

Another topic nobody can get around these days is digitalization. Hardly any innovation has spread and developed as quickly as digital technologies (United Nations n.d.). Digitalization is changing almost everything, from society to country, and companies and industries are changing. In just 2021, US$1.5 trillion was spent worldwide on digital transformation technology and services.[1] In 2025, this number is expected to rise to $2.8 trillion. (Statista 2021b) By comparison, automotive manufacturers made about $800 billion in revenue in the first half of this year. Projected, that is $1.6 trillion in one year, which means that almost the same amount was spent on digital transformation this year as the carmakers made in revenue. (Statista 2021c)

The food industry is also strongly affected by this progressive development. The industry is becoming increasingly digital in various areas and should thus meet the customer needs mentioned above. One sector that is currently becoming very popular is food delivery. The industry experienced rapid growth during the previous years and is predicted to grow by an annual growth rate of 12,6% worldwide throughout the next five years (Statista 2021a).

[1] All currencies in this thesis are to be seen as US Dollar amounts as long as nothing else is mentioned.

A significant facilitator of this was the Covid-19 pandemic which forced many restaurants to close. This fact left food delivery the only option for customers to access prepared food. Even without this boost, the success lies mainly in the increasing ability of companies to satisfy people's needs and demands. Throughout the last 20 years, big players such as UberEats, JustEat, or Delivery Hero have disrupted the market and have gained substantial market share internationally. The key to their success is their innovative business models, which they have developed over the years and will continue to advance in the future.

That is where a big part of our motivation as students and authors of this paper lies. A dynamic industry where many companies with different business models enter the market is fascinating to analyze. The business models face many operational challenges, especially when managing the trade-off between fast expansion and short- to medium-term profitability. So, it is interesting to understand how these businesses work and how companies differentiate themselves. This sector is not just about food, but rather about services and technologies focused on the customer and designed to create real added value, making it even more attractive for us. Above all, it is also personal motivations that have led us to investigate this industry more closely. We are all driven by innovative ideas and an affinity for dynamic and digital business models. For us, it is interesting to see which business models are driving digitalization even further.

# 2. Methodology

This paper contains three major sections. The first section details the historical evolution of business models and the variety of existing business models today within the industry of food delivery. The second section is used to conduct an in-depth analysis of the "Order and Delivery" model and to identify strengths and weaknesses of the business model as well as opportunities and threats that result from the environment. Finally, in the third section, a new business model is introduced based on insights from the in-depth analysis of chapter **Error! Reference source not found.**. In addition to that, three strategic recommendations are given on how business models in the industry could be improved. This master thesis is a qualitative study analyzing platform operators in the food delivery industry using business model analysis. The paper was written using a plethora of academic literature and publications, analyst reports, podcasts, and news articles from renowned sources. Moreover, multiple industry experts from the most innovative food delivery companies were contacted, and eventually, one semi-guided expert interview was carried out with a manager of Austrian food delivery platform Mjam, a subsidiary of Delivery Hero. The transcript of this interview can be found in Appendix A. To prevent any bias in this work, information was collected from the viewpoint of different industry stakeholders. Furthermore, various sources were used to identify conflicting (and therefore potentially biased) rationales.

To perform a business model analysis, an answer is needed to define a business model. A brief literature review is conducted to derive a suitable framework for further analysis. There is no scientific consensus on what the definition of a business model is. However, numerous publications have been devoted to the subject within the last two decades. The authors of those papers have tried, to varying degrees, to strike a balance between the aim to come up with a definition that can describe businesses from as many different industries as possible while at

the same time avoiding a shallow, general description with no real value added. One possible definition is to view a business model as the "architecture of the product, service, and information flows, including a description of the various business actors and their roles, the potential benefits for the various business actors; a description of the sources of revenues" (Timmers 1998). Michael Porter criticized that: "The definition of a business model is murky at best. It often seems to refer to a loose conception of how a company does business and generates revenue. Yet, simply having a business model is an exceedingly low bar to set for building a company. Generating revenue is a far cry from creating economic value." (Porter 2001). These contributions illustrate that there are many vague definitions of a business model that do not qualify for structured analysis. However, there are alternatives. The renowned framework of the Business Model Canvas (BMC), established in 2010, will be used to analyze companies and categorize information for this analysis. Using the canvas, it is possible to investigate any company based on nine differentiated building blocks to get a holistic, in-depth view of the business model at hand: key partners, key activities, key resources, value propositions, customer relationships, channels, customer segments, cost structure and revenue streams. (Osterwalder and Pigneur 2010) With this framework, an in-depth analysis of a specific business model was conducted. Besides the business model canvas, other frameworks were used. A SWOT-analysis was conducted to identify the strengths and weaknesses of the OD model as well as opportunities and threats resulting from the business environment. Furthermore, the extended marketing mix was used to provide a structure for implementation questions that might come up when adopting the newly proposed business model. Finally, a NUF-analysis was used to rank the strategic recommendations given in section 5.3.

### 4.1.1. Key Resources

This element describes what primary resources are required to fulfill the value proposition. This also directly links with the key activities. Business models are usually based on several tangible and intangible resources, but also other segmentations like people, assets and finances are possible. Resources are an essential part of a company and are typically distinctive from competitors. (Belyh 2020) In the following, seven major key resources were defined which are meaningful for OD model platforms in the food delivery industry.

**Network Effects -** The first and probably most crucial key resource in the OD model is network effects. It means that the benefit of a good/service increases as the number of participants increases. Such effects occur in particular within platform models. One typical example is the ride-hailing business. (Stobierski 2020) But it also applies to food delivery, where the quality of food delivery services increases with the increasing number of participating restaurants, curriers, and users. If there are many restaurants on the platform, users have a greater selection, making the platform more attractive and more active users. More users, in turn, means that restaurants get more reach to potential customers and more restaurants come to the platform. The same applies to the drivers. More traffic on the platform means more orders and thus more salary and tips for the curriers. An increased number of drivers increases the speed of delivery, which increases customer value. Therefore, more customers come to the platform. As one can see, these cycles are a continuous process and important in the food delivery industry to gain a competitive advantage such as market share. Most OD model platforms try hard to get these network effects rolling by offering incentives to all participants. Of course, this costs a lot of money, as we will hear later. Therefore, this is an important resource for companies as they can reduce costs and increase market share. The following figure again illustrates the interaction of

the three tangible components that are crucial for the creation of intangible network effects in the OD model.

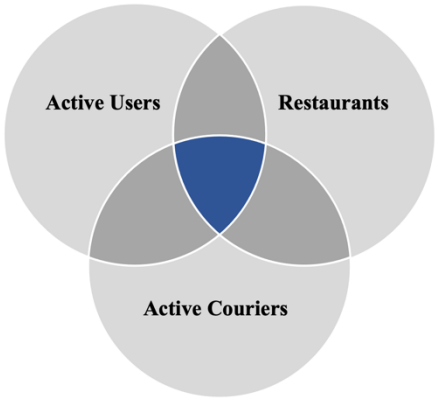



*Figure 1 - Stakeholders for Network Effects in OFD industry*

It can be deduced that restaurants, active curriers, and users also represent a key resource of a companies' business model, as they are the fundamental basis for network effects.

**Active Users and Couriers -** It should not be surprising that a properly running business requires customers who use the service provided. In the case of meal delivery, users are the ones who order meals via the platform and pay online. Without users, no revenue can be generated, and the participating restaurants do not derive any added value from participating in the platform - the platform cannot survive. It is vital to distinguish between simple users registered on the platform and active users. Active users use the app at regular intervals and thus deliver added value for network effects and revenues. That is why the topic of CRM is so important. The same applies to couriers. A minimum number of drivers is required to ensure fast meal delivery to the customer. Here again, the number of active drivers is the Key-Performance-Indicator.

**Contractual relationships to restaurants -** Last but not least, restaurants are part of the network and, therefore a key resource for the OD model and the overall OFD industry. With a low number of restaurants, users have less or even no choice in the food ordering process which leads to a lousy customer experience meaning not serving the users' needs. In favorable terms,

with a high number of restaurants, the value propositions can be delivered, resulting in a successful business with a competitive advantage. Besides that, also the quality and variety of restaurants are important. Cheap – expensive, classic – modern, different nationalities and locations are just a few examples of distinguishing restaurants and making the food delivery service more attractive to customers. Showcasing a suitable restaurant variety on the platform is extremely important.

**Digital Platform/App and IT-Infrastructure -** Moving on to a more technical resource at the heart of every food delivery service: the platform itself displayed on an app. It connects all parties involved (users, restaurants couriers) and is a decisive factor for customer satisfaction. As a result, it is crucial to implement features or any other differentiator to make it a real key resource. Remember, key resources make a company stand out from the competition.

IT infrastructure refers to the components needed to run and manage those platforms. Since this area is very complex, the IT structure will not be discussed in detail but briefly outlined the necessary components. These components include hardware, software, network components, operating systems, and data storage, all of which are used to deliver IT services and solutions. (Red Hat 2019) The data storage component simultaneously bridges the gap to another important resource, namely collecting and using data.

**Data Assets -** "Data is the new gold" - These days, this quote has become very popular, and most importantly, it has become true (Bhageshpur 2019). In a more and more digitized and connected world, the true champions are companies that collect data and use them to take advantage. Above all, the quality of the data plays a decisive role. The better the data, the better analysts can use it to make targeted recommendations for action. In the OD model, data can be collected along the customer journey, including the ordering and delivery process. Companies can identify pain points and act accordingly to improve the experience constantly. It is not easy

to collect high-quality data and use it properly. Therefore, data assets as a key resource can make a difference and give companies advantages in the market. (Close, et al. 2020)

**Brand Awareness and Reach -** Brand awareness provides information about how well known a brand is and significantly influences purchasing decisions, especially online. (Kopp 2021) There are many ways to increase brand awareness, all of which are aimed at strengthening consumer trust in the brand. Uber Eats, for example, has very high brand recognition in the OFD industry because Uber has already made a splash in the ride-hailing sector. (Landor 2019) The food delivery market is highly fragmented and characterized by intense competition due to the presence of established and new players. It remains to be seen whether this is a winner takes it all market, but in any case, due to the number of providers, it is essential to build a brand and get awareness to gain market share. (R. Waters 2019)

**Employees -** "Your Company Is Only As Extraordinary As Your People" (Walter 2013). Even though this quote sounds a bit cliché, it is true in many cases. The lack of staff in the current time means that companies have problems finding good employees. (Pham 2021) What helps here is the brand that was identified as a key resource in the previous paragraph. A company with a bad reputation does not attract the top people in the industry. (Walter 2013) Moreover, since the OD model is a highly platform and IT-driven business, the employees in this industry are among the most important companies' resources. Furthermore, the customer experience, including an excellent customer journey and user interface, is a key element of success; suitable employees are therefore essential. – software developers, marketing, and customer relations employees play the critical role in both cases.

### 4.1.2. Cost Structure

In the following, the cost structure of the OD model will be discussed. Cost structure describes all costs that occur through business operations. In general, employees' costs, expenses for

company infrastructure, the cost associated with company activities, and sourcing through key partners are included in this category. In the case of the OD model, three areas dominate the cost structure.

**IT Infrastructure -** It is the core of the entire business. The main product of the OD model is the platform that connects restaurants and customers. It is crucial that the technological functionality of the platform in terms of data transmission and security, payment conditions and processing, and actuality of information (e.g., opening hours of restaurants, menus, offer of the day, etc.) are accurate and work flawlessly. Therefore, significant investments in R&D (Research & Development) and engineering of the IT infrastructure are essential.

**Marketing -** the platform needs to generate traffic. To do so, companies operating within this business model face the chicken & egg dilemma (Caillaud 2003). The two-sided platform aims to connect customers and providers and takes the match-making role between them. The major challenge is that one side will not join without the other. Customers only profit from the platform if a base of restaurants offers their service and vice versa. This is especially challenging in the early stage of a venture. But when executed correctly, it will lead to network effects that help scale the business exponentially (Li 2010). To achieve this, extensive marketing budgets are necessary. The companies have to launch marketing campaigns targeting restaurants and marketing campaigns targeting customers. The big issue is that customer acquisition costs are horrendous. DoorDash for example spent $290 million in marketing expenses in Q4 of 2020 (DoorDash 2020). That makes up 33% of their total revenues within that period. In 2019, they even spent 101% of their total revenues on marketing, making the business unprofitable with one source of expenses only. The highest marketing expenses are discounts on food and free delivery services to attract customers from competing platforms. These costs can be allocated to the coster acquisition costs. Additionally, social media campaigns and SEO (Search Engine Optimization) advertising consume high budgets.

**Employees -** Employees` costs make up a significant part of the overall cost structure. These can be divided into three subgroups – engineering employees, management employees, and operational employees. Software engineering employees maintain and develop the platform, so one can argue that these fall under the cost point of IT infrastructure. Management employees include human resources, sales, finances, customer support, etc. A fundamental yet very costly group of employees are those who run the operations. These couriers transport the food from the restaurant to the customer in the minimal possible time. Within the OD model, players follow different approaches to hiring and paying their couriers. Uber Eats, for example, promotes their incentive of self-employed drivers that can earn money on the side based on a fixed commission plan per delivery/output. They follow this approach to avoid paying insurance and social security for couriers, which led to an international outcry in society about the social responsibility of large companies and certainly damaged UberEats' image (Guardian 2021). Ironically, the strategy backfired financially, as Uber and Uber Eats combined spent almost 36% of their total revenue on driver incentives and referrals in 2020 (Uber 2020). In opposition, Wolt hires drivers and pays them a fixed hourly salary with additional performance bonuses.

In addition to these expenses, all companies with an OD model face nominal costs such as legal fees, credit card fees, and office infrastructure costs.

### 4.1.3. Revenue Stream

In the Business Model Canvas, the Revenue Streams building block represents the sources of revenue that a company derives from each customer segment. (Osterwalder and Pigneur 2010) This specifies the revenue models a company uses to earn money. A key question to ask is how much customers are willing to pay for your product or service and its benefits. It is about finding a suitable pricing strategy. Often you can earn money from a value proposition in different

ways, for example, freemium, one-time payment, subscription, licenses, advertising. This paragraph will outline the other revenue stream possibilities in the OD model. The primary revenue streams come from restaurants and customers, as the table shows below.

| **Restaurants** | | | | **Customers** | | | |
|---|---|---|---|---|---|---|---|
| Commission Fee | | In-App Advertising Fee | | Delivery Fee | | Subscription Fee | Service Fee |
| Percentage on meal price | Fixed amount per order | Cost per Click | Fixed amount | Based on distance | Based on purchase value | | |

*Table 1 - Revenue Streams in the OD model*

**Restaurant Commission Fee -** this is probably the most common and obvious revenue stream in most platform businesses and established in the OD model. In this stream, the listed restaurants are paying a percentage of typically 15%-30% on the price of an ordered meal or paying a fixed amount per order to the platform company. (Ahuja, et al. 2021) These fees are either set for everyone or negotiated with each restaurant individually. Because of the high bargaining power by the platform provider, percentages are generally relatively high. Thus, some cities have already taken action and have implemented regulations. For example, the fee cap in Lisbon is set at 20% (Abel 2020).

UberEats has developed an exciting pricing model in this regard. They combine commission fees with the in-app advertising fee described in the next section. It starts from 15%, where restaurants don't have promotions included, and other benefits are missing. By paying 30%, restaurants have full promotion and other advantages. Uber calls those pricing models 1) Lite - Keep costs low, 2) Plus - Grow your sales, and 3) Premium - Maximize your sales which already indicates the overall advantage of the packages. A detailed overview can be seen in Appendix D. While the Lite version is designed to provide low-cost order and delivery support, the premium model should maximize sales for the restaurants via the platform. (Kelso 2021)

**In-App Advertising -** The second revenue stream generated by restaurants is an advertising model. This is a trendy way to monetize a platform business, also in other industries. Companies can promote themselves and their products within the app. Platforms can position brands and products based on data about customer preferences. Therefore, platforms charge restaurants a fee. A typical use case is that restaurants pay a premium to be advertised on the home feed or at the app's top. This catches the customer's attention directly when they open the app. In this way, the restaurant hopes to increase the user's likelihood of ordering from them. (Ahuja, et al. 2021)

In addition to the pricing model just mentioned, Uber Eats revenue will be generated on a **cost-per-click model,** which means, every time a customer clicks on the ad, Uber will charge the restaurant a certain fee. (Uber Eats n.d.) One can see a trend in the OFD revenue landscape. Companies increasingly focus on In-App marketing revenue streams. In addition to Uber Eats, DoorDash introduced its in-app marketing options. As of now (October 26, 2021), it is not known what share this revenue stream has or will have in total revenue. But it is clear that this will be a significant source of income for the OD model in the future. (Graham 2021)

**Customer Delivery Fee -** Looking at the customer's side, delivery fees are a prevalent source of revenue. Usually, it ranges from 1,70€ to 4,30€ per order and will be charged directly from the customer. (Ahuja, et al. 2021) It is the decision of the platform company which price and which measure to use. Usually, the fees depend on the distance of delivery or the total amount of the purchase. (J. Alvarez-Palau, et al. 2020) The graph below the subscription model section gives a good overview of the delivery fees of the most popular OD model Platforms in the US. (Note: As this is a highly dynamic market, values may vary over time)

**Subscription Model -** Besides these two options on setting the price for delivery fees, a new revenue stream has occurred over time. Following the business models of Netflix and the others, subscription models are included in the food delivery sector. In this case, platform companies

will charge a monthly subscription fee. Besides earning the fees, a significant benefit for businesses is better budgeting. In turn, subscription model users must pay a monthly amount and therefore access discounted food and free deliveries. This makes it easy to calculate how many orders a subscription is worthwhile from the user's point of view. In the case of Uber Eats, it's the Eats Pass, and for DoorDash, it's the DashPass. Both cost $9,99/month, giving the user access to the benefits just mentioned. According to the latest numbers, this subscription model is well established. At a second glance, however, it becomes clear that these models have been heavily promoted so far, and users often do not have to pay for them up to 6 months. So, it remains unsure whether users are willing to pay for this service after the free trial expires. (M. Waters 2021)

**Service Fee -** Besides the openly communicated delivery fee, some OD model platforms use service fees as second revenue stream. The company charges these fees for providing the service. In the USA, it varies a lot. While Seamless (owned by GrubHub) only charges 1,6%, Uber Eats is adding around 18,5% as a service fee which is relatively high compared to others. (Lichtenstein 2020) Possibly thereby, the inexpensive delivery fees balance out again. The graph below compares delivery fees and service fees from the platform provider.

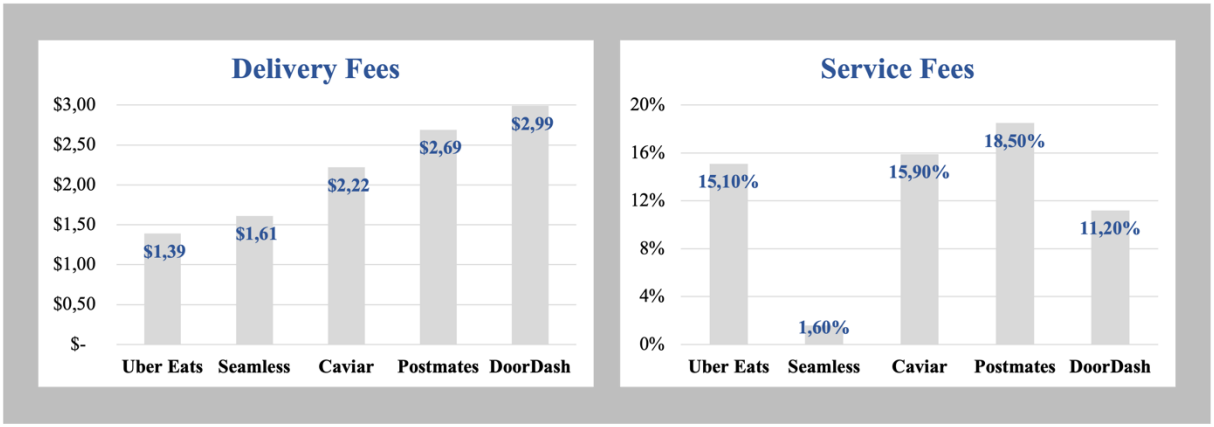



*Figure 2 - Delivery- and Service Fee Comparison (Lichtenstein 2020)*

**Other Revenue Streams -** Two more revenue streams should be explained. First, some companies charge a surge price during peak times or rain. Those fee premiums will be added on top of the delivery fees. Following the example of Uber or Lyft, which have already

established this model in the ride-hailing sector. (Lichtenstein 2020) Second, it's the tips couriers get from the customers via the app. Since these tips will be directly handed over to the couriers, this is not an actual revenue stream for the OD model platforms.

One should keep in mind that some of this revenue streams are now only theoretically present. Companies like Bolt do not yet charge delivery fees to customers to attract more potential users and consolidate the market. For example, Deliveroo offers a 6-month free trial for its subscription model. These promotions eliminate substantial revenues and even extensively increase customer acquisition costs, one reason why those companies are not yet profitable. But they can survive, thanks to many VC money and investors.

## 4.2. SWOT analysis

In the following, specific strengths and weaknesses of the business model as well as opportunities and vulnerabilities in the business environment will be identified. Each factor will be carefully assessed in terms of relevance for the future success of the business model. Strengths and weaknesses address existing elements OD business model, while opportunities and vulnerabilities refer to factors in the business environment that can potentially impact the performance of the business model. Based on this analysis, improvements to the OD business model will be proposed later on.

**Strength -** Three core strengths of the business model were identified. The first and most important one is the excellent **customer experience** that OD platforms offer. It is the essential element of its value proposition and will remain indispensable in the future. The variety of restaurants, the convenience and efficiency of the service, the easy ordering process, and the user experience in the app are the most vital selling points. Due to this, the companies can collect large amounts of user data which is essential to improve the service level and better understand customers' needs.

The second strength of companies operating the OD model lies in their **reliability and trustworthiness as a brand**. Alternatively, customers could order their food directly at the restaurant or via an Order Only model. But as OD companies usually have a well-established delivery fleet that operates 24/7 and offers delivery tracking within the app, customers trust them to deliver the food in a reasonable time. Fluctuations between single orders are pretty small.

The third strength lies in the **network effects** which are essential for this business model to function. Once platforms have reached a specific size and customer/restaurant base, network effects kick in. The growth is no longer linear but follows an exponential trajectory, increasing market share and revenues. All major players in the OD business model have used this effect to their advantage to outperform competitors. The results of this effect are reflected in the market share. For example, in the US, 94% of the total market share of online food delivery is held by three companies (GrubHub, DoorDash, UberEats), all utilizing the OD model (Statista 2021d). In theory, these effects also lead to higher market entry barriers. Once a certain number of restaurants and users use the platform, it should become more difficult for competitors to poach customers (Hagiu and Rothman, Network Effects Aren't Enough 2016).

**Opportunities -** Every business model faces opportunities to improve and be more successful in the future. For the OD model, four main opportunities were identified to shape the future success of competing companies. In this case, opportunities are understood as positive changes in the industry's environment. The first opportunity that gained significant importance in general business and especially in the OD model is **sustainability**. On the one hand, users will increasingly demand ecologically sustainable services and, therefore, pressure companies (IBM 2020). On the other hand, this offers the opportunity for platforms to differentiate from other players in the market. These improvements can range from sustainable packaging to carbon-free delivery of food.

Another opportunity, especially for capital-rich companies, is the **market's consolidation**. Being able to acquire companies to lower the number of players in the market and to increase market share is a standard method in fragmented markets like the OFD industry. Recent examples like the merger between Just Eat and Grubhub or the acquisition of Postmates by UberEats show that key players already look into this option. It is especially appealing because it is easier for companies to achieve better network effects with more participants gained through an acquisition. Companies have fewer competitors and higher bargaining power in a more consolidated market.

Another opportunity of the OD model lies in the **market size** of the food delivery industry and the **customer segments**. Statista states that in 2021 the global revenue of the food delivery industry accumulated to 306 bn USD, and OD platforms performed over 170bn USD. Furthermore, the market is predicted to grow by a compounded annual growth rate of 12.6% throughout the next five years. This potential is reflected in the customer potential. As stated earlier, virtually anyone can be a customer regardless of age, gender or income. This leaves businesses with a huge potential to gain market share and increase their revenues.

**Weaknesses & Threats -** Weaknesses and threats describe existing problems within a company and issues that can arise from the business environment. In the case of the OD model, weaknesses and threats are very interrelated and thus will be addressed together. OD businesses face few but critical vulnerabilities which all fall under the omnipresent topic of **profitability** or in this case non-profitability. As mentioned earlier, all major players operating the OD model are not yet profitable, although many have been in the market for more than ten years already. This can be a huge problem, as it might indicate the unsustainability of the business model and strong dependency on external funding. Currently, the main objective is to gain market share to outperform competitors until market consolidation comes to a halt. Profits would then follow. Yet, **lack of differentiation** between businesses was identified as the main issue preventing the

achievement of this objective. User experience, the app's interface, payment methods, reviews, and customer support are all very similar to competitors.

Platforms and restaurants had exclusive contracts in the past, but there is currently a strong trend away from exclusivity; restaurants see greater reach as more critical than low fees. This ultimately leads to eliminating a differentiating variable for platforms and even more similarity between them (J.P. Morgan 2021). This often means that restaurants and couriers are the same on all platforms. Every regular food delivery customer knows the situation where a courier with a Just Eat backpack delivers the food ordered through UberEats. As a result, customers have a strong bargaining position, and since consumers are very price-conscious, they choose their preferred platform primarily based on price.

Resulting from this lack of differentiation, four specific problems were identified that directly contribute to the overriding problem of profitability. The following figure displays the issues and their hierarchy.

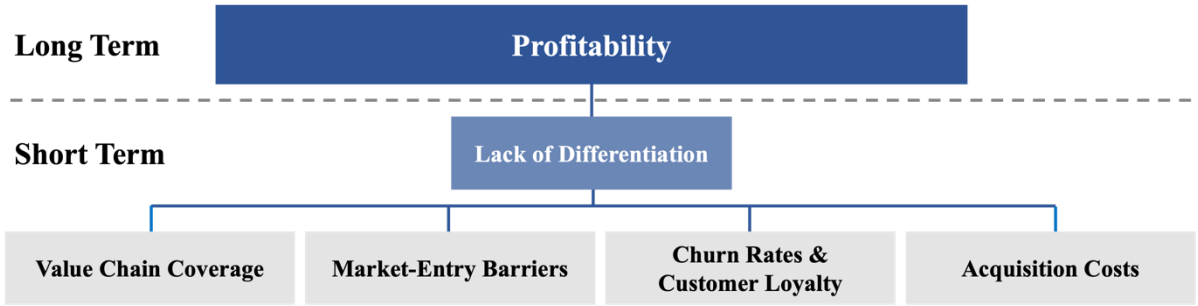



*Figure 3 - Hierarchy of Vulnerabilities in the OD model*

The first weakness lies in the **value chain coverage**. One goal of businesses is to create as much value as possible for their customers. The value chain plays a decisive role in this, as the definition from Carla Tardi, financial services expert and Investopedia author, highlights: “Value chains help increase a business's efficiency so the business can deliver the most value for the least possible cost [...] The end goal of a value chain is to create a competitive advantage for a company by increasing productivity while keeping costs reasonable.” (Tardi 2020). The more the company itself covers this chain, the more it can control and optimize it. Since an OD

model only covers two steps of the value chain, OFD companies are dependent on other companies, which may affect the achievement of competitive advantages. Expanding the value chain to food production would allow an OD company to differentiate from competitors in terms of service offer and price. Moreover, by not participating in food production, they neglect the potential to increase revenues, improve efficiency and enhance margins.

As already mentioned, due to the lack of differentiation between competitors, customers usually choose the platform with the most cost-effective offer. This leads to **churn rates** and **low customer loyalty** as the second major vulnerability. Due to customers' price sensitivity, platforms are forced to offer constant discounts. Customers switch whenever another platform has a better deal on the same food/restaurant. Similar patterns can be found in the management of couriers. As most of them are not employed by companies, they operate for all of them simultaneously. Depending on the bonus and special offer per delivered food, they switch between companies. This has led to horrendous churn rates. Different sources state churn rates of customers and couriers between 55 – 96% within the first year (Manning 2019) (CBInsights 2020) (Newswire 2019). Obviously, this is a massive problem for any company and threatens to ruin it if not addressed adequately. Thus, the cycle of acquiring new customers and couriers constantly continues. To regain lost customers and win new customers, OD businesses strongly invest in marketing. These **acquisition costs** represent the third weakness of the business model. As mentioned in the BMC Light, some players' marketing expenses exceed the total revenues of the business (DoorDash 2020). Most of these expenses go to price promotions for customers and salary incentives for couriers. Especially customer acquisition cost and courier sourcing cost are incredibly high.

Lastly, OD model companies struggle to build up market-entry barriers due to missing differentiation and high churn rates. With the current value proposition, companies can´t cease new competitors from entering the market. One famous example is the rise of Bolt and

specifically Bolt Food. The company was founded in 2013 and initially offered a platform unifying taxi service. As the board saw potential in food delivery, they expanded their offering to this industry. They entered the market in August 2019, almost 20 years after the first market entrants, yet managed to rapidly gain substantial market share in Europe and Afrika. The only barrier for new entrants is a high initial investment and the valley of death during the years of growth.

All-in-all, OD businesses face a huge market internationally, which is expected to continue to grow throughout the following years. In addition to that, the business model is super customer friendly and outperformed the OO model due to its more extensive service and outperformed the Fully Integrated Model due to its comparability and scalability. It is predicted to be the business model with the best position to succeed in the future. Yet, to gain market share and sustainably outperform competitors, companies need to differentiate their services. Furthermore, as the market continues to mature, investors will want to cash out, and all companies using the OD model still face the challenge of profitability. Therefore, business model innovations and strategy adjustments will be necessary to stay ahead of direct competitors and other competing business models.

# 5. Recommendations

The in-depth analysis of the currently dominant OD business model reveals that improvements are inevitable to stay successful in the long term. The research also shows that companies increasingly rely on the OD model. Most market participants currently use this model. This phenomenon is common between platform models in several industries. Companies copy or adapt to the market leader. An excellent example of this is Groupon. When the market for this type of e-commerce marketplace emerged in 2010, all competitors copied Groupon's business model. (Zhao, et al. 2020) Consequently, it requires more than just strategic adaptations. It needs a business model innovation to differentiate itself in the market and to be successful in the long term. For this reason, a two-step approach is adopted.

The primary recommendation is a business model innovation, which means that a new business model called “Order & Cook & Delivery” (OCD) will be introduced. Firstly, a detailed description will be provided, followed by an examination of advantages, a display of the problems it solves, an implementation approach, and the adjusted version of the BMC Light. As a secondary recommendation, three strategic changes are developed. These changes are not exclusively tailored to the OCD Model and could also be implemented in the OD model. However, these changes can be used to significant effect to facilitate the implementation of the OCD Model. The goal of these recommendations should be for companies in the OFD industry to adapt or change their business models to solve the main problems - differentiation in the short-term and profitability in the long run.

## 5.1. Business Model Innovation – OCD as a new Business Model

As the name of the new business model suggests, it is a vertical integration of the cooking element into the food delivery value chain. This means that in addition to the ordering and

delivery part covered in the OD model, the companies in the OCD model also have their own meal production. More precisely, the platform companies have both ghost kitchens (also called "dark kitchens") and virtual brands to make and distribute their own food. To recap, ghost kitchens are only designed to prepare food for delivery services. There is no possibility to eat on site. Virtual brands, in comparison, also offer food exclusively via a delivery app, but they do not have their own kitchens. Instead, they co-use kitchens from other restaurants. It is intended that the OFD platform operates ghost kitchens itself and that each ghost kitchen offers a selection of multiple, standardized virtual brands. Each virtual brand relates to a specific cuisine, e.g., Italian, American, Chinese, etc.

In this regard, it makes sense to make a first clear distinction from other existing business models. Some delivery services already offer food from ghost kitchens on their platform. The crucial difference is that these delivery services neither own nor operate these kitchens themselves. These are simply ghost kitchen operators who offer their food on the platform. With the OCD model instead, the OFD company is both the owner and operator of the ghost kitchens and virtual brands. On the one hand, of course, this means a significantly higher operational expense. Still, on the other hand, more differentiation and from a financial point of view, lower prices and higher margins can be achieved as fewer parties are included in the process. The advantages of the OCD model will be discussed in more detail in the next section.

Another critical point is the clear differentiation from the Fully Integrated Model. In this business model, all three major components - order, cook, and delivery - are covered by one company. However, these companies are primarily large restaurant chains that only offer their food. Pizza Hut is a good example. Consumers must install the Pizza Hut app and can then order Pizza Hut products only. This may not be a bad thing from the big chains' perspective at first glance. As one can see in practice, most Fully Integrated companies are profitable. However, it is significantly limiting from a consumer perspective. Moreover, it could be

detrimental to businesses in the long run, as users instead want one app for everything, not just for one restaurant. (Interview 1, 2021)

If you look at the OCD model, the difference quickly becomes apparent. Here, all three components are covered as well, but since many different ghost kitchens and even more external restaurants use the platform, the choice of food for the end consumer is significantly increased; Any type of food can be ordered centrally via a platform.

The following figure is intended to clearly show the value chain to understand the business model differences better.

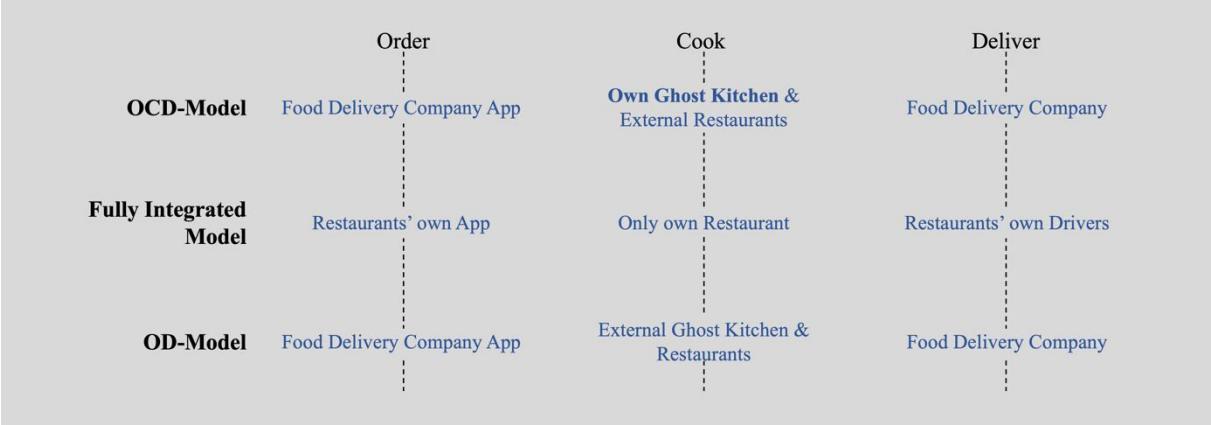



*Figure 4 - OCD Model comparison and differentiation to other business models*

For the description of the OCD business model, a comparison with other areas should provide even more clarity, especially for the food production part of the OCD Model. The Amazon model of e-commerce has certain similarities with the OCD model. It is a platform where people or companies can offer their products for sale. Amazon thereby earns its money through commissions. (Amazon n.d.) In addition, Amazon has its own product, called Amazon Basic. These are also provided on the platform and can usually be offered cheaper than the other competing products. Plus, the margins are much more attractive for Amazon. (Rao 2016) If one now draws the comparison to the OCD model, Amazon's external product sellers are the same as the restaurants for the food delivery company. And Amazon Basic is thus equivalent to virtual brands, which the delivery company themselves operate. The OCD model is also similar from a financial standpoint. Delivery services receive a commission from external restaurants.

Delivery services can offer their dishes at lower prices and earn higher margins with their own kitchens. The reasons why more competitive prices and higher margins are created will be explained in the next section when the specific benefits of the OCD model will be highlighted. Let's give a second example. In addition to the established brands, more and more supermarkets offer their brands in their stores. These are then often offered in different quality and price levels to appeal to different groups of customers and be competitive with other brands. (Begley und McOuat 2020) Even if this is not directly a platform model, parallels can still be drawn, as is the case with the OCD model. The established brands represent the equivalent of restaurants, while the supermarket's private labels correspond to the delivery services' own virtual brands. The OCD model can even take over the idea of the supermarkets and offer different price levels for the virtual brands. However, each delivery service with an OCD model can and should decide how the ghost kitchen and virtual brands are structured in detail.

### 5.1.1. Advantages of the OCD Model

Four main advantages for the new OCD model have been identified as mutually supportive and interrelated. They all relate to one or more of the weaknesses and vulnerabilities identified in the previous chapter and partly leverage the strengths and opportunities of the OD model. Ghost kitchens and virtual brands form the basis for the advantages of this business model. More specifically, access to more data and independence building up on that. Both are, in turn, important as the foundation for advantage number three, more room for differentiation. At the end of this section, the focus will be on additional financial benefits that improve profitability. All these benefits just mentioned directly or indirectly add value to the business model's financial aspects, such as costs and revenues to improve profitability in the long run.

| Additional Financial benefits - Profitability | |
|---|---|
| Room for Differentiation | |
| More and better access to data | Independency |
| Ghost kitchen and Virtual Brands | |

*Table 2 - Advantages of the OCD model*

**Own ghost kitchen and virtual brands -** With the tangible assets of ghost kitchen and intangible assets of virtual brands, OFD companies are vertical integrating into the value chain of online food delivery. This not only significantly changes the present OD model, but at the same time, addresses the vulnerability of low value chain coverage. Besides, these additional assets provide the essential basis for the other advantages of this business model.

**More and better access to data -** As already mentioned, data is the new gold and is very important for customer experience improvement and strategy adjustments. ((Interview 1, 2021)) Both can lead to a real competitive advantage. This has the consequence that companies nowadays are constantly trying to gain more data. This goal of data increase can either be reached by a raise of users to get a larger amount of data or by covering a larger share of the value chain to gain a wider variety of data. (Hagiu and Wright, When Data Creates Competitive Advantage 2020) The latter is the short-term goal of the OCD model. This added data along the customer journey increases transparency for the company, which leads to the chance to identify pain points and customer needs even better. Customers from different customer segments or even each individual customer can thus be served in a more targeted manner. This approach can be summarized well under the term customer-centricity. Gartner describes it as the "…ability of people in an organization to understand customers' situations, perceptions, and expectations. Customer centricity demands that the customer is the focal point of all decisions related to delivering products, services, and experiences to create customer satisfaction, loyalty,

and advocacy." (Gartner Inc. n.d.) More and diversified data can support this method significantly.

To get back to food delivery business models and the vulnerabilities that need to be solved. As Gartner said, customer centricity will increase customer loyalty and thus likely decrease churn rates. Jared Atchison, the co-founder of WPForms, a drag-and-drop form builder platform, agrees with that. He identified four key drivers of customer loyalty, including collecting and using data to engage with customers. (Atchison 2020) This is an enormously important capability when retaining customers is five times cheaper than acquiring new ones. (The European Business Review 2021) This ultimately will lower the CACs. These costs are often promotions like free delivery fees. These customer acquisition promotions can be reduced through better customer retention and thus lower costs. Also, a platform business is about creating network effects to be successful, for that, it needs users. The users are also crucial in the long term for collecting larger amounts of data to analyze and deliver a fulfilling customer experience.

To conclude the advantage of more access to data, one can say that it leads to more transparency, focus on customer centricity which increases loyalty and in turn creates competitive advantages such as network effects and lower costs.

**Independency -** A second major advantage of the OCD model is that OFD companies are less dependent on partner restaurants and can flexibly expand their network of ghost kitchens and virtual brands. On the one hand, this independence is especially crucial in the face of frequent and rapid market changes. Responding early to emerging food trends and customer needs by quickly introducing new virtual brands without creating "cognitive dissonance" or adjusting menus of existing brands is essential. Adapting the business according to these market changes, especially in terms of food variety, price, as well as the location of ghost kitchens, can be significantly simplified by independence to restaurants. An excellent example of this

independence is geographic expansion. Not all parts of a city and especially outside of it have the same diversified range of food at different price levels (Ahuja, et al. 2021). As a result, customer needs can't be served and may not come back on the platform to order food. With the OCD model, OFD companies have the opportunity to establish ghost kitchens and virtual brands wherever there is a need. If a district has no cheap burger shop, platforms can counteract and establish a virtual brand that offers low-budget burgers.

On the other hand, independence is a plus when it comes to innovation. Of course, developing something new is also possible with partner restaurants, but considering that OFD is a very dynamic industry, speed and being agile are crucial factors. (Dupont 2019) Coordination and communication efforts, aligning values, and the indirect connection to the food supplier take up valuable time and resources and are not desired for innovation activities. ( de Jong, Marston and Roth 2015) Instead, flexible adjustments, trial-and-error processes, A/b testing, and other agile approaches can be operated easily within the company and make innovation and market adaptation easier and faster. This aspect is particularly relevant in the implementation of new ghost kitchens and virtual brands and the actual preparation of dishes and the interfaces between the different areas of the value chain.

Taking this argument back to the identified vulnerabilities, one could say that increased independence can positively yet indirectly impact customer loyalty and churn rates. As already discussed, independence means more flexibility, which in turn can strengthen innovation and adaptability on market changes and customer needs. (Dupont 2019) This makes it possible for company to create added value and gain popularity to win over customers. Customer-centric adaptations can further strengthen this effect. This shows that access to more data and independence complement each other and boost customer loyalty. The following graph again shows how independency indirectly increases customer loyalty.


*Figure 5 - Indirect Impact of Independency on Customer Loyalty (Own Illustration)*

However, there are two other indirect impacts. First, independency provides OCD companies the possibility to differentiate easily from other key players, also from OD model players. They are limited in what and how they provide features on the platform as well as food. In the OCD model, companies can decide flexibly for themselves. For example, one possibility is to display certain information such as nutritional information only for virtual brand orders as this information is available internally. This allows them to stand out from the competition, which only cooperates with external partner restaurants.

Another aspect of solving indirect vulnerabilities of current business models are large networks of own ghost kitchens and virtual brands, which can be established because of the low independence to other restaurants. This makes it possible to operate more cost-effectively due to economies of scale, covering different customer needs better. This makes it difficult for new players to enter the market and ultimately succeed. (Hayes 2021)

**Room for differentiation** - Based on the advantages already mentioned, one of the most important positive effects can be identified, compensating for many weaknesses. Currently, there is hardly any differentiation between the various players in the OFD industry. The OCD model counteracts this and creates opportunities for companies to differentiate themselves. Better data access and independence are the key factors for developing and implementing differentiation factors. Data is needed to gain necessary insights into processes and customer behavior and needs; independence, in turn, is required to have the necessary flexibility to realize and implement differentiation activities efficiently. Operating its own ghost kitchens, for example, can enable the development of virtual brands that target specific customer segments or geographic locations. Likewise, the variety of offerings on the platform increases as the

virtual brands are listed exclusively on the company's own platform. This ultimately allows the platform to differentiate itself from the competition.

It solves the vulnerability of differentiation and leverages the power of a vast market with different customer groups and needs. Since differentiation builds up on the first three advantages, it is not surprising to address the same vulnerabilities. In OD business models, the only real differentiator so far is the price. Companies have such high CACs because they spend a lot of money on promotions such as low delivery costs. Hereby, customers mostly choose the service with the lowest price point unless they may have had a bad experience with the service. (Gell 2021) Companies can win customers ' loyalty through further differentiation options, such as meals, App-features, or monopoly positions in low, competitive geographical locations. This can lower churn rates and CACs, despite possibly higher prices. Not least, it should be mentioned that besides product diversification and brand loyalty, a cost advantage raises the barriers to market entry. (Hayes 2021)

**Financial aspects -** The previous arguments have shown how the OCD model, directly and indirectly, influences the platforms' performance by tackling current vulnerabilities. Finally, it will be determined to what extent the OCD model can impact the financial situation and thus on the main problem of profitability, in addition to the aspects of the various benefits already mentioned.

Currently, the costs exceed the revenue, making it an unprofitable business. The OCD model is intended to counteract this. It is essential to clarify that these statements are theoretical in nature and may behave differently in practice. Minor deviations can already make the difference here. However, it can be said that the new business model naturally results in more revenue but at the same time brings significantly higher costs, both one-time fees (e.g., for ghost kitchens) and ongoing costs (e.g., for additional personnel). At the same time, revenues will increase. The crucial point is that these investments are likely to pay off in the long run, as companies benefit

from direct contact with suppliers. In concrete terms, this means that the intermediary, namely external restaurant, is eliminated from the value chain. With an increasing number of ghost kitchens, lower prices can be achieved due to economies of scale. Another cost factor relates to system catering, a concept that will be explained in more detail in chapter 5.2. For now, it suffices to say that this concept can increase operational efficiency and reduce costs. Both factors, economies of scale and system catering, are closely related to margins. In the OD model, the company received 15-30% per order and had no costs for food preparation. In the OCD model, the company now gets 100% of the revenue but must carry the costs. Through economies of scale and system catering, these costs can be optimized so that the margin is ultimately higher than in the OD model. To make the example more tangible, a short calculation example should help.

| | OD model | | OCD Model | | |
|---|---|---|---|---|---|
| | Restaurant | Platform | Restaurant | Platform | |
| Price / Meal | $10,00 | $ - | - | $10,00 | |
| **Margin** | $1,00 | **$2,00** | - | **$4,00** | |
| Ingredients Costs | $2,00 | $0,00 | - | $1,50 | Economies of Scale |
| Other Costs (e.g. Furnishings) | $5,00 | $0,00 | - | $4,50 | System Catering |

*Table 3 - Impact of Economies of Scale and System Gastronomy in the OCD model*

In this example, the OD model and OCD model are compared based on one dish, regarding price, cost, and margin. The dish is sold for $10 to the end consumer. Due to the factors just mentioned, the cost of ingredients and all other costs for operations are lower in the OCD model. Costs are $7 in the OD and $6 in the OCD model. The difference between the $10 sales and the costs is the margin. This is divided between the restaurant and the platform in the OD model. 20% of the price goes to the platform( $2 per dish) and the restaurant receives with $1 per dish.

In the OCD model, 100% of the margin remains for the platform, in this case, $4. Thus, the platform makes twice as much margin in this calculation example with the OCD model.[2]

To conclude, the use of virtual brands in combination with ghost kitchens and system gastronomy create efficiency gains over competitors and ultimately enable higher profitability, not least because of lower CACs and lower costs for food production.

### 5.1.2. Implementation & Potential Challenges

Implementing the proposed new business model would be a challenge to any OD platform as the operational implications are quite large. To account for questions that might arise from this context, the following section will give an overview of what questions and potential issues might arise during implementing the new business model and how such challenges can be countered. The extended marketing mix is used to illustrate and categorize these potential challenges properly.

**Product -** A significant implementation challenge relates to the question, which cuisines (i.e., products) should be offered by the virtual brands of platforms' ghost kitchens. It has to be said that there is no definitive answer to that question and that it very much depends on the strategic choice of the respective platform and the geographic locations of the ghost kitchens. A platform has to decide how much it wants to compete with existing restaurants. One strategy might be to offer specific cuisines only in geographical areas, where existing restaurants do not offer these. This approach would limit the platform's direct competition with existing restaurants, thereby not straining the relationship between the two parties. Another strategy, however, might put ghost kitchens in more direct competition with existing restaurants – placing virtual brands in geographical areas where there are already restaurants offering the same cuisine as the

[2] Important, this calculation is only intended to show the impact of lower costs (because of economies of scale & system gastronomy) on the margin. This is not a detailed calculation as it is common in practice and also the figures and percentage ratios are just fictitious. In reality the margins are significantly narrowed.

platforms' virtual brands. This could lead to the cannibalization of profits and strain the relationship with existing restaurant partners on the platform. Due to these potentially detrimental effects, it is proposed that each ghost kitchen should only offer virtual brands (i.e., cuisines) that do not directly compete with existing restaurant partners in the area. Doing so, the aforementioned adverse effects would be avoided while at the same time the user experience is improved as some people now have the opportunity to order cuisines that were not available beforehand.

**Place -** Considering that the platform itself serves as a sales channel, this category is used to answer a different, but related question: How many ghost kitchens should be installed and where to locate them? This is somewhat linked to the question of what products are offered. Additionally, platform-owned ghost kitchens could be rolled out broadly or in a more limited way, depending on the company's strategy. Of course, a larger, fast rollout puts more immediate financial strain on a company. How a platform eventually wants to transform its business model, therefore, ultimately also depends on the management's willingness to take risks. Nevertheless, it is proposed to pursue a rather broad and fast roll-out to realize economies of scale that would result in a competitive advantage and are needed to complement the proposed pricing strategy. As mentioned before, where to locate the ghost kitchens depends on how much an OCD company is willing to compete with existing restaurants on its platform. Considering the previously proposed strategy related to what products (i.e. cuisines) should be offered, it makes sense that ghost kitchens should rather be placed in areas where the density of restaurants is low. Customers of such regions would also be more likely to be loyal as they have fewer options to choose from in their geographic area. Data insights could lead the platform to identify gastronomically underserved areas and show what cuisines are missing in which area. This would avoid cannibalization of profits while bolstering the availability and service quality of the platform and expanding the pool of potential customers through geographical expansion.

**Price -** There are many different pricing strategies an OCD platform could choose, depending on its business strategy. How a company ultimately decides depends on how much it wants to compete with existing restaurants, how fast it wants to increase market share, and what the target groups of virtual brands are. What's more, platforms have abundant data on customer behavior available, which gives them insights into consumers' willingness to pay for specific dishes and quality standards. This would speak for a value-based pricing strategy. However, another critical factor to consider is that ghost kitchens do not have on-site dining facilities and are typically located in rather less frequented areas where rents are low – thereby automatically lowering the visibility of the newly introduced virtual brand. Therefore, following a penetration pricing strategy during the implementation phase is proposed to generate visibility and gain market share fast. This measure should not hamper profitability to a great extent due to economies of scale that should make lower prices possible while still generating attractive rates of return. In addition, this pricing strategy should not affect existing restaurant owners on the platform too much as the specific virtual brands are only sold in places where existing restaurants do not offer the corresponding cuisine. At a later stage, when the virtual brands are already established in a given market and generate enough awareness, OCD companies should use their data insights and follow a value-based pricing strategy.

**Promotion -** Platforms need to decide how to promote their own ghost kitchens. Promoting them too heavily at the expense of existing restaurants might trigger opposition by restaurant owners and maybe even lead to them leaving the platform. This is a risk that should be taken seriously, considering the importance of listing a large number of restaurants on the platform. This risk is considerably related to how much negotiating power restaurant owners have towards online food delivery platforms. Experience shows that restaurants depend on online food delivery platforms and thus accept high fees charged for the service. The same might be true for offering and promoting own ghost kitchens and virtual restaurants. As a sales channel

with a large customer base, the platform remains an important sales channel to restaurant owners. And considering the improved user experience of the OCD model compared to the traditional OD model, this appears to be even more accurate. Nevertheless, OCD platforms need to be careful when advertising their own virtual brands on their platform for another reason. Preferential treatment might alarm competition authorities and result in financial penalties and negative publicity. Extensive social media marketing measures can be a potent way to generate visibility for virtual brands fast. At the same time, it is harder for competitors to connect the marketing activity of those virtual brands to the OCD platform.

**Personnel -** Implementing the new business model implies that the respective food delivery platform needs to acquire unique expertise in cooking dishes and managing a kitchen. In addition to that, new relationships with suppliers of provisions necessary for cooking have to be established. Therefore, recruiting additional employees who bring the necessary experience, capabilities, and skills is crucial.

**Physical facilities -** An essential factor of the new business model is the need for a platform to set up its own ghost kitchens. This topic can be susceptible to the success of the business model implementation considering the broad financial and operational implications of decisions in this area. Most importantly, the ghost kitchens need to be fitted in a way that supports the operational processes that are in place (see below). Moreover, the platform needs to decide if it wants to use ghost kitchens in a fixed location or moveable ghost kitchens that operate out of remodeled shipping containers. The latter's advantage is that it can be redeployed geographically if needed. Assuming that the moveable ghost kitchens can be fitted appropriately, it is proposed that these should be favored compared to ghost kitchens in fixed locations. This could be an effective way to test the ghost kitchens and virtual brands in different locations while keeping costs at a minimum. It also allows a company to react fast to changes in consumer demand.

**Processes -** For ghost kitchens to successfully operate multiple virtual brands that relate to different cuisines, implementing efficient procedures is required for several major reasons. Such processes should, for instance, ensure the optimal usage of kitchen space in often relatively narrow ghost kitchens. In addition, the possible output for a given number of employees should be maximized (e.g., the number of prepared dishes per hour.); otherwise, a potential competitive advantage compared to more traditionally operating restaurants would be obsolete. Operational efficiency and high output are prerequisites for a sustainable penetration pricing strategy. Furthermore, having multiple different dishes prepared in the same kitchen creates the risk that the ingredients used for one virtual brand's dishes will "contaminate" the dishes of other virtual brands, compromising their taste, authenticity, and overall customer experience. In addition, consistent quality of dishes has to be ensured across all ghost kitchens to allow for a uniform and reliable customer experience, and packaging needs to be standardized to create compelling virtual brands. What is more, centralized processes for procurement can enable economies of scale, which reinforce the competitiveness of the business model.

These factors illustrate the importance of a solid framework of processes for the success of the new business model. The concept of system catering as practiced by restaurant chains such as McDonald’s, Subway, and Kentucky Fried Chicken can be used to structure the new business model's processes efficiently and ensure that all critical factors mentioned above are fulfilled. System catering can be understood as a clearly defined concept that aims at centralized management, standardization, and multiplication (Bundesverband der Systemgastronomie 2021). This approach can be used to tackle all the aforementioned factors in a standardized way. For instance, a sophisticated kitchen design can be developed together with a clear operational blueprint on how the different cuisines would be prepared in the same location without affecting one another,thereby ensuring consistent quality while maximizing output. This concept could then be multiplied for any number of ghost kitchens. Considering the often minimal space in

ghost kitchens and the fact that the new business model involves multiple brands within each ghost kitchen, the operational complexity in daily operations would likely be increased when compared to ghost kitchens offering only one type of cuisine. This seems plausible considering that different cuisines require varying ingredients and modes of preparation. One way to lower this operational complexity would be to pre-cook certain components before they are finally prepared in ghost kitchens. A centralized procurement system would enable such an approach, apart from allowing economies of scale. In every major location where the food delivery platform is operating, there would then be one large kitchen that does not deliver food itself but rather pre-cooks specific ingredients before they are sent to the ghost kitchens that later deliver to consumers.

### 5.1.3. BMC Light of the OCD Model

Business model innovation also evolves the Business Model Canvas. As with the OD model, a BMC Light is created for the OCD model and highlights the critical innovations compared to the OD model. An overview of the OCD BMC Light is provided in Appendix E.

**Key Partners -** Two new key partners were added to the existing partners. Firstly, facility management gains importance. OCD platforms need to cooperate closely with producers of moveable ghost kitchens to fit them according to their needs. Depending on the cuisine, these must be specifically equipped. Secondly, food suppliers become essential partners of OCD companies. This key partner is critical for the business's success for several reasons. On the one hand, the choice of food suppliers determines the quality of food. In online food delivery, the quality of ingredients is even more important than in regular restaurants, as ambiance and atmosphere vanish as customers' valuation criteria. On the other hand, the choice of food

suppliers and conditions of the contract directly impact the margins the company can generate, i.e., to which extent it can realize economies of scale.

**Customer Segments -** If we look again at the definition of business model innovation, it becomes clear that no expansion or change of customer segments is necessary. (Girotra and Netessine 2014) Since the OCD model is primarily about value chain coverage, no new customer segments are defined compared to the OD model. In addition, it has already been established that OFD platforms address most target groups.

**Customer Relationship -** The approach to customer relationship management stays the same as in the OD model. This is not surprising, as the customer segments also remain the same. Therefore, customer relations will still consist of customer acquisition, retention, and support using existing methods.

**Value Proposition -** The OCD model can significantly strengthen the value proposition for customers. Cost savings can be improved as virtual brands can offer their dishes at a lower price due to economies of scale and the application of system gastronomy. Companies distinguish themselves from OD companies through their exclusive culinary offer. Their ghost kitchens and virtual brands distribute food only via their platform. This change can increase the variety of options available to the customer. In addition, more convenience can be created through more data richness and independence to improve the customer experience holistically.

**Key Activities -** Key activities increased along with the vertical integration and are mostly related to ghost kitchens. One essential activity will be running the operations of ghost kitchens, such as managing orders, preparing food, packaging, and cleaning. Furthermore, the marketing and branding of virtual brands are essential. Most restaurants already have a customer base when they enter online delivery platforms. As new virtual brands don´t have this advantage, professional pictures of the food, promotions, recommendations, and reviews will be required to gain popularity. Besides that, one key activity of OCD companies will be managing the

supply chain. It includes identifying potential suppliers, negotiating terms and conditions, and ensuring constant supply and quality of food. As this activity directly impacts the companies´ success in terms of costs, margins, and profitability, it will be imperative.

**Key Resources -** In addition to the existing resources of the OD model, three additional resources are critical in the OCD model. Firstly, the ghost kitchen with its equipment (and movable) and well-running operations is an essential resource. It creates the foundation for virtual brands as well as the business itself. It takes suitable kitchens and functioning processes to produce food efficiently. Chefs and their expertise are an essential part of it. Currently, the key resources of OO and OD models lie in the platforms´ technology and logistics. By tapping into the field of cooking, OCD companies must recruit experienced chefs with particular expertise. Their task is to develop recipes and ensure the quality of food. Secondly, the newly invented virtual brands are a valuable resource. They can either be implemented as subbrands, e.g., "JustEat´s Finest Sushi," or as independent brands, e.g., "Ajitama - Sushi House". Either way, they enable the company to vary independently and increase revenues. In addition, as a sub-brand, they can improve the branding and image of the entire company, and as an independent brand, they can add value to the platform offers. In addition, the supply chain of an OCD platform can be seen as an extended key resource. It should function very well and create significant added value.

**Cost structure -** As companies enter a new business area, their overall cost increase, and their cost structure changes. Even though ghost kitchens have cost advantages compared to traditionally operating restaurants when it comes to the location, real estate costs can still be substantial, considering that ghost kitchens still work out of urban areas. Moreover, ghost kitchens have to be furnished and equipped. Another new matter in expenditures regards personnel such as chefs and cleaning staff in ghost kitchens. Lastly, cost increases in terms of

food supplies and packaging. All in all, the cost can be decreased with an increasing amount of ghost kitchens because companies profit from economies of scale.

**Revenue Structure -** There is a significant increase in revenues in the OCD model resulting from the sale of prepared food. In the OD model, revenues are only generated through the platform and logistic operations of ordering and delivering food. In the OCD model, the company also functions as a restaurant and therefore taps into a new revenue stream.

It turns out that most of the blocks of the BMC Light have been modified or expanded, and implementing and managing this business model innovation will be no easy task. Nevertheless, further recommendations in the form of strategic adjustments are given in the next section.

## 5.2. Strategy adjustments

Three strategic adjustments were identified that would benefit companies in the online food delivery industry. These apply for OD businesses and OCD businesses and build up on general trends as well as strengths and weaknesses identified in the in-depth analysis.

**Improved courier policy -** Over the last years, the digitization of various branches of the economy has led to the formation of gig workers. Those are workers that are usually independent contractors hired by a firm to fulfill a specific service. For instance, in the cab business, Uber uses such independent contractors as drivers around the world. Similarly, in the online food delivery industry, many platforms hire delivery couriers as independent contractors. For platforms, there are clear advantages that support this mode of operations. They don't need to fear that their employees unionize, avoid bureaucracy and save costs. In many cases, employees even have to provide the delivery vehicle themselves (Interview 1, 2021). A recent survey of delivery couriers in New York concluded that drivers earned well below the minimum wage during the Covid-19 pandemic (Ong 2021). However, even though this approach might be financially advantageous in the short run and allow for a faster expansion, significant

downsides should not be underestimated. First, customers are increasingly conscious about the working conditions of companies where they buy services or products. For instance, a recent study found that customers' perceptions of working conditions significantly impacted their intentions to use and recommend a food delivery service. This means that cost savings due to low wages for couriers and a loss in customers could outweigh the lack of investments in vehicles. In addition to that, a shortage of delivery couriers can result in lost business. Suppose there are only few delivery couriers on the streets. In that case, OD platforms have to scale down the geographic availability of individual restaurants to lower the number of incoming orders. This measure is inevitable. Otherwise, delivery times would be too long, and the customer experience would suffer. And even though such shortages in delivery couriers often result rather naturally, for instance due to bad weather conditions, platforms also compete against each other when it comes to hiring delivery couriers (Interview 1, 2021). The importance of offering competitive working conditions should therefore not be underestimated. As a result, online food delivery platforms are advised to improve working conditions for their couriers through wage increases and the provisioning of vehicles. Such an initiative should lead to fewer lost business, an improved brand image, and lower churn rates and acquisition costs for delivery couriers. Especially companies like Delivery Hero and Uber eats should adopt this approach to not fall behind competitors.

**Lead-user method -** As previously mentioned, the current market dynamics within the online food delivery industry are characterized by intense competition of platform companies to increase their market share and to improve the overall customer experience. The role of initiatives to differentiate from competitors has been shown to be of high importance in this regard (Interview 1, 2021). During the research for this thesis, it came to the authors' attention that there was no indication that platforms interacted with customers in any meaningful way beyond simple feedback functions on their platforms to improve their service. However, it has

already been established for decades in academic literature that customers can play a decisive role in innovativeness and, ultimately, the competitiveness of a company. A very renowned approach in that sense is the so-called lead user method. Lead users of a product or service are characterized as individuals who already have needs that will be important to all or most other consumers in that market months or even years in the future. In addition, lead users benefit significantly from the solutions to those needs. A 4-step process was introduced to benefit from lead users' insights, including identifying a vital market or trend, identifying lead users, analyzing lead user data, and using these insights for the general market. (von Hippel 1986) This approach has been further developed and refined in the following decades. For instance, it has been found that specific characteristics of lead users impact the quality of ideas that are generated. More specifically, the higher the dissatisfaction with the current service is, the better are the ideas generated by lead users. (Schuhmacher und Kuester 2012)

Implementing the lead user method into a company's innovation process is challenging, mainly because it is a time-consuming and costly affair that also binds personnel (Brem, Bilgram and Gutstein 2018). It also represents a significant shift in a company's strategy on innovating and collecting market information. Therefore, the decision to adopt the lead user method should be well-thought-out and committed. In the context of online food delivery platforms, the lead user method can be implemented to interact with end consumers in particular. Adoption of the method seems to be most promising for online food delivery platforms that not only provide the service of food delivery but are also involved in the food preparation process. Companies like Uber Eats and Mjam, who collaborate intensively with operators of virtual brands and impact the actual menu that's offered, might use the lead user method to improve the offered dishes, menus, and cuisines. Similarly, prospective operators of the proposed OCD model could benefit from this approach and companies that run a Fully Integrated business model. To

illustrate the application of the lead user method by an online food delivery company, here's an example of what this process could look like for an operator of the OCD model.

(1) An increased consumption of healthy food options is identified as a major trend

(2) Using a survey on the platform, lead users are identified and selected

(3) Workshops with lead users are conducted to identify essential ingredients that are perceived as healthy and to come up with new, exotic recipes for healthy dishes

(4) Creation of a new virtual brand that focuses on healthy and creative dishes that provide unique experiences to consumers using ingredients and recipes identified by lead users.

**Sustainability -** Alongside the exponential growth of food orders during the Covid-19 pandemic came to a similar increase in plastic waste. The environmental research institute of the Chulalongkorn University (ERIC) in Bangkok estimated that single-use plastic waste increased by 60% in 2020. Furthermore, their calculations state that approximately 2.3 billion pieces of single-use plastic were solely used by online food delivery services (Chavanich 2020). This represents a considerable problem and future challenge for the entire industry, especially since several research papers indicate that consumers are more environmentally concerned than ever before. An IBM consumer report from 2020 states that 57% of consumers are willing to change their consumption behavior to reduce negative environmental impacts (IBM 2020). In addition, the McKinsey consumer´s sustainability sentiment declares that 50% of all consumers are willing to pay a premium of 20% for sustainable goods and services (McKinsey 2020) . Thus, OD and OCD companies must reduce their waste. There are different approaches to tackle the challenge. One approach proposes a circular use of multi-use packaging. These consist of durable plastic or metal depending on the provider. Consumers can return packaging either when they order the next time or in any partnering restaurant. Afterwards the operating platform collects all containers, cleans them, and returns them into circulation. Although this displays

the most sustainable procedure, it is accompanied by a lot of operational work and therefore increased costs. Another approach aims to implement plant-based packaging that is fully compostable. Although this approach still produces waste, it solves the central problem of plastic waste. Furthermore, it is easy to implement as the packaging is still single-use, and therefore operations stay the same.

Currently, no major player in the industry (UberEats, BoltFood, Grubhub, Just Eat, Delivery Hero) requires restaurants to use plastic-free packaging. Therefore, this strategy adjustment could propose a strong value proposition and point of differentiation. In addition, it would attract environmentally conscious customers, increase customer loyalty, and contribute to the company's overall image and perception.

## 5.3. NUF Analysis

A total of four recommendations were identified, one business model innovation and three strategy adjustments. As mentioned in the introduction of this chapter, the new business model can be classified as the most important recommendation. However, a NUF analysis (New, Useful, Feasible) is conducted to rank the three strategy adjustments. Initially, this framework is used for decision-making. In the present case, it is used in a slightly different manner. Its purpose is to evaluate the recommendations. The three strategy adjustments are numerically assessed (on a scale from 0 to 10) based on the criteria: New, Useful, and Feasible. New refers specifically to the OFD industry. One can ask: Does this idea already exist on the market, or has it been done before? Useful refers to how the strategy adjustment solves the weaknesses and vulnerabilities defined in the SWOT Analysis. Feasibility refers to how much effort is involved in the implementation. Is the effort/cost in the right balance with the expected return?

The recommendation with the highest overall rating has the highest priority since it offers the best overall package in innovation, problem-solving, and feasibility. The following table shows the evaluation of the three strategy adjustments.

| Ideas | Courier Policy | Lead User | Sustainability |
|---|---|---|---|
| **New**<br>0 (has been done before)<br>10 (has never been done before) | 5 | 6 | 8 |
| **Useful**<br>0 (does not solve the selected problem, and creates new problems)<br>10 (perfectly solves the selected problem, without creating new problems) | 8 | 7 | 9 |
| **Feasible**<br>0 (requires great effort to put into practice)<br>10 (very easy, simple, and fast to put into practice) | 8 | 6 | 5 |
| **Sum** | 21 | 19 | **22** |

*Table 4 - NUF Analysis of the Strategic Recommendations*

Based on the quantitative result, it can be concluded that sustainability has the highest priority, mainly because little attention has been paid to this topic in the OFD industry so far. It also indirectly resolves many vulnerabilities identified in the current OD model. On the one hand, companies can differentiate themselves, but more importantly, they can tie customers to the platform and create a particular lock-in effect. Nevertheless, this transition is a significant challenge involving high costs and high operational efforts. In contrast, the courier policy is feasible to implement, but it would not be the first attempt in the OFD industry and therefore does not represent an entirely new strategic adaptation. (Atkinson 2021) Still, it positively impacts image, customer loyalty, and differentiation and involves less cost and effort. The lowest priority is given to lead users. The OFD industry has already made attempts to introduce this idea, which is currently only possible with great difficulty.

Strategy adjustments should always be considered individually, considering all aspects. Considering in the given case the qualitative elements, one might also classify the courier policy as the highest priority. However, due to the global importance of sustainability and, indeed, the results of the NUF analysis, the clear recommendation is to push sustainability through innovative solutions. The adjustment of the courier policy follows this. Platforms can take advantage of Lead User's integration into the innovation process as a third recommendation.

# 6. Limitations and Extensions

A fundamental limitation of this paper arises from the time frame of this work. On the one hand, the focus of the research is primarily on secondary data, both quantitative and qualitative. Primary data are used in the way of an interview. Although the quality of the data used is appropriate, it cannot be excluded that there are limitations at some points due to the amount of data. On the other hand, limitation arises from the theoretical nature of this work. Although this work aims to provide potential recommendations for action, it is still a theoretical approach that could not be validated in practice due to the scope of the work. In addition, the argumentations of this work may vary in practice. Because of very tight margins, businesses must conduct individual and more detailed actions as well as financial calculations (Interview 1, 2021). The extent to which a financial model can be established and validated may be the subject of further research.

Another limitation is the dynamic and constantly changing situations and markets. The analyses and recommendations described are based on the current data and conditions when the paper was created. Additional or different factors may become relevant in the future due to market changes. It should be noted that the recommendations described were primarily selected and developed based on the OD model. Therefore, other recommendations may be more appropriate if the initial situation or business model changes. This paper focuses on the European and American markets, which are very different from other markets in some parts of the world. For example, sustainability will not have the same priority as in Europe or the United States in less developed countries. Therefore, the strategic recommendations are specific and need to be adapted to each market to deliver practical added value. A comparison of different markets, including quantitative research on customer demand and expectations, could be the subject of further academic work.

# 7. Conclusion

Online food delivery is currently one of the central topics receiving much attention in the food industry. It is dynamic and offers perfect conditions for innovation and digitization. This thesis aimed to analyze business models in the online food delivery industry, identify strengths and vulnerabilities, and propose recommendations for the future success of business models. Analysis has shown that the industry has evolved to contain three primary business models built on the three central pillars of order - cook - deliver. Out of the three business models - Order Only, Order & Delivery, and Fully Integrated - the OD business model has proven to provide the best customer experience, which is why all major OFD players have adopted this model. An in-depth analysis of the OD business model and subsequent SWOT analysis has identified differentiation and profitability as connected, central issues that result from several minor weaknesses and vulnerabilities. Using those insights, it was possible to recommend a new business model, the OCD model, as vertical integration to the current OD model. It is suited to tackle these central issues and provide a clear path to improved differentiation and profitability. The proposed BM is complemented by three strategic recommendations, which OD platforms could also implement to increase differentiation and ultimately profitability. It remains to be seen which business model will be the most successful going forward. However, one thing is quite clear: companies must continue to focus intensely on customer needs and manage to be profitable in the long run, as this is the ultimate goal of any company. The proposed OCD model and strategic recommendations can enable OFD platforms to do better than the competition.

**Industry outlook -** Digitalization will continue to be one of the core topics in the food delivery sector in the future, not least because of the ever-dynamic development of customer needs. Experts predict that the consolidation of the market will speed up and be an important factor of success (McKinsey 2021) (BSCapitalMarkets 2020). The previously mentioned merger of Just

Eat Takeaway and Grubhub, as well as UberEats´ acquisition of Postmates in 2020 were only some examples. Companies aspire to become profitable and therefore attempt to lower costs and increase the benefits from synergies by merging with competitors. Also, a trend towards an aggregation of services becomes apparent in the online food delivery industry. Many platform businesses in other industries followed a similar approach. One famous example is Amazon which started as a sole online retailer and now operates many manufacturing grounds and sells its own goods as private label. Another example can be seen in grocery delivery. While previously platforms such as the Spanish provider Glovo connected supermarkets with customers, most recent competitors such as German start-up Gorillas open their own logistic hubs and distribute groceries to customers. A similar aggregation of complementary services will likely take place in online food delivery of prepared food.

# Appendix

## Appendix A – Interview Transcript

| **Interview 1** | |
|---|---|
| Company | Mjam (subsidiary of Delivery Hero SA) |
| Contact Person | Lisa Marie Feichtenschlager, Project Manager |
| Address | Barichgasse 38, Top 1.4, 1030 Wien |
| Interview Date | December 3rd, 2021 |
| Location | Online |

In the following, statements made by the interviewer will be marked with “I”, while statements made by the interviewee will be marked with “L”.

I: Ok, hello Lisa and thank you very much for offering to talk to me and giving me your insights into the online food delivery industry and how Mjam operates within it. My first question for you would be to just present yourself and describe what you’re doing and why you’re an expert in this industry.

L: Thank you Gabriel. First of all, it’s a pleasure to be here and to share my insights and also my knowledge with you and to help you finding the right answers you’re looking for. So basically I’m working for Mjam. Mjam belongs to the concern of Delivery Hero which is basically based in Berlin and we do have our own entity in Austria, Mjam, across Austria. And my role within the company is that I’m the project manager for the Austrian expansion for virtual kitchens. Only. Including (ghost brands?) also our own (DH kitchens?) and also the franchise concept. I started three years ago as a key account manager and now in my current role I’m fully focusing on driving our virtual kitchen expansion over here in Austria.

I: That's great, thank you. And may I just make another question to your role. So you're expanding the virtual kitchen concept in Austria, meaning that you're contacting existing restaurants on your platform and offering them to expand their offer. Is that correct?
L: Right. I mean like, referring to my role only, so I'm leading a project. Meaning including budget, also the operations and also sales, so those are the three main levers to enter the market I would say. So coming back to your question, is that we have like two main business models. The first model is that we do kind of a franchise business model. So we reach out to existing Mjam restaurant partners that are online on the platform and we ask them: Hey do you want to have or do you want to do additional business with us. So you keep your existing restaurants but you will get a second brand to your existing restaurants. We will do the marketing for you, the branding, we will show you how to cook the dishes, so like the full package. You can compare it to like a Mc Donalds franchise business concept but for delivery only. With the main cause to really develop brands or, like Lieferando isn't able to sign them. Because these are our own brands. And at the moment we have a portfolio of fifteen different brands. And the second business model is that we also build our own kitchens. So we call them (Oju?) kitchens in Austria where we build our own kitchens and where we find an operator who will run this kitchen for delivery only. So it's not like a dine-in restaurant. So it's like a kitchen only, where we cook a couple of brands at the same time. So where we have like five different brands, for example Mamacita, Jesus and so on and it's like a delivery only concept owned by Delivery Hero. So this is a very effective lever when it comes to fully penetrating a city for example where we are not able to find proper franchise partners for example or we do not find any restaurant partner with enough kitchen capacity for example. So, in those areas, meaning like more precisely in areas with a low lead potential but at the same time with a very high order potential for specific brands, we will

enter those areas with our own kitchens. So this is where we are trying to have an (Oju?) kitchen right there.

I: So just that I understand it correctly. You identify geographic regions that are underserved when it comes to online food delivery and there you place those ghost kitchens then?

L: Exactly. So we compare data. So we're looking for areas with a high order potential meaning where we generate a lot of orders from our platform perspective but at the same time where is a high demand for a specific cuisine. For example, like, I don't know, when I take Tulln or smaller cities where the order volume or the platform traffic is very high but we only have Pizza, Kebab, right? (…?) So the whole Mjam portfolio is Pizza only for example and then there is a high demand for Mexican burritos or something like this. And this is where we place Mamacita which is our burrito brand or Mexican brand for example. And this is very helpful and works very well, I would say.

I: And how do you estimate this demand for Mexican food if no Mexican restaurant is present in Tulln for instance?

L: I mean honestly speaking to answer this question I have to reach out to our sales analyst. But basically he's orienting himself by looking at the data, at the order traffic. And I can't answer that right now because like he's providing the data for me and then in the next step I will decide where to go next. So I do have the data ready to be honest.

I: But I mean we can conclude that you have the data insight needed.

L: Yes.

I: We can establish that, that's great. And those ghost kitchens that Mjam runs or Mjam builds and basically finds an operator to run them, are they still owned by Mjam, those ghost kitchens?

L: Yes. Yes. So we rent them. So we have like an operator and the operator will rent the kitchen but we will provide him. So we will do all the construction work, so we will provide

the equipment and all he needs to properly run, so the brands. But we will decide which brands he will get and anything beyond. But he's responsible for the staff. So he needs to provide the cooks, like a kitchen manager. So we only provide the properties and the concept. Meaning we will provide him all the recipes, the work flows and so on. We will do the marketing and the branding and so on. So we will sell him roughly speaking kind of a full package but the (Oju?) kitchens themselves will remain with us. He will rent the kitchen.

I: And when it comes to logistics, like supply of ingredients and stuff like that – do they have to purchase that themselves or do you have suppliers that you forward to them?

L: A very good question indeed because we have like two different kind of such supply chain management offerings. So we have like the Honest Food company. Honest Food company got acquired by us one and a half years ago. What Honest Food is doing is that we kind of pre-cook the ingredients you need in order to guarantee high quality food and that we have like the Mc Donald's experience, meaning it doesn't matter where you order. Mamacita for example always tastes the same. So we will deliver our partners on a weekly basis and we pre-cook the dishes. We do have our own production kitchen in Vienna where we pre-cook the ingredients and then deliver to our partners. The second business model is where we simply have a contract with the wholesaler where our partners purchase the ingredients by themselves but we tell them what kind of ingredients do they need. So we have like specific chicken products and so on, in order to ensure the same taste as well. It's getting a bit complicated because we do have the franchise model, the (Oju?) kitchen and the kitchen is also divided into the wholesaler agreement and  then we do have the pre-cooked one where we provide the whole supply chain also including packaging, stickers and so on. So we deliver the partners with the ingredients pre-cooked and ready to use and also the packaging, also the branding and the stickers and so on.

I: Considering that it's quite complex and that there are many different options – would you say this speaks to the fact that it's more or less in a rather experimental stage? That you're owning your own ghost kitchens and this franchise model? Or do you think that's already an established part of your business model?

L: No we kind of just came out of the pilot phase when it comes to the (Oju?) kitchens expansion for example. What we know now is that a business model like it is the case with the (Oju?) kitchen model only works in big cities or Vienna and the top six cities where we generate a high order volume. When entering smaller cities, like we do have one kitchen in Steyr for example, we are facing challenges like not generating enough order potential so that it's getting to be profitable enough for the (Oju?) operator. But again, we are in a fast moving industry and we are constantly adapting our strategy and the business model. Because at the moment we see, it's a quite exclusive product and it's not a mass product. So that's why we're really looking for high potential areas only because we really want to prevent churns because if we do not generate enough orders, the risk of churning partners is increasing. So that's like the tricky part of it. I can't say if it's fully established already. So we're still in kind of a trial and error phase.

I: I understand.

L: Fast moving industry, right?

I: I understand, yes. Thank you. And maybe moving on now to the next question. So when we look at Mjam and its activities in its daily operations and thinking about it as a check list. Or if you look around in your office, what are the employees doing all the time to make the business work. Like, I don't know, recruiting restaurants and stuff like that. What are the main activities that make that business model work? The key activities?

L: Generally speaking, the online food delivery industry is constantly growing, right? So even more since the worldwide pandemic. So I can definitely tell that we took advantage of

it. So we were able to double the head count at Mjam and also to set up new verticals like online grocery shopping and also virtual kitchens. Coming back to your question, when it comes to the daily work, I mean basically Mjam is an e-commerce company. So basically our main business is just to providing a platform for restaurants and to give them business, right? On top of that we are providing the logistics for restaurants who don't deliver by themselves. And on top of that of course we do have our marketing department and we do have many new verticals like online grocery shopping and also like virtual kitchens and restaurants. So it's a very fast- moving industry so therefore we are constantly adapting our strategy and we are growing. Let's put it this way.

I: And do you have an own department or own employees only dedicated to extracting data insights from your platform?

L: We do have an own department, so like our business intelligence department, we do have our own sales analysts because we are a very data driven company. So we can track every single action. So when it comes to number of orders, reorder rates, so we can really track every single customer behavior and also the performance of our fleet. So the customer experience, we have live tracking of every single order, we can track the prep time per restaurant. So we do have data like restaurants versus rider for example. We know the delivery times, we can measure the user experience, we have every single data you can ask for. We can see the re-order rate, the fail rate, how long it takes that a restaurant accepts an order and so on and so forth. So we can really track literally every single behavior. Which is necessary to adapt strategies.

I: I see. Moving on to the next question, does Mjam have offices in every major Austrian city? Because you're really present in every major state capital at least. Do you have an office everywhere there?

L: I mean as mentioned in the beginning, so our headquarter is based in Berlin. As we belong to Delivery Hero SA. So, however, Mjam is having the main office for the Austrian operations in Vienna only. But we do have some rider stations in other cities where we have our own fleet, our own rider management, I would say. Like, kind of small hubs. But we're mainly present in Vienna and the top six cities including Linz, Graz, Salzburg and so on. So coming to your next questions how we operate in smaller cities like Krems and so on: We do not have an own office there so in such small cities we only provide the platform. So we don't have our own fleet and so on. So we only have our own fleet in bigger cities. Like the top six cities, in Vienna and some smaller cities like Sankt Pölten but, yeah, we don't have our own fleet or own operations in smaller cities like Krems.

I: Okay. So you have at least a small office space in Sankt Pölten to hand gear to the drivers and stuff like that?

L: Equipment and so on. To provide riders with equipment and to have one senior rider captain. So we call them senior rider captain. So it's like one senior rider captain who's responsible for the fleet and for the riders.

I: I see. And in smaller cities your platform still works but you don't deliver yourselves so the restaurants need their own drivers?

L: Exactly. We just provide the platform.

I: Okay great. And really how does Mjam decide in what regions and cities to be active? Is it basically the population count that determines where to go?

L: I mean honestly speaking, this question I need to skip.

I: I see. In the course of our master thesis we are calling the model of Mjam the order and delivery business model. Of course you've merged it with an order only model. So you're basically offering both modes. But only speaking for the order and delivery model, where you

also deliver, what do you think are the greatest opportunities or threats to this model in the nearer future?

L: So you mean biggest chances as opportunities and threats for O-D business models…

I: Exactly.

L: …or for the market place business model? Ok for the O-D business models, meaning like our own service [short interruption]. Ok, so from a platform perspective I can say that we focus on own delivery. Meaning we deliver the logistics and the operations for the restaurants for the following reason: We do have more control over operations. We really want to go for an increase in user experience. So we really want to deliver quality and the best user experience. And with the O-D, so with our own fleet, this is way easier. So we can track every single action, we do have more control over delivery times, delivery experience and so on. So that's why we focus on the own delivery business model because we do have way more control over it and we really want to increase the customer experience. And we know from the data that faster delivery is a better customer experience compared to waiting, I don't know 60 minutes for an order to arrive and you have no control over it, you don't see any live tracking and so on. So that's why we pursue the order and delivery business model.

I: When it comes to courier policy or driver policy – how do you manage your fleet? Do you have your own scooters and bikes that you give to drivers and you think that impacts the attractiveness as an employer, let's say?

L: We do have our own bikes and scooters but, yeah, it's not our core business to put it this way. So we ask our riders to provide by themselves their bikes and so on, just to register and just to simply drive.

I: Have you ever experienced a shortage of drivers that has hampered your business in that sense?

L: Of course, of course we do. It's mainly a seasonal thing. Because during summer times we have a high number of fleet and riders and at the same time a low order volume. When it comes to during the winter times we have a high amount of orders versus lower interest of riders to be in the street. So for example, we are trying to plan the demand accordingly. So in order to have enough riders on the streets. But every time when an unpredicted event occurs, for example when it starts raining and the orders increasing sharply, then at this point sometimes it leads to higher delivery times. But we do have a system in place, when we have a high amount of orders versus not enough riders, we do have automatic shrinkages in place where we automatically reduce the delivery areas per restaurant partner so in order to keep it somehow doable to put it this way. Yes, but of course, sometimes we do face some shortages and especially during winter times when we have high order volume versus not enough riders on the street. Right.

I: I see, thank you. Moving on, in your opinion, most large O-D platform operators are not profitable so far. So what do you think are the main reasons for that?

L: I mean, honestly speaking the food delivery business is a really tight business when it comes to the margins and when it comes to the revenues. So I fully agree on that, we do not generate our main revenue through the O-D fleet, but we do have some non-commission revenue stream where we cover the costs. So our strategy is to have more own delivery business partners live, with the main goal to increase the user experience first but not make the most money out of it.

I: Do you think there is also a mentality of "The winner tales it all" and for now let's burn money and capture market share and in the future we'll make the profits? Do you think that's the rationale?

L: Yes, absolutely. Just like from Delivery Hero's perspective and also from Mjam's perspective, we really focus on growth and then the profitability second. So really we focus on growth first and we want to deliver the best customer experience first.

I: I see. And those new initiatives that you mentioned, like introducing virtual restaurants and owning ghost kitchens. Is the motivation behind it, do you think, just your opinion, rather to increase the service quality and the service level and to gain more market share or to make the business profitable earlier? Because you have a different margin I assume when somebody orders at a virtual restaurant from Mjam?

L: So when referring to virtual kitchens, our main goal is to achieve market share. So how do we do this? It is crucial to create a USP to stand out from the competition. So from my experience also as a project manager, it's a very fast moving environment where you need to adapt strategies very fast and this is why we really focus on creating a USP and our main goal is really to increase our market share with having verticals like grocery shopping and virtual kitchens. So this is the main goal behind creating these kind of brands.

I: I see. If a customer orders at a virtual brand by Mjam, like Mamacita for instance, are the margins for Mjam more attractive compared to when they order at a normal restaurant?

L: No the margin stays the same to be honest. So really we are creating our own brands, really only for the main cause of creating choice. So we have our main (…?) is creating choice for customers, meaning really creating a USP and choice. So this is kind of the main goal of virtual kitchens. But when it comes to the margin and the commission model itself, it's really super similar to all the others. We have the same commission rate for example. We do have some kind of franchise fee or like brand fee on top of that, but the brand fee will cover marketing cost, packaging cost and so on. So in the end we earn the same with the virtual kitchens versus a regular restaurant on the platform but we do increase the choice on our platform and this is a crucial USP to have when it comes to competition.

I: I see. Ok moving on, we've already talked about a couple of questions, that's good. Regarding the fee topic, do you have the same fees for every restaurant or do you negotiate individual contracts as well? Because for instance, I think you have on your platform Mc Donald's as a partner. I mean if you can't talk about it of course I understand but in general, do all restaurants get the same fees?

L: Generally speaking yes. We pursue the same strategy, the same conditions for every single partner.

I: I understand. Do you think, in your opinion, I mean that order and delivery platforms are really targeting basically the whole population, is that correct? Or would you say that you have certain target groups?

L: So I mean, we're aiming for of course the whole population. We do have some target groups. I know that our brand department has the necessary data for that but in that case I can't answer the question but I can provide it later offline, if you want to. I need to reach just out to our internal brand department because we do have the data of our customers and the target group but basically we really want to reach every single Austrian. So this is of course the main goal but we see a certain type of target group on the platform of course. But I do not have all the details to answer the question to you honestly.

I: Of course. And again regarding the virtual brands and the ghost kitchens and the grocery business and so on, so just to recap: These are measures that you take to gain market share and to increase the service level but also to differentiate from competitors, is that correct?

L: Yes, that sums it up. So we are aiming for the best choice, user experience and market share in first run. So this the main goal behind these verticals.

I: I see. Another question relates to customer loyalty. What is your experience with that. Is there low or rather high customer loyalty and are there any means to increase customer loyalty? Do you know anything about that?

L: No I can't have an answer to that right now, I need to skip this question.

I: That's just fine, it's not your specialty I understand.

L: It's like too marketing detailed but yeah I can figure that out and we can take this offline maybe.

I: Thank you. And my last question is regarding fully integrated business models. So just to clarify, those are restaurants like Dominos or Pizza Hut. They operate an actual restaurant with on-site seating often, they operate their own platform, their own app and have their own delivery fleet. So we call them the fully-integrated models. And do you think such models will be successful in the future as well given the dramatic changes? What is your take on that?

L: Honestly speaking, no. I think fully-integrated models like Dominos, their main target group or their main customers will be for sure like kind of returning customers. So because they know the brand and they're returning because of the pizzas of Dominos but in the long run when it really comes to gaining market share and to really grow, you need to provide more because customers are constantly asking for more. They really want to open one app where they can shop their groceries, where they can choose between their favorite Japanese restaurants and so on. So we really see the shift and the trend towards, I would call it fully-integrated like one app, where you can shop your groceries and have all your favorite customer (…?). I think in the long-run Dominos will for sure have the better or the higher rate of returning customers but in the long run I'm not sure if this business model will succeed, in the long run or in the future. But this is just my personal opinion because I do not have any specific data to prove that. But this is from my experience and from my perspective only.

I: Understood. Maybe if you have time, another one or two questions, would that be alright?

L: Yeah, should be.

I: Great, thank you. In your opinion, do restaurants listed on the platform hold negotiating power over Mjam or is Mjam the stronger party? And this question is referring to the fact that you're introducing virtual brands for instance and owned ghost kitchens. And of course those compete with existing restaurants on the platform. Have you experienced any hostile reactions from restaurant owners to these initiatives?

L: This is difficult to answer but when referring to the pandemic for example, we saw a huge shift towards the competition because they really needed the business in order to survive. So that's why we had many restaurants that are also live on Lieferando for example. So I can't answer the question correctly when it comes to the negotiation power because we know that we are a strong platform, especially in Vienna where we earn the stronger position. But it depends on the amount of orders a specific key account or chain is generating for example.

I: And you said before that restaurants during the pandemic also shifted to the competition – did you mean that they were before only registered on your platform and then were also registered at the competition's platform? Or did they leave?

L: No.

I: So they just wanted to increase their reach?

L: They just need as many platforms as possible in order to kind of survive I would say and in order to generate enough orders, as they are not allowed for any dine-in business and only for takeaway and delivery only. So when it comes to that it is crucial to be visible on as many platforms as possible in order to generate as many orders as possible.

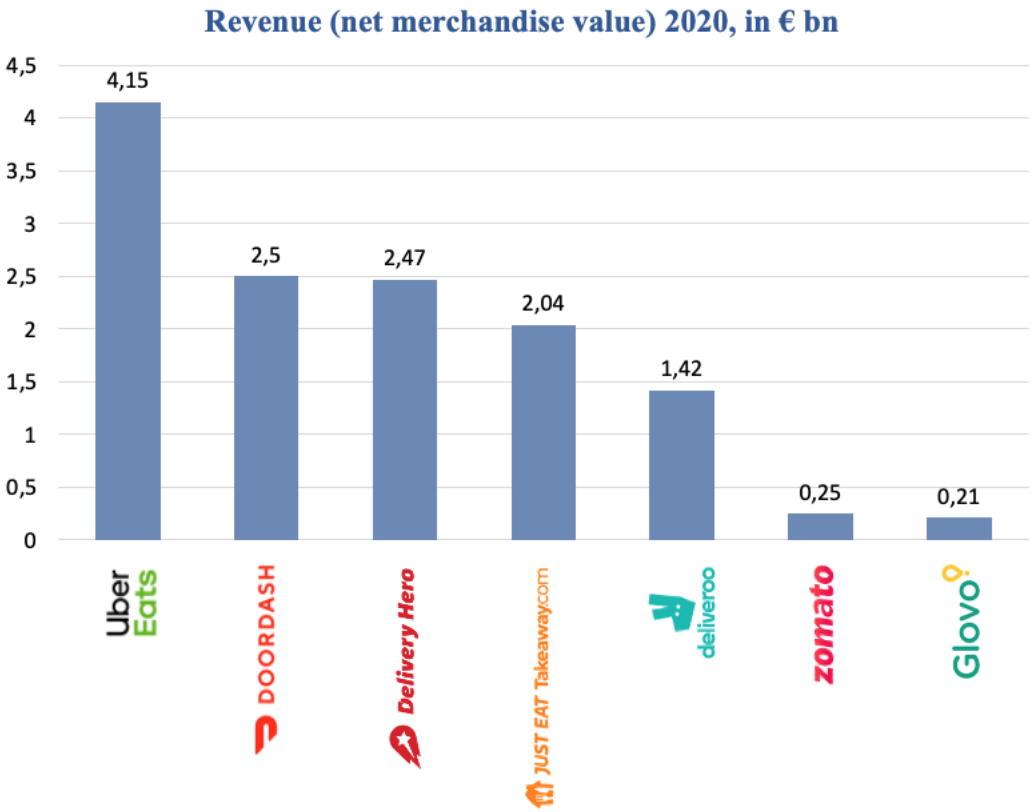
I: I see. Well, thank you very much for your insights Lisa, that was really great talking to you and our master thesis will definitely benefit from your insights. So thank you very, very much and all the best to you.

L: Thank you Gabriel, it was a pleasure to answer your questions. I wish you all the best for your master thesis.

I: Thank you, bye.

L: Bye.

## Appendix B – Key Player Landscape

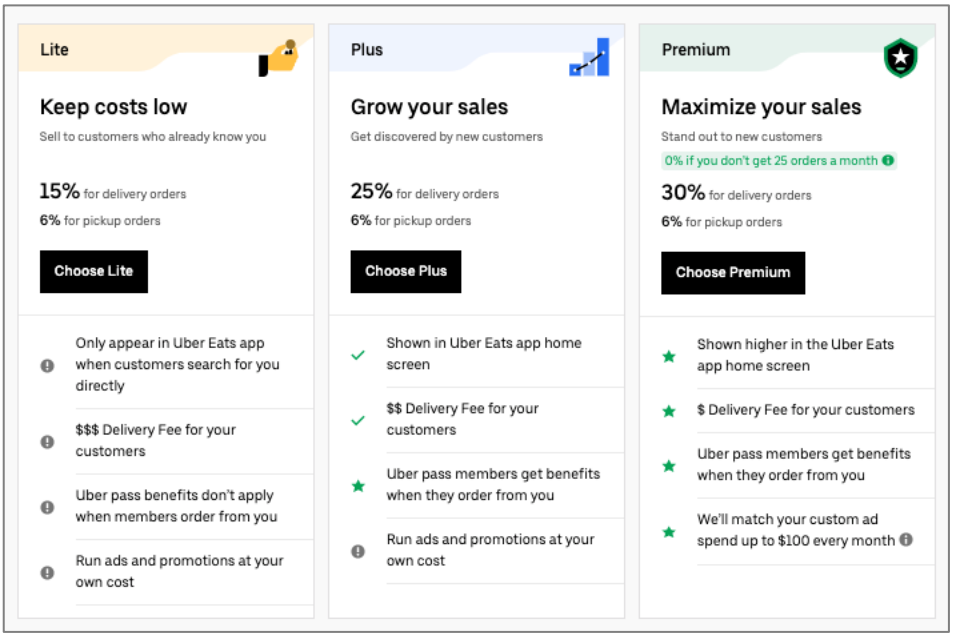



Sources: (Lock, Statista 2021); (Stock Exchange Commission 2021); (Delivery Hero n.d.); (Just Eat Takeaway.com 2021); (Chitkara 2021); (Zomato n.d.); (Bureau van Dijk 2021)

# Appendix C – BMC Light of the OD model

<table>
<tr>
<td><u>Key Partners</u><br>• Restaurants (Providers)<br>• Customers (User)<br>• Couriers<br>• Investors</td>
<td colspan="2"><u>Value Proposition</u><br>• Restaurants<br>• Visability & Reach<br>• Low operational complexity<br>• Reviews and Ratings<br>• Marketing opportunities<br>• Customers<br>• Convenience<br>• Variety<br>• Reviews and Ratings<br>• Saving money</td>
<td rowspan="2"><u>Customer Segments</u><br>• Restaurants<br>• without an own infrastructure for orders & deliver food<br>• that tap into new market segments + get access to new customer<br>• that want to increase the overall volume<br>• Customers<br>• Demographics<br>• Age: 25-34<br>• Gender: both<br>• Psychographics<br>• Convenience lover<br>• Efficiency seeker</td>
</tr>
<tr>
<td><u>Key Resources</u><br>• Intangible<br>• Network effects<br>• Data assets<br>• Brand awareness<br>• Digital platform<br>• Tangible<br>• Active users, couriers and restaurants<br>• Employees</td>
<td><u>Key Activities</u><br>• Recruting Restaurants<br>• Maintaining & Enhancing Platform<br>• Customer Service<br>• Handling logistics<br>• Promotion<br>• Data collection & processing</td>
<td><u>Customer Relationship</u><br>• Customer acqusition<br>• Broad advertising<br>• Promocodes<br>• Banners<br>• Referral Program<br>• Customer retention<br>• Customer Support<br>• Recommendation<br>• Customer Feedback<br>• Loyalty Programs<br>• Social Media</td>
</tr>
<tr>
<td colspan="2"><u>Cost Structure</u><br>• IT Infrastructure<br>• Server hosting, set-up & recurring costs, Salaries<br>• Marketing<br>• Restaurants & customers, Social Media, Promotions<br>• Operations<br>• Sales team, couriers 24/7</td>
<td colspan="2"><u>Revenue Structure</u><br>• Restaurants<br>• Commission Fee (Percentage or fixed amount)<br>• In-App Advertising (Cost-per-click or fixed amount)<br>• Customers<br>• Delivery Fee (based on distance or purchase value)<br>• Subscription Fee<br>• Service Fee</td>
</tr>
</table>

# Appendix D – Uber Eats Pricing Packages



# Appendix E – BMC Light of the OCD model

## Key Partners

- Restaurants
- Customers (User)
- Couriers
- Investors
- Food Supplier
- Facility Management

## Key Resources

- Network effects
- Data assets
- Brand awareness
- Digital platform
- Active users, couriers and restaurants
- Employees: Chefs
- Supply Chain
- Ghost Kitchen & Virtual Brands

## Value Proposition

- **Restaurants**
  - Visability & Reach
  - Low operational complexity
  - Reviews and Ratings
  - Marketing opportunities
- **Customers**
  - Convenience (↑)
  - Variety (↑)
  - Reviews and Ratings
  - Saving money (↑)

## Key Activities

- Recruting Restaurants
- Maintaining & Enhancing Platform
- Customer Service
- Handling logistics
- Promotion
- Data collection & processing
- Ghost Kitchen operations
- Brand bulding
- Supply Chain Management!

## Customer Relationship

- **Customer acqusition**
  - Broad advertising
    - Promocodes
    - Banners
    - Referral Program
- **Customer retention**
  - Customer Support
  - Recommendation
  - Customer Feedback
  - Loyalty Programs
  - Social Media

## Customer Segments

- **Restaurants**
  - without an own infrastructure for orders & deliver food
  - that tap into new market segments + get access to new customer
  - that want to increase the overall volume
- **Customers**
  - Demographics
    - Age: 25-34
    - Gender: both
  - Psychographics
    - Convenience lover
    - Efficiency seeker

## Cost Structure

- **IT Infrastructure**
  - Server hosting, set-up & recurring costs, Salaries
- **Marketing**
  - Restaurants & customers, Social Media, Promotions
- **Operations**
  - Sales team, couriers 24/7
- **Ghost Kitchen operation & Cooking**
  - Facilities, Equipment, Furnishings, Employees, Packaging…
- **Food Supply (Chain)**
- **Economies of Scale and System Gastronomy advantage**

## Revenue Structure

- **Restaurants**
  - Commission Fee (Percentage or fixed amount)
  - In-App Advertising (Cost-per-click or fixed amount)
- **Customers**
  - Delivery Fee (based on distance or purchase value)
  - Subscription Fee
  - Service Fee
  - **Food Sale**

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