Mapping of the Online Food Supply Channels in Ireland

January 2020

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SUSFOOD2: ERA-NET

Funding scheme: PLATEFORMS – H2020 EU project – [2018 – 2021]

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Introduction

The following report sheds light on some of the general characteristics that shape the online food provisioning services (supply channels) operating in Ireland. These characteristics represent the organisational structure, operational features and value propositions, as presented by the online provisioning services on their websites. This research forms part of the ERA-NET Cofund under Horizon 2020 project PLATEFORMS, which aims to produce in-depth knowledge on how food practices are affected by innovations in food provisioning. The report aims to provide a profile of the online food provisioning services based on how they present themselves to their customers by summarising key information extracted from their websites.

Methodology

A dataset has been constructed by collecting information from 140 online food-provisioning services (OFPS) in Ireland. This represented the total number of active online food provisioning services that operated in the business to consumer (B2C) space between December 2018 and June 2019. For the remainder of the report, OFPS will consistently be used to describe the online food provisioning services.

Analysis of the OFPS websites followed a two-stage process. Stage one involved the development of a standard codebook for categorising information extracted from the OFPS websites. This codebook was developed through a consultation process involving the project consortium research members[1] and included the following agreed categories: organisational structure, food categories in the offer, product source, sales & delivery mechanism and value propositions. The second stage of analysis involved coding and verifying the data. Following the initial coding, a second coder crosschecked coded data by blind coding a random sample of 30 OFPS. To further verify the consistency and credibility of the final coded data, all codes were reviewed and agreed by the Irish research team.

Findings

The findings are structured in three sections, as follows: the first section presents the organisational features of OFPS. This provides an overview of the different types of the OFPS and distinguish between the web structure (Pipelines & Platforms). The second section presents the operational characteristics of the OFPS in general, and across all types of OFPS identified. The third and last section focuses on the communications of value propositions by the OFPS.

1.0 OFPS organisational features

Pipelines & platforms

In this analysis two distinct types of OFPS structures are identified, namely the pipeline and platform. The pipeline structure represents the traditional e-commerce approach governed by a single actor (producer or retailer) through a single website - e.g., independent food shops, online-only suppliers, and AFN's websites. The online platform structure represents a third party intermediary web-space that facilitate direct or indirect

1 PLATEFORMS project consortium members: Oslo Metropolitan University (Norway- project Coordinator)- University of Trento (Italy) - University of Gothenburg (Sweden)- Humboldt University Berlin (Germany)- University College Cork (Ireland).

transaction between any two actors (e.g., B2B or B2C or C2C). Online food provisioning platforms are not involved in the production nor the selection of products sold, although they might actively get involved in the delivery and the selection of producers who "fit" the platform mission scope.

In this regard, the vast majority of OFPS operating in Ireland represent the traditional 'pipeline' structure (95%), while 5% of the OFPS represent the platform structure.

Platforms

Despite their low presence, various platform models, with varying operational structures and service mechanisms, were identified. These were food service platforms, hybrid platforms and food assembly platforms.

Table 1 presents a summary of characteristics of the three types of platforms.

Table 1Characteristics of types of food platforms

Platform characteris-tics	**Food service platforms**	**Hybrid platforms**	**Food assembly platforms**
Type of enterprise	For-profit	For-profit	For-profit
Income source	Fixed subscription fees	Fixed subscription fees	Percentage of total sales
Product source	Local restaurants	Mainstream retail suppliers	Local producers/ Suppliers
Product origin	Local restaurants	Local, National & International	Local/region al
Delivery range	Local	Local	Local
Product categories	Restaurants meals	Multiple categories	Multiple categories
Delivery service	Both	Home delivery	Click and collect
Social media presence	Facebook, twitter & Instagram	Facebook & twitter	Facebook, twitter & Instagram
Organic product presence	None	Both organic and non-organic	Both organic and non-organic
Value propositions	Service Convenience	Service convenience	Product convenience

➢ *Foodservice platforms*

This model consists of platforms exclusively designed to allow consumers to order takeaway meals from restaurants in a given area/locality.

Enabled by technology, these foodservice platforms have provided new avenues for growth in the foodservice sector in Ireland[2]. At the time of this audit, five platforms are evident under this structure; these are Just Eat, Deliveroo, Uber Eats, Marvin, and Delivery guys.

➢ *Hybrid platforms*

This platform model resembles the mass retail online service model by bringing on-demand delivery service from a selection of mass retailers to customers in a given area. This model represents an active mediator between retail stores and customers, wherein the platform is responsible for the order fulfilment (actual purchase from store and delivery) through the personal shopper.

The hybrid platform model provides multifaceted value-added services for both retailers and consumers. Consumers can benefit from the service convenience through rapid turnaround delivery and ability to track their order by receiving updates from the personal shopper, while retailers who do not offer online services can utilise this model innovation capacity by letting the platform

[2] These foodservice platforms are driving growth in the foodservice sector. They benefit from consumers gravitating towards the convenience of home delivery systems (Bord Bia, 2017). Recent reports highlighted that a quarter of Irish consumers had used a delivery service to have a takeaway delivered in 2017(Mintel, 2018a).

carry out the online delivery service on their behalf for a given fixed fee. At the time of the audit, only one platform existed under this criterion.

- *Food assembly platforms*

This model offers a centralised IT service that facilitates the creation of an online local marketplace where local food producers/suppliers and consumers digitally 'encounter'. These platforms represent a form of "light" intermediation by digitally connecting consumers with various local suppliers.

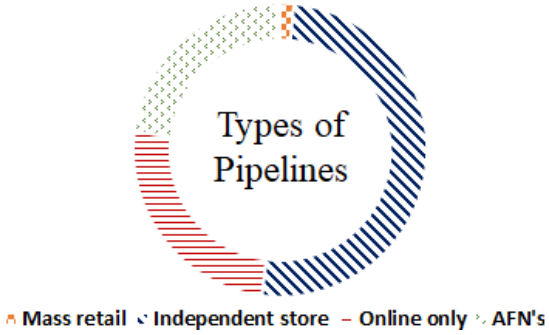
The model embodies the alternative food networks characteristics, in terms of the product sources, supply chain structure, and ethos embedded within the business operation. Suppliers requesting to join the platform are evaluated based on their ecological/ethical credentials and are charged a fixed service fee for membership. Those participating in the platform can vary from direct sale farms selling fruit, vegetables, and honey to others who have their own physical shop and website (e.g., butchers, coffee roasters, and cheesemongers).

Differently to the other two platform models, this model offers a number of designated local collection points for consumers. These weekly collection points are organised by local hosts who act on behalf of the platform in return of a fixed fee. This platform model may create relations among consumers or between consumers and producers through educational and social events organised by these local hosts. At the time of this audit, one such platform was identified.

Pipelines

Overall, four different types of Pipelines were identified. These are Mass retail, Independent food shops[3], Online-only suppliers[4], and Alternative Food Networks (AFNs)[5]. In some cases, the digital route represents the primary route to market for OFPS (online-only suppliers & AFNs), while for independent food shops & online mass retail, it offers an additional route.

Independent food shops are the most prevalent type of the identified pipelines accounting for 50%, followed by online-only suppliers (25%), AFNs (23%), and finally, mass retail accounted for of the identified pipelines (2%).



While two of the mass food retailers operating in Ireland offered an online service at the time of this study, they are excluded from the remainder of the analysis due to the limited number of observations and the limited differences noted within this group due to the breadth of their offerings. The remainder of the analysis will focus on the three other types of pipelines.

[3] Independent food shops are mostly family-run small-specialised food shops and grocers that expand their business to the digital stream through retail websites besides the traditional physical store.

[4] The online only represents the food provisioning systems that exist only online as digital stores.

[5] These online alternative food networks are short food chains that permit direct sale mechanisms between local producers and consumers.

Among the identified online independent food shops, product specialist retailers[6] account for the majority (70%), where butchers (34%) and fishmongers (13%) were the most prevalent types. This was followed by premium specialist retailers[7] (16%), and finally benefit specialist retailers[8] represented exclusively by health food shops (13%).

In the case of online-only suppliers, benefit specialist retailers account for more than half (53%), followed by product specialist retailers (41%), and finally premium specialist retailers are the lowest at 6%. Amongst benefit specialist retailers, ready meal specialists are the most prevalent (35%), followed by health food suppliers (18%). Wine shops, fish smoking houses, and ethnic grocers were other product specialist retailers at 12%, 12%, and 6% respectively.

Finally, the majority (93%) of AFNs were direct sale farms specialising in diverse product categories, such as fruit & vegetables, meat, fish, bread, oats, and drinks (alcoholic & non-alcoholic). Among those, direct sale farms specialising in organic fruit and vegetables via subscription box scheme were the most prevalent (37%), followed by livestock farms (33%). The second type of AFNs were online farmers markets shops specialising in multiple product categories (7%).

2.0 OFPS operational characteristics

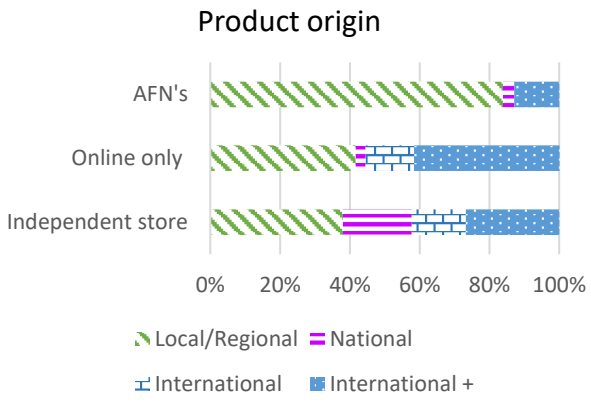
Product origin

Product origin refers to the place of production of the products offered by the OFPS. In this regard, almost half (49%) of the identified OFPS offer products from local/regional sources[9]. The remainder are sourced from the national only, international only and international-plus[10], accounting for 12%, 12% and 27% respectively.

Unsurprisingly, local/regional produced /sourced products are the highest proportion of products offered by AFNs (84%). Products sourced from international –plus and national only were offered less often by AFNs, at 13% and 3%, respectively.

Thirty-eight percent of the online independent food shops exclusively source their products locally. This represent the highest proportion of products offered by independent food shops. The remainder of products offered by this group are sourced from national only, international-plus, and international only at 20%, 27%, and 15%, respectively.

Some 42% of products offered by online-only suppliers are sourced from local/regional only. 42 % are sourced from international-plus, while the remainder are sourced from international only and national only, at 13% and 3%, respectively.



[6] Online suppliers mainly specialising in single food category (e.g., Meat, fish, wine, etc.)

[7] Suppliers of premium quality foods (e.g., Artisanal produce).

8 Suppliers that focus on health benefit (e.g., health food shops, ready meal specialised suppliers).

[9] In the Irish context, 'Local' is defined as products linked to a particular person –i.e. small-scale producers (Bord Bia, 2017) - Local here refers to information presented in the provisioning service website that links to a local producer or local production site.

[10] International plus refers to multiple product sourcing from international, national and local sources.

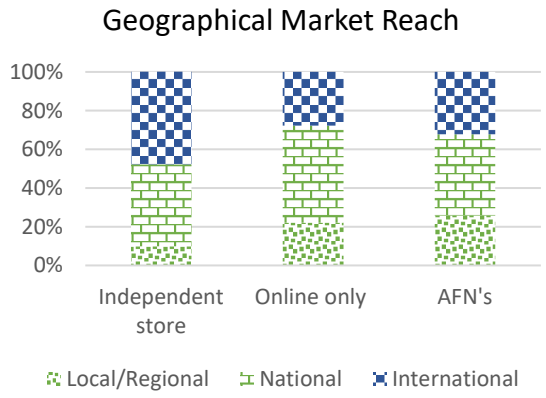
Geographical market reach

Geographical market reach is concerned with whether the OFPS operates in the local/regional, national and international markets. In contrast to the product origin, the majority of the OFPS do not limit their delivery range to local/regional areas. Some 83 % provide a nationwide delivery service, and about 32% of OFPS supply to international markets.

Amongst the three types of OFPS, some (42%) of the independent food shops limit their delivery to national markets . Forty-eight percent extends their reach to international markets, and just 10% restrict their delivery to local/regional area.

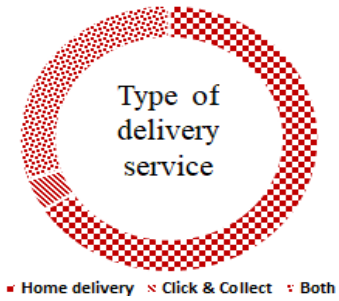
Half of the online-only suppliers service the national only, and 28% extend their services to international markets. With 22% operating solely at the local/regional areas.

Interestingly, just over one quarter (26%) of AFNs provide local/regional delivery service, while almost half (45%) provide national delivery service only, and the remaining AFNs (32%) extends their offerings to international markets.



Delivery

Efficient delivery is an essential value service in food e-commerce[11]. In the context of this analysis, two approaches for receiving online orders from OFPS were evident, home delivery or click and collect. Overall, nearly all types of OFPS (96%) provide home delivery service to their customers, and about 30% provide both home delivery and click & collect. A very small number of OFPS only offer a click & collect services, though; their presence among these types of OFPS is almost negligible (3.6 %).



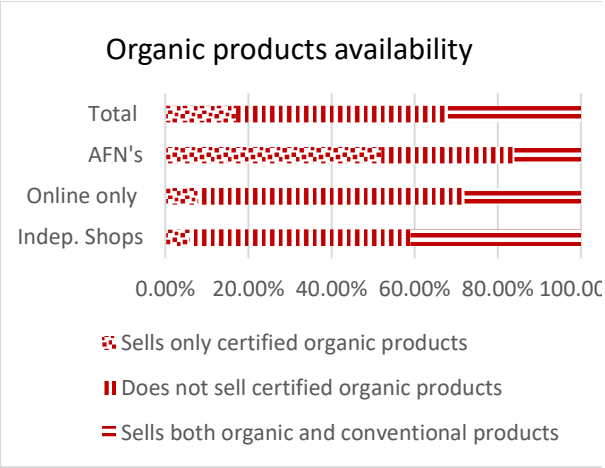
Organic products

Almost half of the OFPS (49 %) offer at least one organic product. Of this 49%, 17% offer certified organic products exclusively. The remaining OFPS (51%) do not sell organic products.

Of the three identified types of OFPS, independent food shops and online-only suppliers are the least likely to offer organic products only, at 6% and 8%, respectively. Over half (53%) of independent food shops do not sell organic products, and 41% offer both organic and non-organic products. For online-only suppliers, the majority (64%) do not sell organic products, while 28% offer both. Over half of the AFNs (52%) sell only certified organic products, while some 16% offer both

[11] Home delivery is the most popular method of receiving online purchases in Ireland, with 89% of consumers had online purchases delivered to their homes (Toluna, 2017- in Mintel 2018b).

organic and conventional produce. Finally, 32% of AFNs do not sell organic products. These are mainly conventional livestock farms.



Product categories

There is considerable diversity in products sold by OFPS in Ireland. However, some noticeable difference in the product portfolio were evident between the three-analysed types of OFPS. In this regard, two generic categories of products offered by the OFPS were found, ambient food and fresh food. Ambient food offerings are most common with snacks, preserves, and cereals, at 49%, 40%, and 27%, of OFPS respectively. Independent food shops and online-only suppliers are somewhat similar with a high proportion of both selling ambient food.

Generally, fewer OFPS offer fresh food. Fresh food can be divided to two subcategories, raw perishable products (Fruit, vegetables, raw meat & fish) and minimally processed perishable products (Ready meals[12], bread & dairy products). Among the raw perishable products in offer by the OFPS, meat is the highest at 31%, while fish, fruit and vegetables are the lowest raw perishable products in offer at 18%, 17%, and 16%. In the case of minimally processed perishable goods, Ready meal category is the highest (28%), followed by bread and dairy products at 24%, and 21%, respectively.

Within the three types of provisioning services, independent food shops and online-only suppliers are least likely to offer fruit and vegetables, while AFNs are the most likely to provide fresh fruit and vegetables, at 29% and 39%, respectively. This is unsurprising as the supply chain structure of both online-only suppliers and independent food shops may limit the capacity to manage raw or minimally processed fresh products with their typically short shelf life. In contrast, the short chain structure that characterise AFNs facilitates the direct selling of freshly harvested farm produce to customers. In the case of meat and fish, independent food shops had the highest proportion of raw meat (39%) and fish (25%). These online independent shops are traditional butcher shops/fishmongers etc. that offer a website alongside the physical shop.

Online-only suppliers are the most likely to offer ready meals at 47%, this compared to 23% for independent food shops. A noticeable difference exists across the online service providers in their offerings in this product category. The independent food shops offer ready meals as an additional product category, while the online-only suppliers are kitchen-based enterprises specialising only in ready meals and meal planning for their customers via weekly/monthly subscription schemes.

3.0 Value propositions

In positioning their businesses, the OFPS communicated their ethos/benefits of their offerings. These were considered as

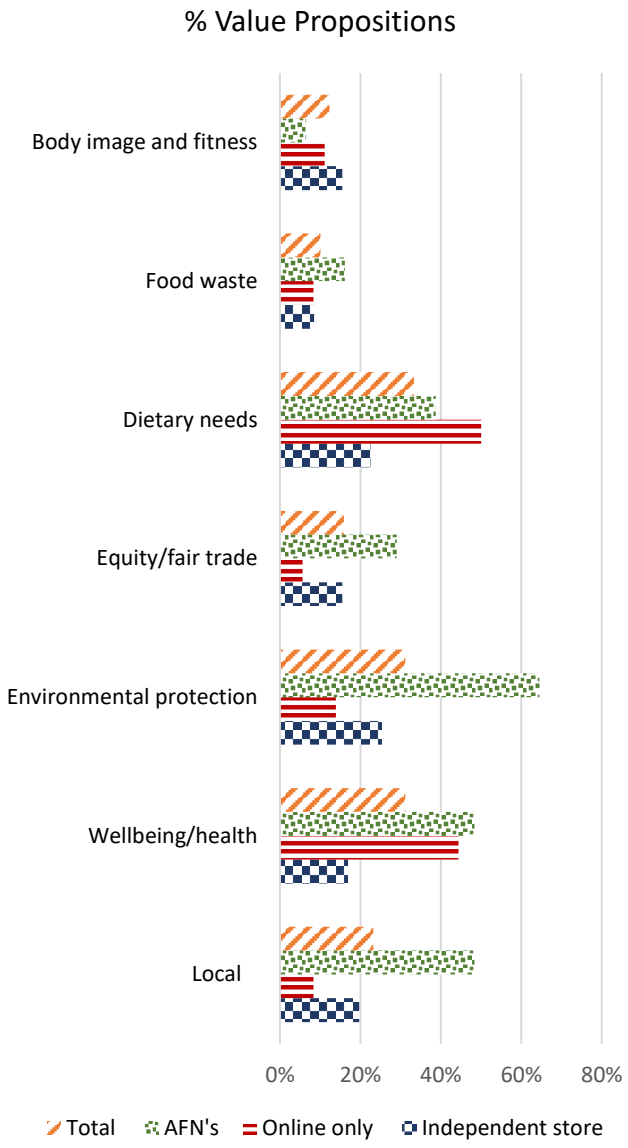
[12] Ready meals/convenience meals: meals that only need to be heated up.

representing their value propositions. Several key themes were identified in the value propositions communicated by the OFPS in their websites, these were local, environmental protection, equity & Fairtrade, food waste, health & wellbeing, special dietary needs[13], and body image and fitness. Some of these correspond to the UN SDGs that address the global sustainability challenges, including those related to environmental degradation, inequality and health.

Overall, health and wellbeing, special dietary needs, environmental protection, and local, were most frequently communicated by the OFPS as characters of their business/products at 31%, 33%, 31%, and 23% respectively. Equity & Fairtrade and food waste were the least mentioned at 16% and 10%, respectively. Body image & fitness was a focal point for 12% of the identified OFPS.

Interestingly, notable differences were evident in the focus on these value communications across the three types of identified OFPS. 65% of AFNs had communicated on environmental protection, compared to 25% independent food shops, and 14% of online-only suppliers. Half of the online suppliers had communications on special dietary needs compared to 39% of AFNs and 23% of independent food shops. Regarding communication on health & wellbeing, 48% of AFNs have this type of communication, followed by online-only suppliers (44%), and finally independent food shops (17%). Finally, 48% of AFNs had communications on local, followed by independent food shops (20%) and online-only suppliers (8%).

Body image & fitness was frequently communicated by 16% of independent food shops, compared to online only (11%) and AFNs (6%). Regarding communication on equity & Fairtrade and food waste, (29%) and (16%) of AFNs had these communications respectively, compared to independent food shops (16%) and (8%) and online-only suppliers (6%) and (8%), respectively.



[13] "Special dietary needs"- i.e. Vegan, Gluten-free, Lactose free.

Box 1: Examples of value communication

*"… Coming together with other growers we can expand the range and volume of local food that we can supply and can support small businesses from around the region..."- **Good & green.***

*"… When food is grown locally, there is a great feeling for the customer knowing that not only are they supporting local business and the local economy, they also know where their food has come from and they may even personally know the grower!"- **Rocket deliveries.***

*"Everything that is grown is certified organic: tasting better and being better for our health and the environment as well us hardly a surprise"- **Kildinan farm***

*" As a business, we are striving to be carbon neutral and we're actively looking for ways to reduce and eliminate the plastic packaging in our boxes…..All of our fresh produce is packed either loose or plant based/brown paper bags, which we take back and re-use every week"- **Green earth organics.***

*"Our aim is to make healthy eating easy! We offer nutritious portion controlled meals to allow you manage your diet easily, helps to nourish your body, helping you feel your best"- **Gourmet fuel.***

***"**People have the perception that only people who take part in resistance training require a high amount of protein but this is not the case. Athletes, who take part in long distance endurance running and sports like soccer, Gaelic football and basketball, require protein for strength and maximum performance"- **Herterich butchers**.*

Conclusions

This report aimed to profile the online food provisioning services "OFPS" operating in the e-commerce sector in Ireland. It does so by summarising key characteristics, regarding the organisational structure, operational features, and value propositions as presented by the OFPS on their websites to their customers.

Based on available data, the results show that the majority of the OFPS represents the traditional e-commerce model (pipelines), with very few food platforms active in Ireland. These food platforms are the most innovative type of OFPS in food e-commerce, which explains their modest presence in the Irish food e-commerce sector. Among those platforms identified, only two platforms were grocery based (hybrid & food assembly platforms), while the majority were foodservices platforms. The food assembly platforms is a good example of socio-technical innovation in the way food is provisioned, where it acts as a digital food hub that brings the local food community together. The platform technical innovation provides an opportunity for small and medium local producers/suppliers that may not have the capacity to provide their own online service to reach customers who seek access to these products at a location convenient to their home/work.

Two broad types within Ireland's pipelines can be identified. First, alternative retailing through, for example, independent food shops and online-only retailers/businesses, and second, Alternative Food Networks (AFNs). The alternative retailers can be seen as the classical brick-and-mortar types of retail businesses that mirrors the products available in the shop shelves/warehouses on their websites. In contrast, AFNs are mainly small-scale family-run businesses using online service to offer fresh and local farm produce directly to consumers.

The majority of these OFPS hold a local identity, where most products are produced or sourced locally. These locally based producers/suppliers are increasingly utilising the e-market space to present their quality products to a broader range of customers at local, national, and international levels. Nevertheless, the environmental impact of the nationwide delivery service provided by the majority of the OFPS remains at a crossroad. Although it may boost the local economy by helping the small local businesses access a broader range of customers to secure more income, the negative impacts of extended transportation on increasing CO2 footprint remain questionable.

There is a concentrated focus on health & wellbeing, special dietary needs, and environmental protection in value propositions communicated by OFPS. The emphasis on health and wellbeing and special dietary needs is particularly emphasised.

Across the three types of OFPS distinguished in the analysis, AFNs are key route to local and organic products in the Irish online retail market space. The products sold through these AFNs are mainly locally produced vegetables, fruit, and meat. These AFNs shares more or less common values and priorities, many of which align with the broadly defined perceptions of socio-environmental sustainability (Sage, 2010), with great emphasis on environmental, health & safety (organic), and supporting local. AFNs promote these sustainability values in their communications to differentiate themselves from the conventional production and retail systems (Sage, 2010). By communicating these sustainability values, they speak directly to consumers who seek a sustainable and ethical alternative to the current unsustainable food systems.

Independent food shops were limited in terms of presenting communications on sustainability value propositions. However, a significant proportion of these independent stores were most likely to present communication on body image & fitness. These values were mainly present by online butchers encouraging athletes to increase their meat protein intake to maximise efficiency.

Finally, online-only supplier's communicated value propositions focused on special dietary needs and health & wellbeing. This is due to the significant presence of online-only ready meal specialists who focus on promoting the convenience of making healthy eating easier through calorie and portion controlled meals, and offering plant based options in their meal plans to attract customers with special dietary needs (Vegans and vegetarian customers).

Limitations

The current research has some limitations; First, the data collection was based on web analysis, which restricted the data only to what is available on the food provisioning websites. Consequently, it was not feasible to access critical information on turnover, number of employees, and the number of registered consumers and producers. Second, the number OFPS and retrieved information from their websites is restricted to the time of data collection, which took place between December 2018 and June 2019.

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