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Перспективы развития FoodTech в современных реалиях в России

Prospects for the development of FoodTech in modern realities in Russia

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Аннотация. *В данной статье рассматриваются перспективы развития Foodtech в Российской Федерации. В настоящее время цифровые технологии являются главным драйвером роста и условием модернизации сферы общественного питания. Огромным толчком для внедрения цифровых технологий на предприятиях послужила короновирусная инфекция (COVID-19), которая появилась в 2020 году. Установлено, что наибольшее развитие получили следующие технологии: разработка высокотехнологичных упаковок, разработка и внедрение «SMART» устройств и приложений, сервисы доставки еды (FoodDelivery), предзаказ готовой еды (Take-Away), в том числе доставка продуктов из супермаркетов (Online Grocery), которые и на данный период времени пользуются огромным спросом и имеют огромный потенциал для развития. Одним из основных мест для предприятий питания, через которое они способны предоставить свой товар и разыскать платежеспособную аудиторию, являются маркетплейсы. Несомненно, главными преимуществами маркетплейсов являются: их растущая доступность, глобальный масштаб, а также улучшение цепочек поставок. В то же время автором установлено, что полная зависимость от маркетплейсов может привести к некоторым факторам, которые в долгосрочной перспективе могут негативно повлиять на предприятия. Даны рекомендации по нивелированию данных факторов. Также были выделены значимые направления, которые способны привести к мощному толчку продвижения цифровых технологий в сфере общественного питания.*

Ключевые слова: FoodTech, общественное питание, цифровые технологии, доставка еды, искусственный интеллект, маркетплейсы

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Abstract. *This article discusses the prospects for the development of Foodtech in the Russian Federation. Currently, digital technologies are the main driver of growth and a condition for the modernization of the catering sector. The coronavirus infection (COVID-19), which appeared in 2020, served as a huge impetus for the introduction of digital technologies to enterprises. It has been established that the following technologies have received the greatest development: the development of high-tech packages, the development and implementation of "SMART" devices and applications, food delivery services (FoodDelivery), pre-order of ready-made food (Take-Away), including the delivery of products from supermarkets (Online Grocery), which for this period of time are in great demand demand, and have a huge potential for development. One of the main places for food companies through which they are able to provide their goods and find a paying audience are marketplaces. Undoubtedly, the main advantages of marketplaces are: their growing*

availability, global scale, as well as improving supply chains. At the same time, the author found that complete dependence on marketplaces can lead to some factors that in the long term can negatively affect enterprises. Recommendations for leveling these factors are given. Significant directions were also highlighted that can lead to a powerful push for the promotion of digital technologies in the field of public catering.

Key words: FoodTech, catering, digital technologies, food delivery, artificial intelligence, marketplaces

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Introduction. Currently, FoodTech or digital technologies are becoming an integral part of life both for a person and for all areas of production.

FoodTech is the introduction of digital technologies in the field of catering [1].

A huge impetus for the introduction of digital technology in enterprises was the coronovirus infection (COVID-19), which in 2020 the World Health Organization (WHO) recognized as a pandemic [3].

In this regard, many catering enterprises began to actively develop and implement IT technologies. The following proposals received the greatest development:

1. Development of high-tech packaging in order to maximize the preservation of product properties and minimize problems associated, including with the environment;

2. Development and implementation of "SMART" devices for catering companies in order to save time on the return of the order;

4. Recommendation services. Services that form the consumer's request for the selection of products, taking into account their requirements; obtaining analytical data, etc.;

3. Food delivery services (FoodDelivery), pre-order ready meals (Take-Away), including food delivery from supermarkets (Online Grocery) have received the greatest development.

If during the pandemic the development of food delivery can be conditioned by the recommendation to comply with the regime of complete self-isolation in which a person avoided contact with other people, then for the period 2022-2023. These industries are in demand due to the following factors:

1. Pre-ordering ready-made food (Take-Away) allows you to eat quality food because the products are prepared in professional catering establishments in compliance with all sanitary standards and requirements, and also allow you not to waste time waiting for customers to prepare meals;

2. Delivery of products (Online Grocery) also allows you to save time and select the necessary products through special marketplaces or alternative mobile applications [9].

The goal will be to analyze the use of marketplaces by food enterprises, identify their pros and cons, and also give a forecast for the growth in the introduction of digital technologies in the food industry.

The objects of research are marketplaces, as well as promising digital technologies in the field of nutrition.

Research methods. In the presented article, general scientific methods of a systematic and integrated approach, generalization methods, methods of comparative analysis were used.

Results and discussions. Many local "Hade Made" catering companies use marketplaces, they allow you to set up logistics, delivery systems, expand your audience, and also familiarize consumers with your brand.

At the same time, the above advantages can, under certain factors, turn into obvious disadvantages in the long term for both large restaurant brands and local "Hade Made" enterprises. Below is Figure 1, which shows the pros and cons of using marketplaces.

Dependence on marketplaces by local businesses is the main reason for the loss of customer base, since there are many uncontrollable factors that can affect the brand of an enterprise, for example, the loss of organoleptic properties of a dish or food due to improper delivery, storage or

transportation. At the same time, there is such a factor as technical problems on the marketplace platforms, during this period of time, enterprises may lose potential or regular customers.

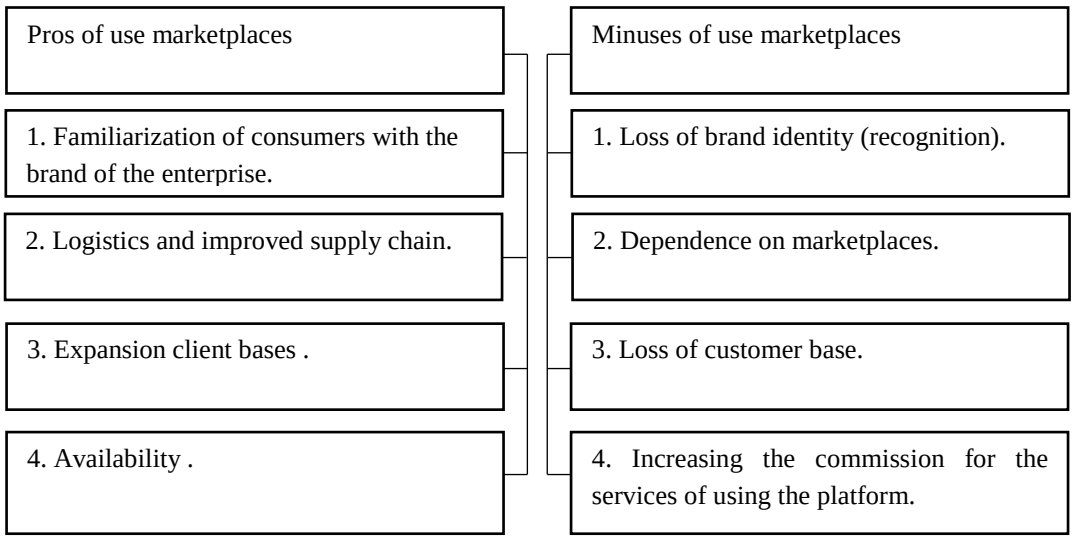

Figure 1 - The main pros and cons of using marketplaces

In addition, despite the availability, the marketplace can at any time increase the amount of commission for its services or change the conditions of participation in some other way [4].

Based on the above factors, we can say that in the future, local "Hade Made" enterprises need to look for a search for the development and expansion of their network in order to maintain their identity and promote the brand, and also look for ways to stand apart from large marketplaces.

As for large restaurant brands that work with marketplaces, they need to create applications and develop their sales channels by selling products through mobile applications and their own websites, such as KFC, Burger King or Dodo Pizza.

At present, the introduction and development of IT technologies has not stopped, but is only gaining momentum. These developments in the field of nutrition will reduce costs and increase profits, ensure information security of production, etc.

There are several areas that can lead to a powerful impetus for the promotion of digital technologies in the field of nutrition.

One of the possible IT technologies in the near future may be the emergence and spread of AR headsets and 5G, which will provide an opportunity to use the Internet reality using AI, VR, MR and AR technologies [6].

Thanks to Extended Reality (from English: “extended reality”), a potential customer will be able to immerse himself in a virtual environment in which he will be able to get acquainted with the dish through the presented virtual menu, immediately before ordering it. In addition, using AR headsets, it will be possible to get complete information about the dish that he buys in a restaurant, including information about the region in which the crop was harvested, under what conditions it was grown, where it was processed, information about food energy etc.

In addition, in the future, it is possible that visual machines for assessing the quality of a dish with artificial intelligence will appear, which will be able to determine product defects, control the composition and the absence of impurities. Certainly, this will have a positive effect on the quality of the dishes, since, for example, the freshness of the products, compliance with the temperature regime, etc. will be monitored.

It should be noted that for this period of time, robotic enterprises have already appeared, in which automatic packaging and return of products is possible, but they are rather isolated and experimental in nature [4]. At the same time, for local "Hand Made" enterprises, this is not economically profitable, since the human resource is much cheaper than full automation of production. As for large enterprises, this concept can pay for itself in the fast-food industry. For

example, self-service terminals are now actively used, in the future it is possible to introduce into production machines capable of completing and automatically issuing an order to a client.

Conclusion. FoodTech is increasingly being introduced into the catering industry. In the next 5-10 years, there will be more noticeable changes, because, as mentioned above, first of all, not only the self-identity of the brand will come first, but also the technical re-equipment of enterprises, which will be able to combine products and services into a single component. According to experts, in the field of food entrepreneurship, both large and local brands, in order to compete in the future, must transform into niche ecosystems with a focus on entertainment, healthy lifestyle and personalization. Otherwise, you will have to adapt to the conditions of marketplaces.

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