



EFFECTS OF CUSTOMER SATISFACTION AND EDUCATION LEVEL ON LOYALTY: A STUDY OF ONLINE FOOD DELIVERY IN SERBIA

Ensar Mekić, PhD

Assist. Prof., International Burch University, Bosnia and Herzegovina

ensar.mekic@ibu.edu.ba

Melisa Asotic 

MBA candidate, International Burch University, Bosnia and Herzegovina

melisa_asotic98@hotmail.com

Abstract

The main goal of this study is to shed light on the start of the business of online food delivery applications by focusing on factors of customer loyalty. Besides investigating influence of customer satisfaction and customer education on loyalty, this paper highlights the demographic profiles of food delivery application users. Even though the online food delivery services are widely adopted by customers with busy lifestyle, it seems that during Covid-19 pandemic the digitalization of online food delivery reached its peak. Despite of high adoption of food delivery applications among customers in Serbia, there is still not enough literature dealing with such important topic. This study relied on structured survey to collect data from 313 users of online food delivery services in Serbia. The validity and reliability of measures are confirmed using factor loadings and Cronbach's alpha values. For empirical part of the research, structural equation modelling (SEM) was applied. The results indicated statistically significant effects of customer satisfaction and customer education on customer loyalty. Findings of this study can help managers and marketers improve customer's loyalty, but also serve as a steppingstone to future researchers who would like to research similar topics in Western Balkan countries.

Keywords: Online Food Delivery, Customer Loyalty, Customer Satisfaction, Applications

INTRODUCTION

The global market for food delivery services will continue to grow and recorded an annual growth rate of about 32% in 2021 (InHoreca, 2020). Caterers, also aware of this trend, gladly accept cooperation with delivery companies. Figures on orders and revenues of the world's food ordering and delivery services are constantly growing under the baton of a busy lifestyle. Food delivery services are gaining in importance undoubtedly due to their practicality and easy availability, but they are also encouraged by simplified online payment systems. These applications make it easy to order, track and pay, which makes them popular among millennials, but increasingly also among other target groups. Apart from the fact that restaurants are increasingly using third-party delivery services, and according to all the announcements of analysts, this trend will continue in the coming years.

According to Statista, in 2019, 204 billion different mobile applications were downloaded from distribution platforms such as Apple Store and Google Play, and others worldwide, either for free or for a fee (Statista, 2020a). Apps have become part of the daily lives of hundreds of millions of consumers, changing their patterns of behavior, and with the Covid-19 pandemic rules, their adoption has even increased. This is, among other things, the case with mobile applications for food delivery, both in the world and in Serbia. Mobile applications development enabled food ordering possibilities even more simple and convenient for customers. New habits and priorities of people who live faster and want to save time have contributed to this transformation. This is especially pronounced among consumers in urban areas. Available statistics indicate that online food ordering is most popular among the younger population (as many as 58 percent of the total number of consumers are people under the age of 35) and that this type of application is used equally by men and women globally. Interestingly, 41 percent of consumers are people with lower personal incomes (Statista, 2020b).

The online food delivery market has grown rapidly due to the impact of the global Covid-19 pandemic. Lockdown has prevented consumers from visiting restaurants, forcing them to seek food delivery services on online platforms. The pandemic has contributed to the growth of orders through mobile applications and the Internet in general while posing logistical challenges to companies in the food industry. Investment in food delivery protocols and equipment has largely determined the degree to which their growth potential has been exploited during the crisis. The outbreak of the pandemic has undoubtedly raised questions about the scope and scope of food delivery applications, as well as the possibilities for further growth of this segment of the economy. Circumstances caused by the coronavirus have reshaped the economics of applications and, among other things, expanded it to deliver products from supermarkets and pharmaceuticals.

This study aims to primarily investigate effects of Customer Satisfaction and Education Level on Loyalty by focusing on online food delivery in Serbia. Secondary objectives are to better understand characteristics of online food delivery users such as gender, age, education level, employment status, monthly income and marital status. The contribution of the study is twofold, theoretical and practical at the same time. The study enables managers and marketers in online food delivery business to better understand their customers and improve customer loyalty, but it also provides a good basis for future scientific researchers who would like to investigate this topic in Western Balkan countries.

THEORETICAL BACKGROUND

The rise of the platform economy as part of the digital transformation has in recent years contributed to the reshaping of economic processes. In this regard, the proliferation of digital platforms has influenced changes in socio-economic patterns, such as consumption, communication, and work style. Exploring digital platforms which are a disruptive factor in the functioning of traditional industries and how they shape everyday life can help us better understand the development path of the platform economy (de Reuver et. al., 2018).

This segment of the economy is often called the "sharing economy". Despite the difficulties in defining it, the platform economy is a technology-based and technology-dependent economy model that, as such, shapes work, institutions, organizations, value chains, and business models (Poutanen & Kovalainen, 2017). The platform economy business model can be described as the way a network of participants collaborates in creating and appropriating value through technological innovation (Chesbrough, 2003). Platforms are usually described as "two-way" and/or "multi-faceted" network markets that facilitate transactions or, at the very least, interactions between many independent groups in which at least one, but usually all, have direct or indirect benefits (Martens, 2019).

This intermediary channel (platform) can reduce search costs for all participants and improve pairing between actors at opposite ends of the exchange (such as between restaurants and people interested in buying a meal), enabling value creation in the interaction process (Duch-Brown, 2017). Tauscher (2016) describes the complexity of the platform economy through four basic characteristics. First, he points to the existence of independent supply and demand groups linked through the platform. Second, these groups enter direct interactions with each other to initiate and realize a transaction, but these interactions go beyond highly automated processes such as those in e-commerce or stock exchanges. Third, the platform provides an open, participatory institutional and regulatory infrastructure for these interactions and sets the conditions for managing them (Takagi, 2020). Fourth, the digital market is

essentially not producing or trading goods or services. Further, the concept of digital platforms is new interactive business approach where value is co-created, translated (co-converted), and co-appropriated among different players in the ecosystem: producers, customers, competition and community. Various approaches have been used to define a single typology of the platform economy, but the main classification of digital platforms is based on the type of resources they provide access to 1) access to information (or content), 2) access to personal data, 3) access to goods and/or services; 4) access to labor or expertise or intellectual abilities of people, 5) access to money or capital such as sites for the so-called crowdfunding (Strowel & Vergote, 2019). Access to goods and services is mainly provided through mobile applications (platforms) that can be defined as subtypes of online platforms. Tauscher and Laudien (2018) go a step further in distinguishing online platforms from mobile applications, offering a comprehensive overview of the main differences between them. The most striking examples of mobile applications are those for food delivery (Strowel & Vergote, 2019). Globally, the most popular mobile applications for food delivery are: "Takeaway.com", "Deliveroo", "FoodPanda", "Uber Eats", "DoorDash".

Food delivery applications combine several features such as providing a wide range of choices food to consumers, receiving orders and transferring orders to food producers, recording payments, organizing food delivery, and providing delivery process monitoring services. This business model has been recognized as one of the fastest-growing phenomena within e-commerce (Thamaraiselvan, et. al., 2019).

LITERATURE REVIEW

When we talk about any platform for ordering food, we need to know that these companies believe in building strong, win-win partnerships that will last. By collecting and analyzing information such as purchase history, traffic situation, market trends, and online comments, food delivery companies will be able to accurately assess customer preferences and delivery times. The main functionality of any on-demand application is to combine the need for a product with product delivery in the fastest possible way (Šarac et al., 2018). User habits differ the most within different social groups that need to be better identified. The student population has significantly different habits than e.g. business users, have different paying powers, consume different types of food, and these habits and needs are very similar in all the cities in which they operate. In the food delivery industry, customers and their experience always come first. Precisely to provide top service, delivery companies are constantly working on innovations within the application and the system itself.

All business activities are monitored in detail (from logistics, operational to marketing, and financial), which ultimately opens up opportunities to provide the best possible service to customers (Šarac et al., 2018). Since they take great care of the delivery time and user experience, restaurants must prepare food fairly quickly so that the courier does not have to wait long, they must ensure that nothing is missing from the order and that the menu is always updated. When it comes to service users, they are mostly citizens who use new technologies every day that are a way of life for them and thus have a habit of using mobile applications. To withstand competition, mobile applications must be in a constant process of innovation, which is based on a thorough knowledge of the expectations, preferences, and needs of its end users (Dillahunt, et. al., 2017).

When the Covid-19 pandemic broke out, the mobile application market in Serbia was in its infancy. The predecessor in this market was the "Donesi" application. Originally a local company, Donesi was bought by FoodPanda in 2014 and by Delivery Hero in 2016. Only with the entry of global mobile applications such as "Wolt" in 2018 and "Glovo" in 2019, the Serbian market began to look like a foreign one (Udruženje CENTAR, 2020). Covid-19 accelerated the growth of this market, which showed exceptional flexibility by almost immediately including the delivery of pharmaceutical and supermarket products. Moreover, the pandemic affected CarGo's passenger transport model. During Covid-19, the use of the passenger transport app decreased, but that led the company to expand and test the food delivery service in March 2020 and launch it in October of that year. Before the advent of food delivery applications, part of the population ordered food from restaurants online or by phone, and the delivery itself was done by restaurants. This pattern of food ordering is still very much present, but mobile food delivery applications are gaining importance. In addition, the emergence of the Covid-19 pandemic and the introduction of a state of emergency have influenced the emergence of new forms of delivery through applications. Namely, in the mentioned period, both globally and in Serbia, the delivery service was extended to other products, primarily grocery stores and products from pharmacies. Analysis of user demographics can be valuable for identifying business development opportunities and understanding market trends (Udruženje CENTAR, 2020). Demographics often reveal customer preferences, habits, and motives and help companies make strategic decisions for the future. Therefore, we decided to focus on the customer experiences with applications for food delivery in Serbia.

The average user of food delivery applications in Serbia is more often female, unlike other countries where the users are predominantly male (Statista, 2020c). Delivery applications in Serbia and other countries are most often used by employees. The most common users are young people: in Serbia, over 50 percent of users of apps belong to the population up to 34

years of age. The next most numerous group is those aged 35 to 44 (32%), which confirms that these applications are more accepted among younger people (Garcia, 2018).

The largest number of users of these applications are from larger cities, which is expected given the size of the population and the number of applications that operate in these cities. With the acquisition of "Donesi" by "Glovo", "Glovo" becomes one of the strongest participants in the market. It should be borne in mind that Covid-19 influenced the structure of supply and demand: products from supermarkets and products from pharmacies first entered the supply during the lock-down and the pandemic. Only "Glovo" had these and other products in its offer even before the pandemic broke out. When ordering food, most users order fast food: pizza, burgers, and pasta. The basket of consumers who order products from supermarkets in most cases includes water, carbonated drinks, juices, sweets, snacks, and one-week basic supplies (fruit, meat, etc.). However, the choice of these orders is also related to the size of the package that couriers can carry on bicycles, motorcycles, or on foot (the size of the package is usually 40x40x30 cm). The weight of the order also plays an important role (for example, for orders through "Glovo" it must be less than 9 kilograms) (Udruženje CENTAR, 2020).

Lack of time is the most common reason for ordering all types of products through applications (food, supermarket products, pharmaceuticals, etc.). Therefore, it is concluded that most people use delivery applications because it saves time (Tribhuvan, 2020). The time-saving factor increases the value of services provided because it reduces the amount of time and energy that consumers spend when buying products and has proven to be a significant factor for Serbian users (Šarac et al., 2018). As for those who order food from restaurants, another important factor in using the application is the intention of the users to please themselves. But what people perceive as a "reward" has more to do with not having to prepare food than with the type of food they order. Special occasions (birthdays, celebrations) are a common reason for ordering food. Covid-19 also revealed some other reasons important for the use of applications, among which are contactless payment and the so-called lockdown as two important factors for ordering through applications.

In recent research, much attention has been paid to examining the interdependence of technical and other characteristics of applications and user choices. Some authors point out that, when choosing an application to use, the design and technical features of the application are important to users (Williams, et. al., 2020). The average frequency of orders is 2.6 times a month for all users of food delivery applications in Serbia. About a quarter of all app users use them weekly (at least once a week), while the rest order at least once a month. In addition to being the largest customer base, consumers who order food from restaurants are also the most frequent users: they order food 2.7 times a month. Most non-users consider applications

useless. Members of this group prefer the experience of eating out or prefer to prepare/choose food themselves. In addition, other reasons for not using applications are low accessibility, distrust in delivery, distrust in product selection, and uncertainty of payment methods (Hassen, T. B., Bilali, E. H., & Allahyari, M. S., 2020). Despite the findings of some developed economies, high shipping costs distract consumers from using the application, the monetary factor is not recognized among consumers in Serbia as a significant limitation in the use of applications. Most users in Serbia spend between 1,000 and 2,000 dinars per order. The frequency of ordering food through applications in Serbia is somewhat lower compared to other countries (Udruženje CENTAR, 2020). Most users usually choose to use one application. Also, some use two or even three delivery applications. Even though food delivery applications are becoming increasingly popular, there is still no answer in the literature that could explain what is it that keeps users from using apps more frequently.

When looking at orders, the data indicate that "Donesi" (before the takeover by the company "Glovo") occupied the largest part of the market of applications for food delivery in Serbia, as much as 75 percent of all realized orders. This is not a surprise, considering that this company had the largest distribution network and the longest presence on the market. About 28 percent was realized through the other two suppliers, "Wolt" and "Glovo" or 26 percent of all orders (Udruženje CENTAR, 2020). This overlap is possible because a certain part of the user uses two or more delivery services at the same time. As expected, the largest number of orders was realized through the "Donesi" application, since it was present in the largest number of cities. However, given that Wolt has operated in only two cities, its relative share is significant. Among other things, it can be explained by the fact that these are the two largest cities, ie the markets with the largest number of users. According to the population of people who use it, "Donesi" was the leading application for delivery in Serbia.

The outbreak of the coronavirus pandemic and the consequent lockdown have encouraged the use of mobile applications for food delivery in Serbia. During this health crisis, for many people who work from home, ordering through these applications has become commonplace. On the one hand, it is indicative that the frequency of using applications by those who used them before the pandemic and the state of emergency did not change much after the lockdown, as most "old" users continued to use the same intensity applications. The habit of using food delivery applications is more firmly rooted in those who used the applications even before the pandemic, so a significant part of them can be characterized as a base of loyal users. On the other hand, the users who started using the applications during the lockdown did not maintain the habit of using them, since most of them, after the end of the state of emergency, used the possibility of food delivery via applications less often. Some international studies

predict that consumers will probably spend more on food delivery, ie prepared food and supermarket products, after the pandemic than they did before. Additionally, due to reduced budgets and concerns about the spread of the infection indoors, consumers are likely to continue to prefer consuming food at home, at least for a while (Becker, Haas, Kuehl, Ignasio & Venkataraman 2020).

CONCEPTUAL MODEL AND HYPOTHESES

Customer Satisfaction and Customer Loyalty

Numerous studies have established that customer satisfaction is an antecedent of customer loyalty. Antonios (2011) conducted an extensive literature review and reported that most of the studies agree that direct result of repeated customer satisfaction is customer loyalty. Jose Alberto Castaneda (2011) investigated relationship between Customer Satisfaction and Loyalty on the Internet and found evidence that there is a significant satisfaction-loyalty relationship. Moreover, author stressed out importance of shifting researchers' focus onto the electronic market, as most of the studies treating relationship between satisfaction and loyalty come from physical market (Castaneda, 2011).

Following previous recommendation, a different authors provided a lot of evidence to support relationship between customer satisfaction and loyalty in electronic market. One of those is a study of e-customer's satisfaction and e-customer's loyalty which focused on 500 bank clients in Pakistan and revealed that customer satisfaction has a significant and positive impact on customer loyalty (Raza & Umer, 2020). According to evidence from numerous studies reviewed, and with reference to evidence of studies reported above, we propose following hypothesis:

H1: Customer Satisfaction has impact on customer loyalty of online food delivery users

Education Level and Customer Loyalty

Andreas B. Eisingerich and Simon J. Bell (2006) studied 1268 clients of a global financial services firm and found that customer education to be the strongest determinant of client loyalty (Eisingerich & Bell, 2006). This finding has been confirmed in another study performed year later by the same researchers. Customer loyalty was again found to be positively and significantly related to customer education (Bell & Eisingerich, 2007).

Another study investigated relationship between customer education programs and its impact on customer loyalty. The findings revealed that customer education programs increased customer loyalty to the firms (Islam & Akagi, 2019). However, not all researchers confidentially agree that customer education level necessarily affects the customer loyalty. Jessica Antonios

(2011) thinks that the compilation of research on the benefits of customer education still remains insufficient and that in order to better understand the model of customer loyalty, the researchers should address a number of variables not frequently present in the literature (Antonios, 2011).

Studies presented above triggered our curiosity to see if education level could have something to do with the customer loyalty of food delivery app users and accordingly we propose the following hypothesis:

H2: Education level has impact on customer loyalty of online food delivery users

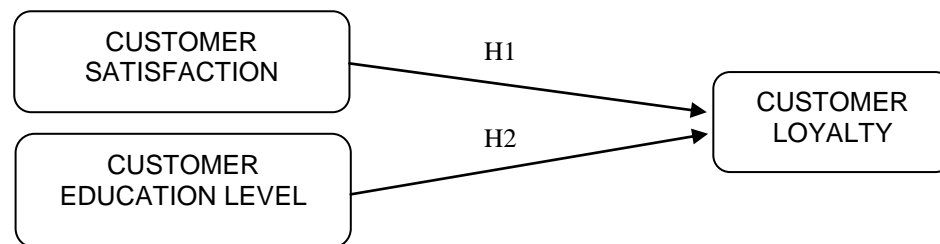


Figure 1. Proposed Research Model

METHODOLOGY

Instrument Preparation

We used an online questionnaire to examine the satisfaction and loyalty of customers of online food delivery in Serbia. The first part of the questionnaire covers questions related to socio-demographic characteristics of customers (gender, age, occupation, age, education and monthly income). The second part includes scales for assessing customer satisfaction and loyalty (1- I do not agree at all, 5 - I completely agree). Previously validated scales have been used to avoid any issues with validity and reliability. Harris and Goode (2004) developed a multi-item scale to measure service loyalty in the online service context. Considering context of their study, items used to measure Customer Loyalty they developed seems to be perfect fit for this study (Harris & Goode, 2004). Items used to measure Customer Satisfaction are based on work of Walsh & Beatty (2007). Originally, the short customer satisfaction scale has been developed by Maxham & Netemeyer (2002), and it has been adjusted by Walsh & Beatty in 2007. Even though short, scale appeared to be valid and reliable to measure customer satisfaction across multiple studies (Walsh & Beatty, 2007; Maxham & Netemeyer, 2002). Finally, to make sure that respondents get clear and understandable questionnaire, the original scales have been translated from English into Serbian language, and the instrument has been distributed in Serbian language.

Sampling Design

Judgmental sampling was used as a sample method in this study. We collected 313 responses of users which they use online food delivery in the territory of the Republic of Serbia. On Facebook, relevant online forums and groups were contacted, as well as students from all study cycles at Serbian higher education institutions. These methods were used to reach the respondents.

Data Collection Procedures

For the purposes of this research, 313 responses of users of online food delivery in the territory of the Republic of Serbia were collected. The collection process was done online, using Google Forms. The respondents using services of online food delivery were qualified as valid to participate in the study. The respondents were approached by contacting relevant online groups and forums on Facebook social media, as well as by approaching students of all cycles of study at higher education institutions in Serbia.

Statistical methods applied

The causal relationships of the hypothetical model were tested by means of the partial least square (PLS) path modelling method. Following instructions of Becker, Klein, and Wetzels (2012) the following steps were performed to prepare structural equation model using Smart PLS3: Latent variables were created and related measurement items were assigned to them; The independent variables were related to the dependent one. More precisely, Customer satisfaction and Education level were related to Customer loyalty. Indicators were assigned for each variable. The output of the mentioned steps is presented in Figure 2.

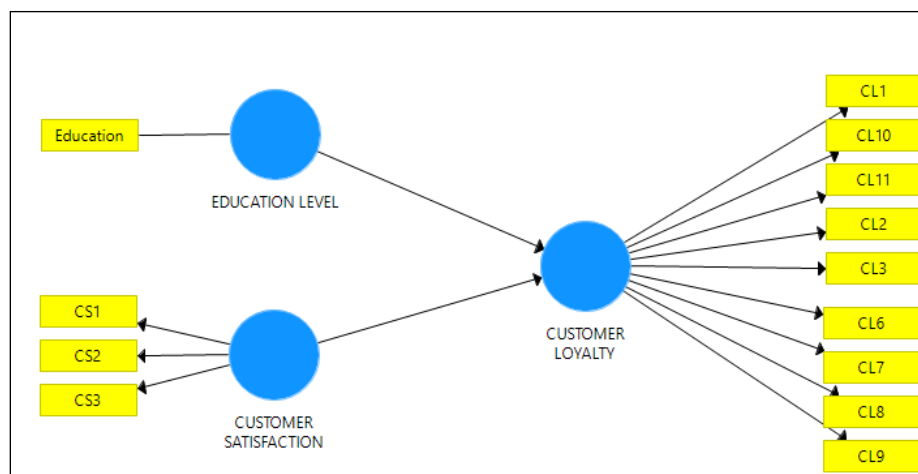


Figure 2. Model in Smart PLS 3

Regular PLS algorithm and Bootstrapping technique were conducted in Smart PLS 3 to conduct exploratory factor analysis, confirmatory factor analysis and investigate direct effects of variables in the model. To ensure stability of results, following recommendation of Hair, Sarstedt, Ringle, and Gudergan (2017), PLS Bootstrapping was completed using 10,000 bootstrap subsamples.

Both validity and reliability of the data collection instrument was evaluated using appropriate procedures in Smart PLS 3. The main findings of this analysis will be presented in the following paragraphs. Factor loadings were observed for each item. Items with factor loadings greater than 0.5 on the factor with which they were hypothesized to correspond were considered adequate indicators of that factor (Hair, Black, Babin, & Anderson, 2010). Two items with factor loadings lower than 0.5 were removed (CL4, CL5), and the final version of factors with valid indicators was ready for analysis (Table 1).

Table 1. Loadings of Items per Factors in Measurement Instrument

CODE	ITEM	Customer loyalty	Customer satisfaction
CL1	I consider myself a loyal user of the online food ordering service	0.817	
CL2	If anyone asks me, I will speak positively about the website	0.81	
CL3	I would recommend the online food ordering page to friends	0.761	
CL6	I like the features of the online food ordering site and the offer itself	0.803	
CL7	I like the performance and services of the site	0.832	
CL8	I believe that using a site for online food ordering is better than another site	0.832	
CL9	I believe that a particular online ordering site has the best food offer at the moment	0.848	
CL10	I believe that the characteristics of an online ordering page correspond to what I like	0.857	
CL11	I prefer the service of a particular site for online food ordering compared to another site	0.776	
CS1	I am satisfied with the quality of the service provided		0.898
CS2	I feel very satisfied with the overall experience of using the online food ordering service		0.992
CS3	The service fully met my needs		0.885

Note 1: Items used to measure Customer Loyalty (CL items) are based on scale developed by Harris and Goode (2004)

Note 2: Items used to measure Customer Satisfaction (CS items) are based on scale originally developed by Maxham & Netemeyer (2002) and later adjusted by Walsh & Beatty (2007)

Cronbach's (1951) coefficient alpha is widely used to determine the reliability of multi-item scales and assess the internal consistency of model constructs. The reliability of factors in this study has been presented in Table 2 below.

Table 2. Construct Validation

Factor	Cronbach's Alpha >0,7	Composite Reliability >0,7	(AVE) >0,5
Customer loyalty	0.936	0.946	0.662
Customer satisfaction	0.885	0.929	0.813

All AVE values are between 0.662 and 0.813, which is above threshold of 0.5 defined by Fornell and Larcker (1981) and Hair, Black, Babin, and Anderson (2010). Cronbach's Alpha values of all first order latent variables conform to the rule of thumb defined by Cronbach and Richard (2004), and this is confirmed by composite reliability scores which are all higher than the recommended cut-off of 0.7 (Fornell and Larcker, 1981; Hair, Black, Babin, and Anderson, 2010). Considering factor loadings of all items higher than 0.4, composite reliability scores higher than 0.7, and AVE values higher than 0.5, it could be concluded that all the conditions of convergent validity are met in this study.

RESULTS

Descriptive Statistics

The questionnaire provided 313 valid responses in total. Previously mentioned statistics indicated that globally, online food ordering is most popular among the younger population and that this type of application is used equally by men and women globally. Interestingly, 41 percent of consumers are people with lower personal incomes (Statista, 2020b). Considering results presented in table 3, there is no difference when it comes to Serbia. When it comes to gender, there were 54,30% female and 45,70% male respondents, which shows that both genders are users of online food delivery. In terms of age, most of the respondents (68.70%) are young adults aged between 19-36 years, followed by (12.10%) respondents aged 18. Only (7,70%) respondents are 55-72 years old. Talking of personal income, we can see that people who have a salary of 600 EUR (lowest personal income in this categorical variable) bought the most (75,10%). The confirmation of statistics reported by Statista (2020b) by our sample is a good sign that our sample is relevant and well balanced. Moreover, in table 3 we can see most respondents, (54,60%) precisely, are master and PHD. Online food delivery is mostly used by

employees (77%). In terms of marital status, unmarried people use online food delivery more compared to other categories (72,20%).

Table 3. Sample Characteristics

Variable	Demographics	Valid %
Gender	Male	45.70%
	Female	54.30%
Age	18 years	12.50%
	19-36 years	68.70%
	37-54 years	10.90%
	55-72 years	7.70%
Education level	Primary school	2.60%
	High school	19.80%
	Bachelor	23%
	Master, PhD	54.60%
Income	600 EUR	75.10%
	601-1200 EUR	16.30%
	over 1200 EUR	8.60%
Employment	Unemployed	20.10%
	Employed	77%
	Retired	2.90%
Marital status	Married	23%
	Not married	72.20%
	Divorced	2.40%
	Widow	2.40%

Inferential Statistics

After running a bootstrapping algorithm in Smart PLS 3, results were supporting both hypotheses. Effects of both customer satisfaction and education onto the customer loyalty are confirmed (Table 4). The results are also visually reported in form of figure 3.

Table 4. Hypotheses' tests

#	Hypothesis	Path	Direct effect	Status
H1	Customer Satisfaction has impact on customer loyalty of online food delivery users	CS>CL	P=0,000* t=20,506	Supported
H2	Education Level has impact on customer loyalty of online food delivery users	EL>CL	P=0,000* t=3,661	Supported

**Significant at 95% confidence interval*

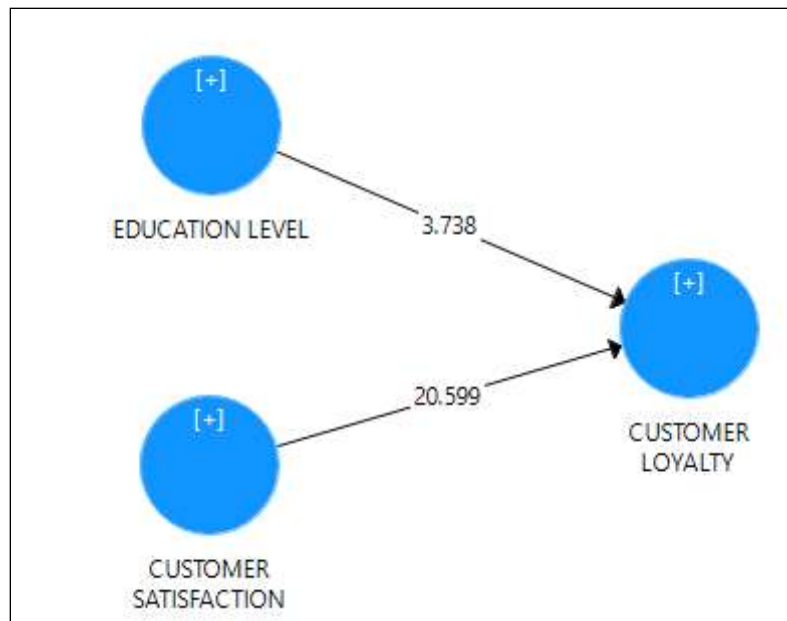


Figure 3. Bootstrapping results, t statistics

Hypothesis one has been supported with p value of 0.000 and t value of 20.599. There is no doubt that customer satisfaction with online food delivery services has statistically significant effects on customer loyalty. Accordingly, it is recommended to all subjects active in online food delivery business in Serbia to put customer satisfaction on top of the priority list as it will enable them achieve customer loyalty. This finding is not surprise, as it supports previously discussed findings (Raza & Umer, 2020; Castaneda, 2011; Antonios, 2011).

Hypothesis two has been supported with p value of 0.000 and t value of 3.738. Education level of customers using online food delivery services has statistically significant effects on their customer loyalty. It is recommended to future researchers to investigate this relationship more deeply with aim to better understand similarities and differences in consumer behaviors of different education categories as well as the implications for customer loyalty. This finding is in line with results reported by other studies (Bell & Eisingerich, 2007; Eisingerich & Bell, 2006; Islam & Akagi, 2019; Antonios, 2011).

CONCLUSION

The main goal of this study was to shed light on the start of the business of mobile food delivery applications by focusing on factors of customer loyalty. Besides investigating influence of customer satisfaction and customer education level on customer loyalty, this paper highlights the demographic profiles of food delivery application users. Even though the online food delivery services are generally adopted by customers with busy lifestyle, it seems that during Covid-19

pandemic the digitalization of online food delivery reached its peak. Despite of high adoption of food delivery applications among customers in Serbia, there is no literature dealing with this topic.

This study relied on structured survey to collect data from 313 respondents in Serbia. After confirmation of validity and reliability of measures through factor loadings, AVE values, composite reliability and Cronbach's Alpha values, data was processed using the descriptive statistics tools in SPSS and structural equation modeling techniques in Smart PLS. The descriptive analysis revealed that mobile food delivery applications are equally popular among the younger population of men and women. As far as delivery applications are concerned, women are more frequent users of food delivery applications, which is a specific feature of the Serbian context. There are similarities between (relative) average monthly expenditures for mobile applications between users in Serbia and users in developed countries, however, in terms of the average frequency of ordering, Serbian users still order less than users in developed countries. As the number of food delivery applications on the Serbian market has proven to be growing, there is a need to assess the potential for their expansion.

According to forecasts, further growth of the food delivery application market is expected. This optimistic forecast is based on an estimate of the growth in the use of food delivery applications during the pandemic. However, one should be aware that the number of users is unlikely to grow at the same pace in the future. The future use of applications will depend on several factors: first, it is important to determine how application-based models will reshape the market (whether most restaurants, supermarkets, and other retail stores will switch to delivery applications). It is also important to consider other factors, such as the purchasing power of the population and possible additional regulation of the application market. In addition, the question is whether consumers will accept application-based models. Findings of our study revealed high level of customer satisfaction and loyalty, so the attitudes of users regarding the possibility of future use of applications give a reason for optimism to all current and future entrepreneurs in food delivery business in Serbia.

Finally, the results indicated statistically significant effects of customer satisfaction and customer education on customer loyalty. Findings of this study can help managers and marketers improve customer's loyalty to online food delivery, but also serve as a steppingstone to future researchers who would like to research similar topics in Western Balkan countries.

Limitation of this study relatively small sample size and it is recommended to future researchers to do the same or similar studies on larger sample size.

REFERENCES

- Antonios, J. (2011). Understanding The Effects of Customer Education on Customer Loyalty. *Business Leadership Review*. Retrieved from <http://www.mbaworld.com/blr>
- Becker, J.-M., Klein, K., & Wetzels, M. (2012). Hierarchical Latent Variable Models in PLS-SEM: Guidelines for Using Reflective-Formative Type Models. *Long Range Planning*, 45, 359-394. doi:<http://dx.doi.org/10.1016/j.lrp.2012.10.001>
- Becker, S., Haas, S., Kuehl, E., Ignasio, M., & Venkataraman, K. (2020). Delivering when it matters: Quick-service restaurants in coronavirus times. New York: McKinsey&Company.
- Bell, S. J., & Eisingerich, A. B. (2007). The paradox of customer education: Customer expertise and loyalty in the financial services industry. *European Journal of Marketing*, 466-486. doi:<https://doi.org/10.1108/03090560710737561>
- Castaneda, J. A. (2011). Relationship Between Customer Satisfaction and Loyalty on the Internet. *Journal of Business and Psychology*, 371–383. Retrieved from <https://link.springer.com/article/10.1007/s10869-010-9196-z>
- Chesbrough, H. W. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Massachusetts: Harvard Business School.
- de Reuver, M., Sorensen, C., & Basole, R. C. (2018). The digital platform:a research agenda. *Journal of Information Technology*, 33(2), 124-135. doi:10.1057/s41265-016-0033-3
- Dillahunt, T. R., Wang, X., Wheeler, E., Cheng, H. F., Hecht, B., & Zhu, H. (2017). The sharing economy in computing: a systematic literature review. *Proceedings of the ACM on Human-Computer Interaction*, 1(CSCW), 1-26. doi:10.1145/3134673
- Duch-Brown, N. (2017). *The Competitive Landscape of Online Platforms*. Seville: Joint Research Center Digital Economy Working Paper 2017-04.
- Eisingerich, A. B., & Bell, S. J. (2006). Relationship marketing in the financial services industry: The importance of customer education, participation and problem management for customer loyalty. *Journal of Financial Services Marketing*, 86–97. doi:<https://doi.org/10.1057/palgrave.fsm.4760022>
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Garcia, K. (2018). Five Charts: The State of Food Delivery. Retrieved from eMarketer: <https://www.emarketer.com/content/fivecharts-the-state-of-food-delivery>
- Hair, J. F., Sarstedt, M., Ringle, C., & Gudergan, S. P. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (2nd ed.)*. Thousand Oaks: Sage.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis*. NJ, USA: Prentice-Hall, Inc. Upper Saddle River.
- Harris, L. C., & Goode, M. M. (2004). The four levels of loyalty and the pivotal role of trust: a study of online service dynamics. *Journal of Retailing*, 139–158. doi:10.1016/j.jretai.2004.04.002
- Hassen, T. B., Bilali, E. H., & Allahyari, M. S. (2020). Impact of COVID-19 on Food Behavior and Consumption in Qatar. *Sustainability*, 12(17), 1-18. doi:10.3390/su12176973
- InHoreca, (2020). Delivery - the fastest growing food sales channel in the restaurant business, www.in-horeca.com
- Islam, K. A., & Akagi, C. (2019). An Exploratory Study of Customers' Experiences with their Financial Services' Customer Education Programs as it Impacts Financial Firm Customer Loyalty. *Services Marketing Quarterly*, 330-344. doi:<https://doi.org/10.1080/15332969.2018.1514797>
- Martens, B. (2019). *An Economic Policy Perspective on Online Platforms*. Brussels: Institute for Prospective Technological Studies Digital Economy Working Paper 2016/05. JRC101501.
- Maxham, J. G., & Netemeyer, R. G. (2002). A Longitudinal Study of Complaining Customers' Evaluations of Multiple Service Failures and Recovery Efforts. *Journal of Marketing*, 57-71. doi:<http://dx.doi.org/10.1509/jmkg.66.4.57.18512>
- Poutanen, S., & Kovalainen, A. (2017). New Economy, Platform Economy and Gender. In S. Poutanen, & A. Kovalainen , *Gender and Innovation in the New Economy* (pp. 47-96). New York: Palgrave Macmillan. doi:10.1057/978-1-137-52702-8_3
- Raza, S. A., & Umer, A. (2020). Internet banking service quality, e-customer satisfaction and loyalty: the modified e-SERVQUAL model. *The TQM Journal*, 1443-1466. doi:<https://doi.org/10.1108/TQM-02-2020-0019>
- Šarac, D., Dupljanin, Đ. & Jovanović, B. (2018). Aplikacije za dostavu – prednosti, karakteristike i najbolje prakse, XXXVI Simpozijum o novim tehnologijama u poštanskom i telekomunikacionom saobraćaju – PosTel, Beograd.

- Statista. (2020a). Mobile Internet Apps. Preuzeto sa internet stranice Statista: <https://www.statista.com/markets/424/topic/538/mobile-internet-apps/>
- Statista. (2020b). Online Food Delivery. Preuzeto sa internet stranice Statista: <https://www.statista.com/outlook/374/100/online-food-delivery/worldwide#market-age>
- Statista. (2020c). Statista Digital Markets Outlook, New York, US.
- Strowel, A., & Vergote, W. (2019). Digital platforms: to regulate or not to regulate? In B. Devolder, *The Platform Economy. Unraveling the Legal Status of Online Intermediaries* (pp. 1-30). Cambridge: Intersentia.
- Takagi, S. (2020). Literature survey on the economic impact of digital platforms. *International Journal of Economic Policy Studies*, 14(2), 449-464. doi:10.1007/s42495-020-00043-0
- Tauscher, K. (2016). *Business Models in the Digital Economy: An Empirical Study of Digital Marketplaces*. Leipzig: Fraunhofer MOEZ, Fraunhofer Center for International Management and Knowledge Economy.
- Tauscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, 36(3), 319–329. doi:10.1016/j.emj.2017.06.005
- Thamaraiselvan, N., Jayadevan, G. R., & Chandrasekar, K. S. (2019). Digital Food Delivery Apps Revolutionizing Food Products Marketing in India. *International Journal of Recent Technology and Engineering*, 8(2S6), 662-665. doi:10.35940/ijrte.B1126.0782S619
- Tribhuvan, A. (2020). A study on consumers perception on food apps. *International Journal Of Advance Research And Innovative Ideas In Education*, 6(4), 208-243.
- Udruženje CENTAR (2020). *Uspion mobilnih aplikacija za dostavu hrane i prevoz putnika: Slučaj Srbije*. Udruženje CENTAR. Centar za istraživanje javnih politika.
- Walsh, G., & Beatty, S. (2007). Customer-based corporate reputation of a service firm: scale development and validation. *Journal of the Academy of Marketing Science*, 127-143. Retrieved from <https://link.springer.com/article/10.1007/s11747-007-0015-7>
- Williams, G., Tushev, M., Ebrahimi, F., & Mahmoud, A. (2020). Modeling user concerns in Sharing Economy: the case of food delivery apps. *Automated Software Engineering*, 27(1), 229-263. doi:10.1007/s10515-020-00274-7