

# Can Mobile Payments Boost E-Commerce Business in Romania?

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**Abstract:** The purpose of this paper is to highlight the influence of mobile payments on the development and consolidation of E-commerce businesses in Romania, as well as the tendencies of using mobile banking and mobile payments applications by consumers in this area. At the same time, the author makes a brief comparison of the mobile payment companies in Romania for 2019, in order to outline the features, advantages and benefits offered by them in the current context of business transformation by digital disruption. The research methodology is based on the analysis and interpretation of the data provided by the recent studies conducted by specialized companies in the field of Ecommerce and mobile payments, as well as based on the comparison method used to classify the services offered by the mobile payment companies. The findings of the research show that the impact of the introduction and use of mobile payments in E-commerce businesses in Romania is a substantial one from the point of view of the increase of sales and profit, also showing an increase in the number of mobile payments companies in the conditions of diversification of their services.

**Keywords:** mobile payment, E-commerce business, Fin Tech companies, digital disruption  
**JEL Classification:** G21, G23, L81

## 1. Introduction

The purpose of this paper is to highlight the influence of mobile payments on the development and consolidation of E-commerce businesses in Romania, as well as the tendencies of using mobile banking and mobile payments applications by consumers in this area. At the same time, the author makes a brief comparison of the mobile payment companies in Romania for 2019, in order to outline the features, advantages and benefits offered by them in the current context of business transformation by digital disruption.

The originality of the paper is given by the research objective focused on highlighting the implications of the use of mobile payment in Ecommerce on the development of businesses in the field in Romania, as well as on presenting the differentiation of FinTech companies in Romania based on the characteristics of the services offered by them.

The findings of the research show that the impact of the introduction and use of mobile payments in Ecommerce businesses in Romania is a substantial one from the point of view of the increase of sales and profit, also showing an increase in the number of mobile payments companies in the conditions of diversification of their services.

The limits of the research are highlighted by applying only qualitative methods and tools in research, a future development of the research being desirable to also involve quantitative approaches, meant to reflect more specifically the influence of the use of mobile payment on Ecommerce-type businesses in Romania.

## 2. Literature review

A whole series of researches highlighted by articles and specialized studies in the

fields of E-commerce and mobile payment come to reflect the current developments without precedent so far as a result of technological innovations in both fields, but also of the action of the developing economic markets. In this regard, authors from different corners of the world have reported the product changes and future trends through analyzes carried out on qualitative and quantitative basis in the sectors mentioned above.

In an editorial titled „Entrepreneurship in the context of the fourth Industrial Revolution” the author shows that „The networks of devices that will be connected to each other and that will be able to store and exchange data at an extraordinary speed can provide unlimited possibilities for creating contexts in which people can develop their business” (Marinescu, 2018). According to this, Cojocaru & Cojocaru do an analysis of the market trends and technological changes in the field of mobile devices showing that “the user experience is the final test for all the mobile devices”(Cojocaru & Cojocaru, 2014).

Yadav et al. highlight „that variety of services, social influence, perceived usefulness, cost and perceived trust have significant influence on consumer’s intention to adopt m-commerce. The only exception was perceived ease of use which observed statistically insignificant influence on adoption of m-commerce” (Yadav et al., 2016).

A paper of Sivathanu points out in the findings the followings: „the results suggest that the behavioral intention (BI) to use and innovation resistance (IR) affect the usage of digital payment systems. The relation between BI to use digital payment systems and the AU of digital payment systems is moderated by the stickiness to cash payments” (Sivathanu, 2019).

Lim Chiu et al. reveals also in their paper „that the non-adopters of mobile banking asserted that the antecedents of initial trust played a significant influence on behavioral intention to use online banking services“ (Lim Chiu et al., 2017).

In their research, Zhang, Lu and Kizildag shows that „the “fun” feature of the technology and consumers’ innovativeness characteristics are considered important in influencing mobile banking adoption. Trust in the banks has its predominant role in mobile technology adoption for banking services“ (Zhang et al., 2018).

The analysis of the factors related to the characteristics of the technologies used in mobile banking was the object of research of the authors Valaei, Nikhashemi, Bressolles and Jin which in their paper shows “that the task and performance characteristics are more relevant compared to technology characteristics when doing transactions via apps. In addition, the findings uncovered that user satisfaction and continuous intention to use apps stem from the degree of fit in online transactions”. The authors also underline „that users in the lower income group are more concerned about the performance characteristics of banking apps, and there are no differences across age and gender groups“ (Valaei et al., 2019).

Another research of Anneli Järvinen „reveals deviations between various banking services and company-level results regarding consumers’ trust in their banking relationships”and „also highlights deviations in consumer trust between European countries, and identifies countries with low, medium and high trust in banking and in distinct banking services“ (Anneli Järvinen, 2014).

Regarding Romania, a study conducted by Leoveanu and Sandu shows “that young people are very open to new type of banking applications and they enjoy using mobile banking” and that “more than half of the students that declared they are not using mobile banking in this moment and more than half from total sample declared they will definitely call on mobile banking [in the future]” (Leoveanu & Sandu, n.d.) and this shows the availability of young people adapting to the use of new technologies that appear in the activity of ecommerce and banking.

### 3. Research methodology

The research methodology is based on the analysis and interpretation of the data provided by the recent studies conducted by specialized companies in the field of Ecommerce and mobile payments, as well as based on the comparison method used to classify the services offered by the mobile payment companies.

According to „The 2018 Global Ecommerce Report”, Internet penetration across Europe reaches 83% in 2018 from 80% in 2015. In this regard, penetration in social media, defined by Internet users who use social media sites via any device at least once a month, reaches 73% in Sweden, in the UK - 66%, in Spain and France - 58%, in Italy - 57% and in Romania - 51%, to exemplify only a few European countries (Global Ecommerce Report, 2018).

Considering the part of the population that uses each device for Internet access, the following trends can be highlighted: 57.6% - on the desktop, 36.2% - on the mobile phone and 6.2% - on the tablet. Regarding ranking of shopping websites (no of visitors) in Romania

the first place is occupied by Olx.ro, followed by eMag.ro and thirdly Aliexpress.com while in France, Germany, Italy, Spain and Great Britain the wellknown website Amazon.com is the first choice (Global Ecommerce Report, 2018).

„2017 was a milestone year for the mobile industry: the number of people connected to mobile services surpassed 5 billion globally. As such, two out of three people in the world had a mobile subscription at the end of 2017. Looking out to 2025, the mobile industry will reach new major milestones across key indicators –unique subscribers, internet users and 4G/5G connections” (Global Ecommerce Report, 2018).

As examples of top ecommerce websites in Europe (Global Ecommerce Report, 2018) there are: 1.Amazon, 2.eBay and 3.Aliexpress; regarding top payment method, one can point out: 1.PayPal, 2. Debit/credit card and 3. Cash on delivery; considering top 3 countries ranked by B2C Turnover, there are 1.United Kingdom, 2.France and 3.Germany; with reference to top ecommerce import destinations, one can show Germany and France.

Taking an overview of Romania, specific macroindicators for 2018 were: a population of 19.6 million inhabitants; a degree of urbanization of 55%; an unemployment level of 5.2%; and an economic growth of 4.1% in 2018 compared to 2017. Also, the GDP per capita in 2018 was \$ 23,626, as well as a declared literacy of population of 99%.

The 2018 Global Ecommerce Report highlights also the following data for Romania: the internet penetration rate is 74%; the percentage of online shoppers is 18%; the GDP of E-commerce activities is 2.55%, and the percentage of online buyers

abroad is 3%. Romania had have about 7,000 online stores in 2017, more than the figure of 2016 of 5,000 and expects to reach 14,000 in 2018. (Global Ecommerce Report, 2018).

At European Union level, the European Commission monitors the digital competitiveness of member countries by calculating the Digital Economy and Society Index (DESI), which includes features related to connectivity, human capital, the use of Internet services, the integration of digital technologies and the provision of public digital services. Thus, regarding this index, Romania is ranked 27, penultimate, as in 2018, when it advanced from the last place held in 2017 (European Commission, 2019).

The important characteristics in the context of the paper are represented by the use of Internet services and the integration of digital technologies. According to the first characteristic, the following can be emphasized (European Commission, 2019):

- Internet users increased from 56% in 2016, to 61% in 2017 and to 68% in 2018 (27th in the EU) compared to 83% for the EU;
- users of social networks increased from 74% in 2016, to 82% in 2017 and to 86% in 2018 (1st place in the EU) compared to 65% for the EU;
- mobile banking users increased from 8% in 2016, to 11% in 2017 to decrease to 10% in 2018 (28th in the EU) compared to 64% for the EU;
- mobile shopping users increased from 18% in 2016, to 23% in 2017 and to 26% in 2018 (28th place in the EU) compared to 69% for the EU, and online sales users dropped from 5% in 2016 to 4% in 2017 and then increased to 5% in 2018 (26th in the EU) compared to 23% for the EU.

Regarding the second characteristic (European Commission, 2019), it is highlighted:

- SMEs selling online increased from 7% in 2016, to 7% in 2017 and up to 8% in 2018 (27th place in the EU) compared to 17% for the EU;

- e-Commerce turnover increased from 4% in 2016, to 5% in 2017 and to 5% in 2018 (25th place in the EU) compared to 10% for the EU;

- selling online cross-border remained the same in all the years 2% (28th place in the EU in 2018) compared to 8% for the EU.

„Romania has committed to invest in digital technologies, via EU-coordinated programmes. The country is a member of the EuroHPC Joint Undertaking; it has also signed the Declaration creating the European Blockchain Partnership and the Declaration on Cooperation on Artificial Intelligence. Digitising enterprises remains an important challenge” (European Commission, 2019).

„The 2018 Global Ecommerce Report” also presents data on the ecommerce activity related to the use of mobile and mobile banking in Romania.

In terms of social media sites, in Romania the most used websites are: Facebook - 87.5%; Twitter - 1.2%; YouTube - 5.1% and Pinterest - 4.5%. In the top of the home delivery companies is the first place Fan Courier, followed by Urgent Cargus and Romanian Post.

Concerning the device usage are available the following data: mobile phone (any type) - 96%; smart phone - 60%, laptop or desktop computer - 56%, tablet - 23%.

Linked to the device usage there are the Internet use data: total number of active internet users - 13.74 million, 70%, and total number of active mobile internet users - 12.23 million, 62%. In this regard, the frequency of Internet use is expressed as: every day - 85%, at least once per week - 8%, at least once per

month - 4%, less than once per month - 3%. Considering Internet connections the report shows that: speed and devices - average internet speed via fixed connections is 98.64 MBPS; average internet speed via mobile connections is 28.65 MBPS (Global Ecommerce Report, 2018).

Regarding access the internet there is most often via a computer or tablet - 20% compared to a smartphone 38%, and on both a smartphone and computer or tablet - 32%. Share of web traffic by device is: Laptops & Desktops - 59%; Mobile phones - 38%; Tablet Devices - 3%. Weekly online activities by device as a percentage of the total population engaging in each activity at least once per week: use a search engine - smartphone - 44% vs. computer 40%, social network visit - smartphone 44% vs. computer 34% and look for product information smartphone - 21% and computer - 16%.

Analysing social media use the report shows that: total number of active social media users is 10 million, and as percentage - 51%; total number of social users accessing via mobile - 8.9 million and active mobile social users as a percentage of the total population - 45%.

In terms of comparing mobile users versus mobile connections and comparing the number of unique mobile users to the number of mobile connections the followings are highlighted.

The number of unique mobile users is 15.97 million, mobile penetration - 81% (mobile users vs. total population), total number of mobile connections - 27.61 million; mobile connections as a percentage of total population - 141%, average number of connections per single mobile user - 1.73 (Global Ecommerce Report, 2018).

As a particular aspect derives the use of mobile for payments and the report presents that cash (delivery on cash) is the most used method of payment, followed by bank transfer, cash payment at shops / on site / at headquarters. Also the preference of payment methods in 2017 was the following: cash - 70%; card - 25%; bank payment / internet banking 5%. And not less, the amounts spent on online comparator (average spending per e-shopper) have increased from \$ 1,218 in 2015 to \$ 1,452 in 2017 and \$ 1,757 in 2018.

The author realized also a research regarding the evolution of mobile payments in Romania and he has associated this evolution with the ecommerce trend of recent years in our country. A glance on the mobile connectivity in Romania was made by The Global System of Mobile Communications (GSMA) – an association that „represents the interest of mobile operators worldwide” (GSMA, 2019).

In this respect, a research of GSMA points out the overall country index score for Romania in 2018 was 73.8 out of a maximum possible score of 100, concerning the followings: mobile network infrastructure – 72.6 out of a maximum possible score of 100; affordability of devices & services – 81.9; consumer readiness – 80.2; availability of relevant content & services - 62.2 (GSMA, 2019).

A group of factors have been considered regarding GSMA mobile connectivity index. First of all, financial inclusion factors as representing the percentage of the population aged 15+ that reports owning or using each financial product or service, such as: has a bank account – 61%; has a credit card – 12%; makes and/or receives mobile payments via GSMA – 0.5%; makes online purchases and/or pays bills online – 12%.

A second factor, ecommerce growth by categories: Fashion and Beauty +22%;

Electronics and physical media +11%; Food and personal care +19%; Furniture and appliances +19%; Toys, Diy and Hobbies +15%; Travel (including accommodation) +31%; Digital music +11%, and Video games +12% (GSMA, 2019).

A report on „Mobile Payments in Romania” in 2018 by AUKA remarks that „being (or remaining) number one in financial services requires being number one in payments. To be number one in payments, you need to be number one in mobile payments” (AUKA, 2019).

A first analysis of FinTech companies was made in 2019 under the name of “Romania’s FinTech Map” by the conference organized by the Romanian business magazine Wall-Street under the name of “Future Banking 2019”.

The analysis has the merit to highlight FinTech companies in the fields of Payments & wallets, Lending / Crowdfunding, Investments & Wealth Management, Personal Finance, Insurtech, Financial Infrastructure and Enablers, so that, on the one hand, a promotion of these companies is ensured, and, on the other, a highlight of the strengths and markets to which they are addressed.

An analysis of the companies presented in the table reveals that, although specialized in Payments & Wallets, they also associate other financial services with the basic service, which diversifies their activity in order to increase the turnover and profits.

Depending on the types of clients that most of the Payments & Wallet type companies in Romania have selected, it can be said that there is not only the predominance of the B2C type, but also an alternation with the B2B type.

We can highlight a large part of companies in the pre-seed or seed stage, although

there are companies that have reached full development. Regarding the operating area, respectively the countries in which they operate, these companies have a spectacular spread, and depending on the dimensions achieved and the size of the financing achieved.

It is also noted that the emergence of these companies (their establishment) was

carried out over the years starting with the international financial crisis and was based in particular on the financing of bootstrapping, that is, by not calling on external sources, but relying on their own savings. However, it is worth noting some other companies that have managed to benefit from raising more or less funds as amounts of money (300 k \$ - 12 mil. \$).

Table no. 1. Payments & Wallets FinTech Companies in Romania in 2019

Name	Founded	Funds Raised	Services	Client Type	Country of Operations	Current Stage
Pago	04/2016	570 K €	Online Payments, Insurance, Money transfer, In app donations	B2C	Romania	Growth
Minutizer	03/2014	Bootstrapped	Pay per minute; Blockchain; Time base payments; Payment solutions; Real time payments	B2B B2C	Romania, Holland, Mexico, Columbia, Panama	Growth
Volt	2017	Bootstrapped	P2P payments, money transfer, instant transfers during non-banking hours, send money like sending a message, transfers from card to card	B2C	Romania	Seed
Younify	2014	Bootstrapped	Internet Banking, Mobile Banking, PSD2, Invoice Payment	B2B	Romania	Seed
Oveit	2016	350 K \$	Payment solution, FacePay, digital wallet	B2B B2C	Romania, Japan, South Africa, Uk, USA	Growth
Pay by Face	01/2019	Bootstrapped	Biometric Payment Processing Platform	B2B2C	Romania	Pre-Seed
Moneymailme	2016	12 mil. \$	money transfer, enabling platform, mobile app, social payments application	P2P	Over 130 countries worldwide	Growth
SelfPay	2009	Bootstrapped	smart kiosk, self-service kiosk, bill payment, innovation, kiosk solutions, retail kiosk, self-service technologies, digital kiosk	B2C B2B	Romania	Growth
Paybilla	2018	300 K €	Payments, Billing	B2B	Europe	Seed
mobilPayWallet	03/2013	Bootstrapped	Digital Wallet, Digital Payment, Mobile Payments, mcommerce, eWallet	B2C	Romania	Growth
M3 Payments	2019	12 mil. \$	payments, business, sme, online platform	B2B	Europe	Seed
ProxiCash	2018	Bootstrapped	Cash Withdrawals, Account Withdrawals, PISP	B2B2C	Romania	Pre-Seed

Source: Future Banking – Romania's Fintech map 2019

## 5. Results and discussions

The report on „Mobile Payments in Romania” in 2018 by AUKA states that there is currently no mobile payment solution that dominates the Romanian market, expressing the opinion that factors such as lack of confidence, low market penetration or existing barriers in regulation, results in the fact that most payments are still in cash (AUKA, 2019).

In this regard, Romania is positioned at the tail end, being behind its neighbors in Eastern Europe, a fact evidenced by the statistical observations that show the cash withdrawals had a growth rate similar to the payments made by card. This is explained by the lack of knowledge of the population in the financial field, which leads to the low use of non-cash payment instruments (AUKA, 2019).

However, in Romania there is a clear tendency to recover the trend that Europe is aware of today, that of reducing cash payments and increasing the use of non-cash payment instruments. Thus, the banks in Romania, in particular, but also the Romanian and foreign companies of the FinTech type are starting to develop new solutions for making payments easier and suitable between business partners, between customers and suppliers, between traders and customers and between individuals, in fact giving freedom of decision and action to all participants by focusing on the customers of mobile payment services.

In the circumstances in which the EU directive on PS2 payment services is in force from the second half of 2019, open banking companies are becoming a serious competition for banks, including the Romanian banks, as evidenced by a survey among

bankers (AUKA, 2019). Romanian bankers, where 29% of them expressed concern about the threat already posed by large companies in the group GAFA (Google-Amazon-Facebook-Apple) in the coming years, shows in a percentage of 19% that they have already made plans to introduce bank-issued mobile payments.

“Romanian bankers were also most likely to acknowledge their role would change post PSD2. Almost a third (30%) believed their roles would be affected compared to an average of 24 per cent across the board” (AUKA, 2019).

In the competition between banks and FinTech-type companies of open banking services, banks are in a temporary advantage and, in many respects, they still enjoy the confidence of customers in terms of customer money management, although the truth is that this trust has decreased after the effects of the international financial crisis. However, the current conditions of economic development and diversification and amplification of financial services, intermediate or not, worldwide, make it possible to multiply the number of non-banking companies that offer payment services, therefore the increased competition in this area. This development of the FinTech company segment will also be able to achieve a close connection with the Romanian ecommerce companies, so that the enhancement of the ecommerce activity in Romania will be strongly driven by this association.

The originality of the paper is given by the research objective focused on highlighting the implications of the use of mobile payment in Ecommerce on the development of businesses in the field in Romania, as well as on presenting the differentiation of FinTech

companies in Romania based on the characteristics of the services offered by them.

## 6. Conclusions

The present paper aims to carry out, first of all, an analysis of the way in which the ecommerce activity in Romania evolves, highlighting the main characteristics of the stage regarding the digitization of the economy and the society, the factors that led to the development of ecommerce in Romania. , as well as the relationship between ecommerce and the provision of mobile banking services to current and potential customers.

Secondly, the paper wanted to present the current situation of the implementation of mobile payment services at the level of

Romania based on the analysis of some research carried out by specialized consulting firms.

The third research direction of the study tried to make a comparison between several FinTech companies in the field of mobile payment services, in order to increase their influence on the Romanian market and to boost the ecommerce activity in Romania.

The limits of the research are highlighted by applying only qualitative methods and tools in research, a future development of the research being desirable to also involve quantitative approaches, meant to reflect more specifically the influence of the use of mobile payment on Ecommerce-type businesses in Romania.

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