THE MOBILE ECONOMY: EFFECT OF THE MOBILE COMPUTING DEVICES ON ENTREPRENEURSHIP IN LATVIA∗

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Abstract. The article aims to establish the impact of the use of mobile devices on business success in Latvia. The authors consider income of the enterprise for the last year, volume of sold products/services, volume of exported products/services, profitability of the enterprise for the last year, as well as a change in the market share of the enterprise for the last year as variables for business success. Despite the fact that the market share of mobile devices in Latvia comprises only 38.43%, the authors determined a weak linear relationship between variables for business success and the majority of different mobile technologies used on mobile devices. The authors study such mobile technologies as mobile access to e-mail, mobile version of the website, messenger groups for solving business tasks, SMS marketing, mobile access to company resources, advertising, management of production processes, payments of company bills from a mobile phone, equipment of a company transport system with location data transmission systems, and a company’s mobile application. The authors come to the conclusion that entrepreneurs underestimate both the use of a mobile version of the website and augmented reality technologies.

Keywords: mobile computing devices; entrepreneurship; Latvia

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JEL Classifications: M10, M15, M21, O32, O33, O52

1. Introduction

Internet economy being a new economic and social model (Afuah and Tucci, 2000; Afuah, 2012), enables fast real-time, synchronous and asynchronous interaction between people and businesses and provides unlimited scope of access where anyone can use the Internet anywhere in the world. The value of the Internet and its products increases as more users connect to it - the value of a network is equal to the square of the number of its users (Metcalfe, 2013), and the number of users grows exponentially (Reed, 2001). The Internet-based product distribution channel replaces old channels, alleviates time constraints, increases transparency and access to information; it has infinite virtual capacity; it is cheap, open, easy to use, increases productivity, and optimises business processes (Hempell, 2006, Jovanovic and Rousseau 2005, Clarke, Qiang, and Xu 2015; Shao et al.,
Bresnahan and Trajtenberg (1995) believe that internet technologies spread to most sectors, improve over time, and complement other forms of promotion. Manyika, Chui, Bughin et al. (2013) view the Internet as a set of network technologies capable of changing lifestyles and business practices, disrupting existing economic and social structures, and creating new ones. Therefore, the Internet brings forth new types of companies, new business models, and plays a crucial role in the ways of organizing, coordinating, and conducting social and economic activities. Rehman and Nunziante (2023) and Fulgenzi et al. (2024) find that the Internet economy positively and significantly impacts total factor productivity across the European regions. Information technologies have revolutionised business (Sabherwal and Jeyaraj, 2015; Zvirgziņa and Skadina, 2018; Stecenko and Stukalina, 2022; Lee et al. 2023; Wided, 2024), trade (Ahmed and Le, 2020; Dinu et al., 2022; Wen et al., 2023), investment (Ilmudeen, 2021; Shen et al., 2022; Wu et al., 2023).

Mobile computing devices (smartphones, computers, and tablets) are essential tools for business which are not limited by time and place. Wireless networks connect mobile computing devices via the Internet (Hoang et al., 2011). Today, a vast network has already been established to support handling an enormous amount of information (Khder et al., 2008, 2013). Twenty years ago, some researchers and professionals were not very enthusiastic about mobile business success. They accessed mobile technologies as “the toy” for certain social groups – for example, teenagers, the rich, or executives (Al-Qirim, 2003; Feng et al., 2006). Nowadays, mobile phones facilitate the growth of digital transactions and contribute to an Internet economy (Faqih and Jaradat, 2015; Ahn, 2020). Nowadays, mobile phones facilitate the growth of digital transactions and contribute to the Internet economy (Haldar et al., 2023). Al-Zoubi's (2024) research results show the annual distribution of 1404 papers published on economic development and the digital economy in the Web of Sciences Database Core Collection from 2000 to 2023. During this period, there was a remarkable yearly growth rate of 30.78%. While the study of this subject began in the early 2000s, the number of published works was very small until 2017. There has been a notable upswing in scholarly attention since 2019, demonstrating the growing significance and acknowledgment of this discipline.

By the end of 2021, more than 27.1 billion devices were connected to the Internet, which equates to over 3 devices for every inhabitant of the planet (CISCO, 2021). 5.22 billion people or 66.6% of the world population use mobile devices (Data Report, 2021). 15% of adult Americans are “smartphone-only” Internet users, which means that they do not have at home broadband access but instead have a smartphone (Pew Research Centre, 2021). Approximately half of the web traffic worldwide is attributed to mobile devices. In the first quarter of 2023, mobile devices (excluding tablets) accounted for 58.33% of global website traffic, consistently fluctuating around the 50% mark since the beginning of 2017 and eventually surpassing it in 2020. Due to weak infrastructure and financial constraints, many developing digital markets skipped the desktop internet phase entirely and transitioned directly to mobile internet through smartphones and tablets. India is a prominent example of the market, with a significant number of online users primarily focused on mobile devices. Mobile application downloads worldwide were 255 billion in 2022 (Statista, 2022). The market share of desktop computers, mobile devices, and tablets in Europe in 2023 is 45.64%, 51.89%, and 2.48%, respectively (Statcounter GlobalStats, 2023a). In 2023 in Latvia, the market share of desktop computers, mobile devices, and tablets comprises 60.66%, 38.43%, and 0.91% respectively (Statcounter GlobalStats, 2023b). Therefore, it is impossible to underestimate the impact of mobile devices on business. This research aims to examine the impact of mobile device usage on business success in Latvia.

2. Methodology

The use of mobile devices in business is theoretically based on the connection between the dissemination of knowledge and economic prosperity (Chavula, 2010; Anyanwu, 2012; Asongu et al., 2016b). Neoclassical models of economic development recognize technologies as a form of public goods and services that are entirely exogenous to existing economic systems. New economic development models are based on the neo-Schumpeterian and endogenous approach (Howells, 2005). According to new models of economic development, technological progress is a product of the participation of "human capital" (see Romer, 1990). Romer (1990) argues that technology can be both endogenous and exogenous at the same time. Rosenberg (1972) asserts that the extent to which new technologies are utilized for production purposes is crucial for
ensuring economic development. The abovementioned theories align with contemporary literature on the relevance of knowledge dissemination in entrepreneurship (Acs et al., 2013; Hayter, 2013; Ghio et al., 2015). Therefore, mobile devices are used on the Internet to expand the dissemination of knowledge, which aligns with neoclassical models of economic growth regarding sources of innovation (Abramowitz, 1986; Bernard & Jones, 1996; Kwan & Chiu, 2015). The creation and dissemination of knowledge complement each other in innovative production (Kwan & Chiu, 2015).

Talar (2014) established that the Internet economy contributes to the creation and development of new industries, transforms traditional sectors of the economy according to new principles, and adds value based on widespread network usage. It utilizes the Internet as an open platform to engage all stakeholders in innovative and economic activities, fostering the development of network technologies and thereby aiming for further advancements in the Internet and new online technologies. The Internet and its associated technologies are continuously evolving, and its users are constantly increasing. The use of business data storage and important documents in mobile network computing within cloud computing has made data efficiently accessible in remote locations (Vakil et al., 2012). Distributed computing has become a catalyst for innovative progress in the field of data transmission, expanding the capabilities of business architecture in many business domains. Other business models have transformed the transportation industry by connecting end-users and service providers (Kenney et al., 2015). The cloud-based business model has transformed the hotel and apartment booking industry. Businessmen can make important management decisions based on feedback from end-users (Song et al., 2018). Businesses can scale efficiently by expanding their structure and capabilities as they grow. Using universal applications, business clients, shoppers, or end-users can quickly access services and products online. The Internet has turned business into a portable endeavour. Thanks to mobile applications, various services are available anytime, anywhere, and on any device. The use of universal applications expands the scope of business and provides better insights into market demand. Email allows organizations to quickly transmit and send these records to remote locations beyond the office. Capello et al. (2023) examined the growth of the digital service economy across European regions, highlighting the transformative patterns that are reshaping the business landscape. Ding et al. (2021) investigated the intricate relationship between the digital economy, technical innovation, and high-quality economic growth, exploring its geographical and mediation effects.

To achieve the research goal, in May-June 2023, the authors surveyed Latvian entrepreneurs. A total of 252 entrepreneurs were interviewed. The survey was conducted in the primary languages spoken in the regions: Latvian and Russian. The planned sampling design for the type of selection is combined with the non-repetitive method, and the sampling method is stratified based on the primary research directions. The survey was conducted using the technique of interviewing via telephone and a questionnaire available for online completion on the Internet. The authors applied the following methods for data processing: frequency analysis, correlation analysis, and factor analysis.

The enterprises under survey are divided by types of activities as follows:
Figure 1. Types of activities of the enterprises under survey.
Source: authors’ calculations based on survey data (n=252, 2023)

Note: (A) Agriculture, forestry, fish industry, (B) Mining industry and quarrying, (C) Manufacturing industry, (D) Electric energy, gas industry, heat supply and air conditioning, (E) Water supply; upkeep and rehabilitation of wastewater and waste, (F) Construction, (G) Wholesaling and retailing; automobile and motorbikes repair, (H) Transport and storage, (I) Accommodation and catering services(hotels, etc.), (J) Information and communication services, (K) Finance and insurance activity, (L) Real estate, (M) Professional, scientific and technical services, (N) Administration and servicing offices, (O) Public administration and security; mandatory social insurance, (P) Education, (Q) Health and social care, (R) Arts, entertainment, and recreation, (S) Other services, (T) Household activities as employers; production of goods for own use and provision of services in individual households.

The largest percentage of surveyed enterprises are engaged in agriculture -16.7%, 13.1% work in wholesaling and retailing; automobile and motorbikes repair, 8.3% are engaged in the sphere of arts, entertainment, and recreation, 7.1% in education, and 7.1% in accommodation and catering services. The survey covered all types of entrepreneurial activities in Latvia.

The authors found that among the surveyed enterprises, 29.8% have been operating for 1-5 years, 22.6% have been operating for less than 1 year, 20.2% have been in operation for more than 20 years, 14.3% have been operating for 6 - 10 years, and 13.1% have been in business for 11 - 20 years. Among the surveyed enterprises, 54.8% have fewer than 10 employees, 26.2% have 10 – 49, 9.5% have 50 - 249 employees, and 9.5% have more than 250 employees.
3. Results and discussion

The median annual turnover of the surveyed enterprises is 17,500 euros, and the mean (average) annual turnover is 1,700,742 euros. In the past year, the revenue of the surveyed enterprises changed as follows: 46.4% experienced a decrease, 31% remained unchanged, and 22.6% saw an increase.

The change in the profitability of the surveyed enterprises is as follows: 40.5% experienced a decrease, 36.9% remained unchanged, and 22.7% saw an increase. The change in the volume of products sold and services provided by the surveyed enterprises is as follows: 22.1% experienced a decrease, 32.1% remained unchanged, and 35.7% saw an increase.

The change in the volume of exported products/services is as follows: 29.8% experienced a decrease, 45.2% remained unchanged, and 25% saw an increase. The change in market share for the surveyed enterprises is as follows: 36.9% experienced a decrease, 39.3% remained unchanged, and 23.9% saw an increase.

Table 1. Use of mobile technologies and devices (smartphones, tablets, etc.) in business in the context of digitization in the last few years (%).

<table>
<thead>
<tr>
<th>Use of mobile technologies and devices</th>
<th>never</th>
<th>rarely</th>
<th>medium</th>
<th>often</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile access to e-mail</td>
<td>8.3</td>
<td>25</td>
<td>17.9</td>
<td>10.7</td>
<td>38.1</td>
</tr>
<tr>
<td>Mobile version of the website</td>
<td>15.5</td>
<td>17.9</td>
<td>19</td>
<td>19</td>
<td>28.6</td>
</tr>
<tr>
<td>Messenger groups for solving business tasks</td>
<td>8.3</td>
<td>26.2</td>
<td>19.1</td>
<td>20.2</td>
<td>26.2</td>
</tr>
<tr>
<td>SMS marketing</td>
<td>13.1</td>
<td>21.4</td>
<td>22.7</td>
<td>19</td>
<td>23.8</td>
</tr>
<tr>
<td>Mobile access to company resources (databases, etc.)</td>
<td>13.1</td>
<td>25</td>
<td>14.3</td>
<td>23.8</td>
<td>23.8</td>
</tr>
<tr>
<td>Company has developed its own mobile applications</td>
<td>31</td>
<td>22.6</td>
<td>16.6</td>
<td>17.9</td>
<td>11.9</td>
</tr>
<tr>
<td>Advertising targeted for use on mobile devices</td>
<td>23.8</td>
<td>19</td>
<td>23.8</td>
<td>17.9</td>
<td>15.5</td>
</tr>
<tr>
<td>Mobile devices for managing production processes</td>
<td>17.9</td>
<td>27.4</td>
<td>20.1</td>
<td>17.9</td>
<td>16.7</td>
</tr>
<tr>
<td>Payments of a company bills from a mobile phone</td>
<td>13.1</td>
<td>17.9</td>
<td>23.7</td>
<td>16.7</td>
<td>28.6</td>
</tr>
<tr>
<td>Equipment of a company transport system with location data transmission systems</td>
<td>16.7</td>
<td>21.4</td>
<td>17.8</td>
<td>26.2</td>
<td>17.9</td>
</tr>
<tr>
<td>Own mobile application</td>
<td>26.2</td>
<td>21.4</td>
<td>19</td>
<td>16.7</td>
<td>16.7</td>
</tr>
<tr>
<td>Augmented reality technologies</td>
<td>38.1</td>
<td>13.1</td>
<td>20.3</td>
<td>20.2</td>
<td>8.3</td>
</tr>
<tr>
<td>Possibility to purchase (order, pay, choose a delivery method) your products or services through mobile</td>
<td>17.9</td>
<td>14.3</td>
<td>25</td>
<td>10.7</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Source: authors’ calculations based on survey data (n=252, 2023)

It has been found that 38.1% of entrepreneurs always use mobile devices for email, while 8.3% do not use mobile access to email at all. 32.1% of entrepreneurs use the possibility to purchase (order, pay, choose a delivery method) products or services through mobile, but 17.9% never use this option. 28.6% of entrepreneurs have a mobile version of the website and always use it, while 15.5% never use it. 28.6% of entrepreneurs make payments for their businesses using a mobile phone, while 13.1% have never done this. 26.2% of entrepreneurs always use messenger groups to solve business tasks, while 8.3% never use them. 23.8% of entrepreneurs always use SMS marketing, while 13.1% never use it. Therefore, the above-described ways of using mobile technologies are the most popular among entrepreneurs.

The least popular actions for entrepreneurs are the use of augmented reality technologies (8.3% always use, 38.1% never use) and the development of their own mobile applications (16.7% always use, 17.9% never use). It is interesting to note that 23.8% of enterprises never use advertising oriented to be used on mobile devices (only 15.5% always use it). According to the authors, there is a potential to use mobile devices more for managing production processes (17.9% never use them, while 16.7% always use them). Additionally, they suggest equipping company transportation with location data transmission systems (16.7% never use them, 17.9% always use them). It is possible that these ways of using mobile technologies are not in high demand for small businesses.
As a result of the survey, the authors also established the subjective assessment by entrepreneurs of the degree of impact of mobile technologies on specific aspects of business in the context of digitization in the last few years.

Table 2. Degree of influence of mobile technologies on specific aspects of business in the context of digitization in the last few years (\%)

<table>
<thead>
<tr>
<th>Degree of influence of mobile technologies on specific aspects of business</th>
<th>negative influence</th>
<th>no influence</th>
<th>positive influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity of employees</td>
<td>21.4</td>
<td>31</td>
<td>47.6</td>
</tr>
<tr>
<td>Resources saving (including time)</td>
<td>25</td>
<td>19</td>
<td>56</td>
</tr>
<tr>
<td>Communication with clients</td>
<td>10.7</td>
<td>27.4</td>
<td>61.9</td>
</tr>
<tr>
<td>Communication with suppliers</td>
<td>17.9</td>
<td>25</td>
<td>57.1</td>
</tr>
<tr>
<td>Remote interaction with the company information systems, equipment, and products by employees</td>
<td>21.4</td>
<td>27.4</td>
<td>51.2</td>
</tr>
<tr>
<td>Development (or adaptation) of products and services for use by customers on mobile devices (purchase, payment, delivery)</td>
<td>15.5</td>
<td>35.6</td>
<td>48.8</td>
</tr>
<tr>
<td>Effectiveness of advertising</td>
<td>25.1</td>
<td>26.1</td>
<td>48.8</td>
</tr>
<tr>
<td>Efficiency of decision-making</td>
<td>17.8</td>
<td>29.8</td>
<td>52.4</td>
</tr>
<tr>
<td>Customer awareness about products and services</td>
<td>13.1</td>
<td>28.5</td>
<td>58.4</td>
</tr>
<tr>
<td>Execution of business processes</td>
<td>20.3</td>
<td>21.3</td>
<td>58.4</td>
</tr>
<tr>
<td>Number of clients</td>
<td>21.5</td>
<td>32.1</td>
<td>46.4</td>
</tr>
<tr>
<td>Number of sales</td>
<td>19.1</td>
<td>33.2</td>
<td>47.7</td>
</tr>
<tr>
<td>Internal costs</td>
<td>22.6</td>
<td>38.2</td>
<td>39.2</td>
</tr>
<tr>
<td>Satisfaction of employees</td>
<td>19.1</td>
<td>26.2</td>
<td>54.7</td>
</tr>
<tr>
<td>Introduction of new products and services</td>
<td>19.1</td>
<td>38.1</td>
<td>42.8</td>
</tr>
<tr>
<td>Number of employees</td>
<td>21.4</td>
<td>42.9</td>
<td>35.7</td>
</tr>
<tr>
<td>Number of IT employees</td>
<td>28.5</td>
<td>42.9</td>
<td>28.6</td>
</tr>
<tr>
<td>Remote employees</td>
<td>22.6</td>
<td>35.9</td>
<td>41.5</td>
</tr>
</tbody>
</table>

Source: authors’ calculations based on survey data (n=252, 2023)

Evaluating the degree of influence of mobile technologies on business processes and other characteristics (in entrepreneurs’ opinion), it can be stated that a certain share of entrepreneurs believe that this influence is negative. 28.5% of entrepreneurs believe that the use of mobile technologies leads to an increase in the number of IT employees and results in internal costs (22.6%) and negatively affects the company resource saving (25%). 25.1% consider advertising with the use of mobile technologies to be ineffective. 21.4% believe that the use of mobile technologies has a negative impact on labor productivity. Additionally, 21.4% of entrepreneurs believe that remote interaction of employees with the company information systems, equipment, and products is ineffective and even has a negative impact. Therefore, it can be concluded that a certain share of entrepreneurs may have a limited competence in mobile technologies and may be hesitant to use them in their business activities. However, a significant share of entrepreneurs assesses the impact of mobile technologies on certain aspects of business positively. So, 61.9% believe that mobile technologies have a positive impact on communication with customers, while 57.1% think that mobile technologies have a positive impact on communication with suppliers. 57.1% consider marketing to be effective, and 48.8% appreciate the effectiveness of advertising using mobile devices. 58.4% consider the use of mobile technologies in business processes to be effective and believe it increases employee satisfaction (54.7%). According to 51.2% of entrepreneurs, remote interaction of employees with the company information systems, equipment, and products through mobile technologies also has a positive impact on business. Considering the market share of mobile device usage in Latvia at 38.43% (compared to 51.89% in the EU), the subjective assessment of the impact of mobile technologies on business is quite optimistic.
If we analyze the correlation between entrepreneurs’ assessments of the impact of mobile technologies on business and objective business results, there is a positive linear relationship between changes in revenue at the enterprise and the degree of assessment related to communication with customers (Spearman correlation coefficient 0.187, p-value<0.01), communication with suppliers (Spearman correlation coefficient 0.153, 0.01<p-value<0.05), remote interaction of employees with company information systems, equipment, and products (Spearman correlation coefficient 0.223, p-value<0.01), development (adaptation) of products and services for mobile device use (Spearman correlation coefficient 0.154, 0.01<p-value<0.05), customer awareness about products and services through mobile technologies (Spearman correlation coefficient 0.180, p-value<0.01), execution of business processes (Spearman correlation coefficient 0.145, p-value<0.01), number of clients (Spearman correlation coefficient 0.146, p-value<0.01), number of sales (Spearman correlation coefficient 0.159, p-value<0.01), employee satisfaction (Spearman correlation coefficient 0.240, p-value<0.01), introduction of new products and services (Spearman correlation coefficient 0.203, p-value<0.01), and remote employees (Spearman correlation coefficient 0.126, 0.01<p-value<0.05).

There is a positive linear relationship between changes in the profitability of enterprises and entrepreneurs’ assessments of the impact of mobile technologies on resource saving (Spearman correlation coefficient 0.161, 0.01<p-value<0.05), communication with customers (Spearman correlation coefficient 0.285, p-value<0.01) and suppliers (Spearman correlation coefficient 0.176, p-value<0.01), remote interaction of employees with company information systems, equipment, and products (Spearman correlation coefficient 0.174, p-value<0.01), development of products and services for mobile device use (Spearman correlation coefficient 0.247, p-value<0.01), marketing efficiency (Spearman correlation coefficient 0.132, 0.01<p-value<0.05), decision-making promptness (Spearman correlation coefficient 0.132, 0.01<p-value<0.05), customer awareness about products and services (Spearman correlation coefficient 0.254, p-value<0.01), execution of business processes (Spearman correlation coefficient 0.178, p-value<0.01), number of clients (Spearman correlation coefficient 0.176, p-value<0.01), number of sales (Spearman correlation coefficient 0.255, p-value<0.01), internal costs (Spearman correlation coefficient 0.179, p-value<0.01), employee satisfaction (Spearman correlation coefficient 0.263, p-value<0.01), introduction of new goods and services (Spearman correlation coefficient 0.239, p-value<0.01).

The analysis reveals positive linear relationship between changes in the volume of products sold/services provided in the last year and entrepreneurs’ assessments of the impact of mobile technologies on employee productivity (Spearman correlation coefficient 0.171, p-value<0.01), resource saving (including time) (Spearman correlation coefficient 0.152, 0.01<p-value<0.05), communication with clients (Spearman correlation coefficient 0.200, p-value<0.01), remote interaction of employees with company information systems, equipment, and products (Spearman correlation coefficient 0.170, p-value<0.01), customer awareness about products and services (Spearman correlation coefficient 0.165, p-value<0.01). Number of sales also correlates with the change in the volume of products sold (Spearman correlation coefficient 0.170, p-value<0.01); employee satisfaction correlates with the change in the volume of products sold (Spearman correlation coefficient 0.207, p-value<0.01).

Changes in the volume of exported products or services during the last year correlate with entrepreneurs’ assessments of the degree of impact of mobile technologies on employee productivity (Spearman correlation coefficient 0.132, p-value<0.01), communication with customers (Spearman correlation coefficient 0.152, 0.01<p-value< 0.05), development of products and services for mobile device use (Spearman correlation coefficient 0.211, p-value<0.01), promptness of decision-making (Spearman correlation coefficient 0.156, 0.01<p-value<0.05), customer awareness about products and services (Spearman correlation coefficient 0.128, 0.01<p-value<0.05), number of sales (Spearman correlation coefficient 0.213, p-value<0.01), employee satisfaction (Spearman correlation coefficient 0.151, 0.01<p-value<0.05), and introduction of new products and services (Spearman correlation coefficient 0.198, p-value<0.01).

Change in the market share correlates with entrepreneurs' assessments related to the impact of mobile technologies on resource-saving (Spearman correlation coefficient 0.167, p-value<0.01), marketing efficiency (Spearman correlation coefficient 0.138, 0.01<p-value< 0.05), advertising efficiency (Spearman correlation coefficient 0.132, p-value<0.01), number of sales (Spearman correlation coefficient 0.203, p-value<0.01), remote employees (Spearman correlation coefficient 0.126, 0.01<p-value<0.05).
The table reflects the results of a correlation analysis between the following variables: the use of mobile technologies and business results in Latvia. In most cases, there is a weak positive linear relationship, with the exception of the correlation with business results being only the presence of a mobile version of the website and the use of augmented reality technologies (the exception being their impact on changes in market share – Spearman correlation coefficient 0.131, 0.01<p-value<0.05). Certainly, the use of augmented reality technology and custom mobile applications by entrepreneurs is very limited (as seen in Table 1). However, mobile website versions are relatively common but still do not have a significant impact on changes in a company’s income, sales volume, export changes, profitability, or market share.

4. Conclusions

The least popular actions among entrepreneurs in Latvia are the use of augmented reality technologies and the development of their own mobile applications. It appears that there is a potential for greater use of mobile-oriented advertising as well as the management of production processes and equipping company transport with location data transmission systems.

The most popular actions among entrepreneurs in Latvia involve mobile access to email, the possibility to make mobile purchases (order, pay, select delivery methods) of products and services, mobile payments for company
bills, mobile website versions, and the use of messaging groups for business purposes, as well as SMS marketing. Despite the lower market share of mobile devices in Latvia – 38% compared to the European average of 52%, the use of mobile devices still has a positive impact on business in Latvia.

According to the assessments provided by entrepreneurs, the most positive impact of mobile technologies is observed in the following areas: communication with customers and suppliers, marketing effectiveness, customer awareness of products and services, execution of business processes, number of customers and sales, development or adaptation of products and services for mobile device usage, and effectiveness of advertising.

A weak positive linear relationship has been established between the following variables: objective changes in enterprise income and the degree of assessment by entrepreneurs for communication with customers, communication with suppliers, remote interaction of employees with company information systems, equipment, and products, development (adaptation) of products and services for mobile device use, customer awareness about products and services through mobile technologies, execution of business processes, number of customers, number of sales, employee satisfaction, introduction of new goods and services, and remote employees.

A weak positive linear relationship has been established between changes in the profitability of the enterprise and the degree of entrepreneurs' assessments of the impact of mobile technologies in various areas. These areas include the impact of mobile technologies on resource-saving, communication with customers and suppliers, remote interaction of employees with company information systems, development of products and services for mobile device usage, marketing effectiveness, decision-making promptness, customer awareness, business process execution, number of customers, number of sales, internal expenses, employee satisfaction, and introduction of new products and services.

A linear positive relationship has been established between changes in the volume of products/services sold in the last year and entrepreneurs' assessments of the impact of mobile technologies on various aspects of their business. These aspects include the impact of mobile technologies on employee productivity, resource-saving, communication with customers, remote interaction of employees with the company information systems, employee satisfaction, and customer awareness. Additionally, number of sales correlates with changes in the volume of products/services sold, while employee satisfaction correlates with changes in the volume of products sold.

The change in exported products or services over the last year correlates with entrepreneurs' assessments of the impact of mobile technologies on employee productivity, resource-saving, communication with customers, development of products and services for mobile device usage, decision-making efficiency, customer awareness products and services, sales volume, employee satisfaction, and the introduction of new products and services. The change in market share correlates with entrepreneurs' assessments of the impact of mobile technologies on resource-saving, marketing efficiency, advertising effectiveness, sales volume, employee satisfaction, and the introduction of new products.

The authors believe that the use of a mobile website version and augmented reality technologies have the potential to impact businesses in Latvia positively.

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