

Digital maturity and value capture of small and medium sized enterprises

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ABSTRACT

The aim of the study is to reveal the impact a company's digital maturity on its economic indicators of balanced growth, promoting the company's sustainable development. Literature sources on the importance of digitization, digital maturity and maintaining the value of the company within the business model were analyzed within this study, a questionnaire to assess the level of digital development of companies was created. Using this questionnaire, a survey of companies from various industries was conducted to determine their digital maturity. The level of digitization determined is analyzed within the business model (BM) dimension of value capture in the context of changes in the relevant economic indicators: turnover, costs and profits. After analysis of the literature sources and processing of the survey data, the authors conclude that the company's digital maturity ensures success only if all elements of the BM are transformed, otherwise the balanced growth of economic indicators is not ensured.

Keywords: profit potential, business models, digital transformation, disruptive innovation, profitable business model, service-dominant logic, profit strategies, digital platforms, digital maturity.

1. INTRODUCTION

Along with the emergence of Industry 4.0, the concept of "digitization" has become an integral part of the contemporary daily life. At the same time, under the impact of COVID-19 pandemic, digitization has also become an indispensable element of the entrepreneurial activity.

In the last decade, business infrastructure has become digital along with the growing integration of products, processes and services [1]. Currently, digital transformation of the business model (BM) is a matter of concern of not only technological enterprises, which built their BM around a digital product, but also any manufacturer and service provider. Industry 4.0 provides opportunities to digitize all processes that may possibly be digitized and to replace human labor [2].

In this regard, an important question emerges: to what extent small and medium-sized enterprises can benefit from achievements of Industry 4.0 in their development, or it is the privilege of large corporations only, and Industry 4.0 will facilitate capital inflow to large enterprises [2].

In the recognitions of this fact, this research was conducted with an aim to determine the impact of digital maturity of enterprises on the balanced growth of their economic indicators, which in its turn promotes their sustainable development. The enterprises operating in the Latvian market, mainly small and micro enterprises from different industries, were covered in the present research.

The study was conducted based on the body of non-financial indicators related to the digital maturity of the companies obtained by means of survey. In order to evaluate the practical significance of the survey data, the questions in the survey were grouped and interpreted adopting the perspective of the Universal Business Model. The obtained data were compared with the actual financial data listed in the annual reports of the surveyed companies; the conclusions on the extent the digital maturity of an enterprise influences its balanced economic growth were made, analyzing company revenue growth or cost minimization dynamics.

The research has demonstrated that digitization of the elements of value proposition (VP) dimension creates the greatest economic effect having an impact on the revenue growth. However, it has also been demonstrated that it is possible to ensure the steady profit increase, which promotes the balanced growth of an enterprise, only facilitating the interaction among all elements of the business model, uniting and adjusting various digitization opportunities.

2. MATERIALS AND METHODS

At the first stage of the research, the qualitative analysis of relevant literature was performed in order to provide theoretical substantiation for the definitions used in the current study and to select appropriate research methods. Selecting the literature sources, a limitation with regard to the publication period was set: only the sources published after 1990, when the Internet experienced exponential development, were considered. In the mid-1990s, the first theories on the BM concept were formulated. A large number of publications dedicated to these issues were published in the mid-2010s. In turn, the papers on digital transformation started to appear later, their number started to increase noticeably only from 2014 onwards [1]. In addition, the authors studied industry expert opinions, their selection was done with the help of online resource search tools using definite key words in the contextual search.

At the second stage, a survey questionnaire was drawn up; the questions were formulated based on the results of analysis of scientific and popular science literature, similar questionnaire samples and personal experience of the authors. The questionnaire consists of 10 sections, but in essence the questions are divided into two groups. One group of questions allows obtaining factual information on the enterprise: the number of employees; duration; area of activity; subjective self-assessment of own digital maturity; planned digitization activities. The second group of questions covers several specific issues: corporate governance, customer service; digital marketing channels; products; personnel; accounting; financial planning and control; effective business governance; data analysis-based managerial decision-making. Each answer to the survey questions was ascribed a definite score expressed in points, taking into consideration whether and to what extent the answer attests the level of digital development. With some exceptions due to the nature of questions, the scores to the answers were ascribed following the principle laid down in Table.

Table
The principle of ascribing the score to the survey questions

Type of answer	Score
Positive answer: yes, it has been introduced	2
Future plans: in the launch process/planning/partially	1
Negative answer: no, it is not necessary	0
Indeterminate answer: no answer	0
If the answers are provided to several questions, each answer	1

At the third stage, 34 enterprises were selected, whose managers had personally agreed to participate in the survey. These enterprises are working in the Latvian market, represent various industries, and have different duration. However, in their majority, the surveyed companies may be categorized as small and micro enterprises based on their turnover figures.

The obtained survey results were considered adopting the BM approach, each question was related to a definite element of a particular BM dimension. The considered elements of the value proposition (VP) dimension, such as the customer, goods, marketing channels, modes of communication, and delivery channels, have an impact on the revenue. Such elements of value creation (VC) dimension as personnel, customer service provision, accounting, planning and control functions of business organization, and management decisions, have been classified as the elements influencing costs. In order to assess the impact of digital maturity of an enterprise on its revenues and cost dynamics, company answers were evaluated as proportion of the maximum possible score.

Analyzing the answers to the survey questions, the maximum possible score was set at 118. It was assumed that this score attests the highest level of digital maturity of an enterprise. It was broken down into two dimensions – the factors that have an impact on the revenue growth (maximum possible score – 56) and the factors that contribute to cost reduction (maximum possible score – 62). Analyzing the answers to the questions from the first question group, which reflect the subjective self-assessment of digital maturity made by entrepreneurs, maximum possible score was set at 16. The maximum possible score mentioned above was considered to represent 100%. Answers to the questions in each question group were evaluated separately.

The data obtained in the survey were transformed into numerical values. The resulting score was used to determine the overall digital maturity of the surveyed companies, digital maturity of each company separately and each industry represented by the surveyed companies. Grouping the answers into cost and revenue categories, the impact of the digital maturity of the enterprise on its cost or revenue dynamics was determined.

At the final, fourth stage, the obtained data were compared with the actual data reported by the companies in their annual financial reports. The conclusions on the degree to which digital maturity of the company influences the balanced growth of its economic indicators were made by analyzing company revenue increase or cost reduction.

Financial reports of 34 companies for the period from 2018 to 2019 (the data for 2020 were also available) were extracted from the open data base *Firmas.lv*. Data analysis and visualization were performed using an analytical tool *Microsoft Power BI*.

3. LITERATURE REVIEW

3.1. The role of digitization

The issue whether small and medium-sized enterprises (SMEs) may tap the opportunities offered by Industry 4.0 or only large corporations are capable to fully employ them remains open. The advantage of SMEs lies in their ability to respond more quickly to market demand and to adapt their BMs more easily, while they still lack the large-scale investment to introduce innovations that are available to large companies. The future development scenario could be to adopt different types of cooperation and profit-sharing business models, such as SME or start-up mergers with large companies or cooperation in strategic alliances [2,3].

Along with the introduction of the Internet, entrepreneurs persistently try to discover new ways to expand cooperation and organize economic activities at the interface between the virtual and real world [4]. In their research “Factors influencing companies’ positive financial performance in digital age: a meta-analysis” [5], analyzing the factors promoting business value capture, the authors determined the following dominating groups of non-financial factors of the digital category: Digital Networking, Digital Data, Automation, Disruptive Innovation.

Digital Networking establishes business communication both with the customers, expanding company opportunities to present their goods, and with suppliers and other partners, widening and facilitating product ordering options [6,7,8], thus creating a business ecosystem. A business ecosystem consists of individuals, organizations, and state establishments, as well as activities that ensure company interaction with the customers, competitors, media and other actors [9, 10]. One enterprise may be part of several ecosystems, the participants of which are either its partners, suppliers, and customers [11].

Digital Data: Summarization, processing and analysis of the digital data facilitate and improve management forecasts and decisions, helping create a profitable business. Digital transformation alters business organization, shifting the focus from process definition to data flow management concept [12,13]. Modern analytical tools integrated within company BMs offer sample opportunities for analyzing data [8], providing information about products, customers and core values of the organization [14]. Reports drawn up using the data obtained at

the third-party platforms provide information on customer behavior and product demand [15]. Customer feedback allows improving product quality and developing a unique product [5]. All newly obtained data create new knowledge and allow not only making businesses more efficient, but also replacing human labor by automation solutions, thus radically reducing costs [16,12].

Automation is integration of classic AI technologies that allow working autonomously and creating self-organizing systems. It reduces errors, increases speed and allows decreasing maintenance costs [12].

Disruptive Innovation: Innovative development may follow two different paths: innovation related to company's sustainable development, aimed at improving the existing products, which allows selling them at a higher price, simultaneously attracting more customers, and disruptive innovation [17]. The latter provides opportunity to offer alternative products, which are much cheaper and more user-friendly; they also partially or fully replace the existing product range. Disruptive innovation is not intended to develop better products, it is aimed at launching new products that currently are not available in the market [14,18]. However, it is important to bear in mind that what may appear a disruptive innovation for one company may be just a factor promoting sustainable development for another [17].

3.2. Definition of digital maturity of an enterprise.

The term "digital maturity" came into being along with the rise of Industry 4.0. This is a new notion, so common understandings of this concept have not yet been developed. The opportunities brought about by Industry 4.0 imply that all processes that can be digitized should be digitized to the degree possible and human labor should be replaced. Activities that cannot be digitized should integrate technological solutions, expanding human capabilities and work quality, thus eliminating all routine professions and creating new professions related to control functions, innovative and critical thinking. In turn, the value of activities that cannot be digitized will be increasing [2]. The opportunity to build a more profitable business may be considered a positive factor of this trend, as the need for labor decreases [19]. However, currently the situation is not as straightforward, since digitalization also calls for continuous employee training. The skills of the workforce must be very high, therefore, their remuneration should also be sufficiently high [2].

In the paper "Business model transformation and business viability. Case of Yellow pages" [20] exploring the definition of digital maturity, the authors discovered that digitalization is a new source of BM innovation, which promotes company competitiveness and boosts profit growth at some enterprises [16]. Introduction of new technologies may not always be successful if an enterprise has not established a respective business culture. The main issues that arise are whether the company recognizes that nowadays there is a dramatic gap between the digital maturity of an enterprise and market development [21] and whether the enterprise has sufficient advanced professional competence to launch new projects. Time, finance and quality are the main success factors that influence feasibility of each newly launched project, as a result, speed has become a new business currency [13]. Expensive technologies and highly-qualified and skilled and therefore well-paid employees are expensive only if the projects are long-term. If it is possible to reduce the number of processes or process time, an enterprise may improve operational efficiency and increase

profits. The ability of an enterprise to recognize and acquire new external knowledge, adopt, transform and use it for its own commercial needs to innovatively transform its BM is crucial [6].

Summarizing the above-said, it may be concluded that digital maturity is a state when efficiency of the digital processes reaches its maximum, all arrangements are made to ensure that the team works as a well-coordinated whole using the adopted IT solutions [22] in pursuit of the enterprise value capture (VCP).

3.3. Significance of business model and its improvements.

In the age of Industry 4.0, the role of BM became increasingly important. The main feature of the revolution is the unpredictable and disruptive combination of new technologies and the market, and it is not possible without dynamic adjusted BM growth [2,3]. BM is a conceptual tool that includes a set of elements and their interactions, it reflects the business logic of each firm [23]. Many researchers believe that BM combines three main aspects of business - value proposition (VP), value creation (VC) and value capture (VCP). The dimension of value capture includes financial [23] and, in the authors' view, non-financial aspects [5].

The VP dimension includes a set of solutions for the company customers [25] and determines who the company customers are, what product may be offered, what the main consumers of the product are, what pricing policy is used, what product distribution channels are used and what marketing activities should be implemented. The VC dimension is defined in terms of such factors as how companies create value and develop a value chain and what tools, resources and competences they use for this purpose [24]. The financial aspect of the value capture dimension determines how value proposition is transformed into revenues, what cost structure the company will adopt and what profit generation mechanism will it use. In turn, non-financial aspect may be further subdivided into digital and non-digital factors, which represent a set of support driver factors, which allow sustaining the value of the business model in the long term.

Digitization is a new source of BM innovation; it promotes company competitiveness. In order to determine the scope of strategic business change under the impact of innovation, the term 'transformation' should be used [26]. The concept of digital transformation has been discussed for many years. The following topical issues should be addressed: how to digitally transform business models, which tools should be considered [12].

Many of the proposed BMs are incomplete because they do not consider changes over time [3]. There are serious gaps in the dynamics of the currently defined BMs, which mostly reflect the situation at a given time [25], while the dynamic BM approach examines the trends and how the changes in one BM dimension affect other BM dimensions [3,27].

3.4. Balanced economic indicators for sustainable development of the company.

The concept of "growth" is frequently used in the economic markets. Growth indicators are frequently aligned with the general level of life growth indicators; therefore, growth rates are widely used in both academia and business [28].

The dynamic development of the company inevitably creates economic risks. When planning the long-term development of a company, it is important to ensure balanced economic development. Profit growth rate is the determining factor, followed by growth of other indicators in this proportion [29]:

$$dP > dT > dC > dCA > dFC > dSt,$$

where:

dP – profit growth rate;

dT – turnover growth rate;

dC – cost growth rate;

dCA – current asset growth rate;

dFC – fixed capital growth rate;

dSt – staff growth rate.

In their research “Factors influencing companies’ positive financial performance in digital age: a meta-analysis” [5], the authors have concluded that in practice, profit increase is frequently perceived as a result of cost minimization, however, maximization of profit should be ensured increasing revenue by means of efficient resource use [24]. It is recommended to increase efficiency promoting effectiveness, rather than just to search for the ways how to minimize costs [26]. Revenue growth is still perceived as the main factor determining steady profits, but the authors also stress the role of cost minimization that results from adoption of digital solutions. In an effort to minimize costs, it is essential to sustain or increase revenue and to create an efficient cost structure using new approaches to setting pricing policies, while taking into consideration the time factor that may limit profit acquisition opportunities.

In view of the theoretical premises laid down above, in the forthcoming sections of this paper, while analyzing the data obtained in the survey, the authors analyzed profit growth rates in relation to revenue growth and cost reduction indicators. The relevant section of the above-mentioned formula is going to be used: $dP > dT > dC$.

4. RESEARCH RESULTS

34 companies from different industries were included in the survey sample. Most companies represent the service sector – 56 %, 20 % are trade enterprises, 15 % – manufacturing companies and 9 % – construction companies. In terms of their turnover, most companies are classified as small and medium-sized enterprises, their reported revenue is in the range from 1 m to 10 m EUR (41 % of the companies), in turn, the companies with the revenue from 0.1 m to 1 m EUR and the companies with the revenue below 0.1 m were represented in approximately the same proportion – 29 % and 27 % of the total number of companies surveyed, respectively. One company reported revenue of 170 m EUR. Duration of the majority of the surveyed companies (53 %) is more than 12 years, whereas the proportion of the companies, whose duration is shorter than 6 years, as well as those that operate from 7 to 12 years is approximately the same – 26 % and 21 % of the total, respectively. With regard to the number of employees, 56 % of the surveyed enterprises employ fewer than 10 employees; 23 % – from 50 to 200 employees; 18 % – from 11 to 50 employees, and only 3 % employ more than 200 employees.

Analyzing the answers to the questions in the first question group, which reflect companies’ subjective self-assessment of own digital maturity, it was observed that a large share of the companies (17) assess their digital maturity higher than evidenced by the scores they received for the answers in the questionnaire, and consider that they widely use digital solutions in their business activities. The majority of these companies

believe that the introduced digitization solutions are optimal in terms of their cost efficiency and are used to full capacity. The evaluation of 10 companies demonstrated very close match between subjective self-assessment and the received scores, at the same time, seven companies evaluated their digital maturity lower than attested by survey results.

Analyzing the answers to the questions in the second question group, the obtained results demonstrate that the digitization degree of the surveyed companies is poor. The average score is 28 % from the maximum possible score that attests the highest level of digital maturity. Considering distribution of activities between VP and VC BM dimensions, 32 % of the total score attributable to this dimension was related to the VC dimension, which influences cost reduction. 24 % from the total score attributable to this dimension was related to the VP dimension, which influences revenue growth.

Considering the answers to the questions related to the VP, of the maximum possible score of 56 (100 %) the answers of 16 companies (45.45 %) fall in the range from 0 % to 19 %, of 13 companies (39.39 %) – in the range from 20 % to 39 %, and in case of 5 companies (15.15%) – in the range more than 40 %. The lowest VP digitization degree is observed at the companies coming from construction and manufacturing industry, the highest – at the trade enterprises.

None of the companies mentioned that disruptive innovations fully substitute the range of products offered by the company, which can substantially reduce the attained revenue figures. However, eight out of the surveyed companies noted that the company product has been partially replaced by an alternative innovative solution, seven mentioned that they introduced innovative solutions for their product improvement. All these companies also reported significant revenue growth in the last reporting year.

The majority of companies that can digitize their products are on the way to product digitization: 14 companies, or 40 % of all companies surveyed, have digitized or partially digitized their products; 13 companies, or 37 %, mentioned that it is not possible to digitize the products they sell.

The surveyed companies still have a sufficiently large potential for expanding digital marketing activities and customer communication channels. 11 companies, or 30 %, stated that they do not use any digital marketing channels and they do not have their own web site. Digital platforms Google, Facebook and other were mentioned as the most popular marketing channels (36 % cases). Some companies use banner ads and email marketing.

At the same time, among the companies that maintain their own web site, the majority (64 %) use it only as a showcase that presents information on the company and products, but is not used for interactive communication with the customer. Five companies (20 %) run an online shop, however, only two of them provide a wide range of functionalities allowing the customer to order a product, pay for it, order delivery, file a complaint, and leave feedback. In turn, data exchange with the internal information system is ensured only at one company.

Considering the answers to the questions related to the VC, of the maximum possible score of 62 (100 %), the answers of 5 companies (15,15 %) fall in the range from 0 % to 19 %, of 17 companies (51,52 %) – in the range from 20 % to 39 %, of 11

companies (33,33%) – in the range above 40 %. The lowest VC digitization degree is observed at the companies in construction and manufacturing industry, in turn, trade and service enterprises are characterized by higher digital maturity. Overall, digitization of the elements of the VC dimension is higher compared with the elements of the VP dimension.

A large share of the companies – 70 % of the surveyed – follow modern trends and implement their business management and control using data analytics. It was mentioned that analytical tools for management control were introduced in company governance (23 answers), work task planning and control (17 answers), procurement planning (16 answers) and marketing activity control (13 answers). 8 companies mentioned that they do not use data analysis in planning their business activities, and only 1 company noted that it uses data analysis in setting its pricing policy.

Analyzing the survey answers it may be concluded that although the companies widely use data analysis in their business management, data analysis is mainly done using autonomous tools detached from process recording and management systems, since the integrated ERP system is introduced only at 31 % of the companies, 16 % of the companies synchronize data across separate systems, and 53 % of the companies have not adopted an integrated ERP system, storing their data in the isolated systems not ensuring automatic data exchange.

COVID-19 pandemic has promoted digitization of all processes. 80 % of the surveyed companies maintain the tools to perform transactions and sign documents using the electronic signature, 44 % of the companies also ensure storing and recording of the electronic documents. The majority of the companies may provide opportunities for remote work – 53 % fully and 19 % partially. Only 25 % of the companies due to specific nature of their activities may not organize their work remotely.

A large share of the companies – 48 % of those that provide remote working opportunities – are able to assign tasks and control task performance and employee workload remotely. 26 % of the companies are able to control work performance remotely, although they do not provide for workload control, and as many companies may ensure only task assignment, not providing for task performance and employee workload control.

Digitization activities mentioned above are mainly focused on business management, accounting and control, at the same time, digital solutions have been introduced in the core business processes to a limited degree. Two companies are planning to launch a virtual assistant, seven – robots for process automation, some IoT solutions have already been introduced at four companies, and nine companies plan their launch.

Overall, digitization of the elements of the VC dimension is higher compared to that of the elements of the VP dimension. Therefore, taking into consideration the obtained data, it may be assumed that the surveyed companies increase revenue at the expense of cost minimization and digitization has influenced revenues to a lesser degree.

With regard to the last available profit and loss statement included in the annual reports of the surveyed companies, it may be concluded that 26 companies, or 76 % from the surveyed enterprises, have reported a significant turnover growth. Taking into consideration the fact that in manufacturing and construction

digitization of the VP dimension is at a very low level, it may be presumed that growth has been facilitated by other factors, which lie beyond the scope of this research. In turn, the majority of enterprises working in the service sector reported a turnover growth of 23 % on average, whereas the turnover of a half of the companies working in trade has grown by 10 % on average.

Although survey results indicate that companies mainly perform digitization activities related to the elements of the VC dimension and the share of costs in the profit and loss statement is expected to decrease, only 14 companies, or 41 %, demonstrated a more rapid cost decrease trend against the revenue increase trend.

Profit is an important measure of company development, however, only a balanced profit growth may ensure sustainable development of the company. The balanced growth may be described by the formula, where profit growth is more rapid than revenue growth, and revenue growth is more rapid than cost minimization rate: $dP > dT > dC$. Analysis of the financial reports of the surveyed companies demonstrates that profit growth was reported by 18 companies, or 53 %.

Profit growth reported by 5 companies, or 15 % of the surveyed, is attributable to the increase of their revenue. Their costs grew faster than their revenue, therefore, it is the revenue growth that ensured profit increase. In turn, 9 companies, or 26 %, demonstrate the balanced profit increase, the growth of their profit surpasses their revenue increase and cost reduction. 4 companies, or 12%, witnessed a drop in their revenue, however, this profit growth was sustained at the expense of radical cost minimization.

5. CONCLUSIONS

The paper explored the impact the digital maturity of a company has on its balanced economic development. It is possible to evaluate the influence of digital maturity on the financial performance results of a company, interpreting it against BM dimensions and developing a conceptual tool, which accounts for the interaction among the set of related elements and reflects the business logic of each particular firm.

Having analyzed the results of the survey of 34 companies aimed at establishment of their digital maturity, the authors conclude that in their majority the companies assess the digital maturity of their business model higher than it may be implied based on the survey results.

Taking into consideration the summarized survey results, it has been concluded that digitization of the elements of the VP dimension produces the largest economic effect, which has an impact on the revenue growth. However, it is possible to secure the balanced profit growth, which ensures the balanced development of an enterprise, only in the interaction of all elements of BM dimensions, integrating and adjusting various digitization options

In their further research, the authors plan to supplement the questionnaire with the questions on the forms of BM element digitization and future digitization plans. It is additionally planned to examine specific industries, conducting surveys involving a larger number of respondents. The authors intend to analyze the industries whose product range has changed due to

disruptive innovation, as well as the industries affected by limitations caused by COVID-19 pandemic.

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7. REFERENCES

- [1] J. Reis, M. Amorim, M. Melão, “Digital Transformation: A Literature Review and Guidelines for Future Research”, **Trends and Advances in Information Systems and Technologies**. Volume 747, 2018, pp. 411-421, doi:10.1007/978-3-319-77712-2.
- [2] M. H. Lee, Y. J. Joseph, et al. “How to respond to the Fourth Industrial Revolution, or the second information technology revolution? Dynamic new combinations between technology, market, and society through open innovation”, **Journal Open Innovation: Technology, Market, and Complexity**. Volume 4, no. 3, 2018, doi:10.3390/joitmc4030021.
- [3] H. Khodaei, R. Ortt, “Capturing Dynamics in Business Model Frameworks”, **Journal Open Innovation: Technology, Market, and Complexity**. Volume 5, no. 8, 2019, pp. 1–13, doi:10.3390/joitmc5010008.
- [4] M. Wasko, R. Teigland, D. Leidner, S. Jarvenpaa, “Stepping into the Internet: New Ventures in Virtual Worlds”, **MIS Quarterly**. Volume 35, no. 3, 2017, p. 645, doi:10.2307/23042801.
- [5] L. Kasperovica, N. Lace, “Factors influencing companies’ positive financial performance in digital age: a meta-analysis”, **Entrepreneurship and Sustainability Issue**. Volume 8, no. 4, 2021, pp. 291–311, doi: 10.9770/jesi.2021.8.4(17).
- [6] L. Raymond, F. Bergeron, A. M. Croteau, J. Pierre, “IT-enabled Knowledge Management for the Competitive Performance of Manufacturing SMEs: An Absorptive Capacity-based View”, **Knowledge and Process Management**, Volume 23, no. 2, 2016, pp. 110–123, doi:10.1002/kpm.1503.
- [7] M. Mikusz, “Value-In-Context with Service Innovation in the Digital Age: A Service-Dominant Logic Perspective”, **Proceedings of the 50th Hawaii International Conference on System Sciences**, 2017, pp. 1267–1276, doi:10.24251/hicss.2017.151.
- [8] H. D. Köhler, “Profit and Innovation Strategies in Low-Tech Firms”, **Estudios de Economía Aplicada**, Volume 26, no. 3, 2008, pp. 73-87.
- [9] C. Seelos, J. Mair, “Profitable Business Models and Market Creation in Context of Deep Poverty: A Strategic View”, **Academy of Management Executive**, Volume 21, no. 4, 2007, pp. 49–63, doi:10.5465/AMP.2007.27895339.
- [10] R. F. Lusch, S. Nambisan, “Service Innovation: A Service-Dominant Logic perspective”, **MIS Quarterly**, Volume 39, no. 1, 2015, p. 12, doi:10.25300/MISQ/2015/39.1.07.
- [11] D. Paulus-Rohmer, H. Schatton, T. Bauernhansl, “Ecosystems, Strategy and Business Models in the age of Digitization - How the Manufacturing Industry is Going to Change its Logic”, **Procedia CIRP**, Volume 57, 2016, pp. 8–13, doi: 10.1016/j.procir.2016.11.003.
- [12] D. Schallmo, C. A. Williams, L. Boardman, “Digital Transformation of Business Models — Best Practice, Enablers, and Roadmap”, **International Journal of Innovation Management**. Volume 21, no. 8, 2017, 1740014 (17 pages), doi:10.1142/S136391961740014X.
- [13] P. Bendor-Samuel, “The power of digital transformation in a Data Driven”, *Forbes*, 2017, Jul. 21
- [14] C. M. Christensen, “The Innovator’s Solution: Creating and Sustaining Successful Growth”, Boston: **Harvard Business School Press**, 2003.
- [15] L. Li, F. Su, W. Zhang, J. Mao, “Digital transformation by SME entrepreneurs: A capability perspective”, **Information Systems Journal**, Volume 28, no. 6, 2018, pp. 1129–1157, doi:10.1111/isj.12153.
- [16] B. Dehning, V. Richardson, R. W. Zmud, “The Value Relevance of Announcements of Transformational. Information Technology Investments”, **MIS Quarterly**, 2003, pp. 637–656.
- [17] R. P. Joseph, “Digital Transformation, Business Model Innovation and Efficiency in Content Industries: A Review”, **The International Technology Management Review**, Volume 7, no. 1, 2018, pp. 59–70.
- [18] J. Linder, S. Cantrell, “Changing Business Models: Surveying the Landscape”, **Accenture. Institute for strategic change**, 2001.
- [19] Y. Eremina, N. Lace, J. Bistрова, “Digital maturity and corporate performance: The case of the Baltic states”, **Journal Open Innovation: Technology, Market, and Complexity**. Volume 5, no. 3, 2019, doi: 10.3390/joitmc5030054.
- [20] L. Kasperovica, N. Lace, “Business model transformation and business viability. Case of Yellow pages”, **The 23rd World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2019): Proceedings. USA, Orlando 2019; Winter Garden: International Institute of Informatics and Systemics (IIS)**, Volume 3, 2019, pp. 19–24, ISBN 978-1-950492-10-7.
- [21] G. C. Kane, D. Palmer, A. N. Phillips, D. Kiron, N. Buckley, “Aligning the Future for Its Digital Organization”, **MIT Sloan Management Review and Deloitte University Press; Cambridge**, Volume 58, no. 1, 2016.
- [22] SPARK, “Цифровая трансформация? Нет, не слышали/ Tsfrovyya transformatsiya? Net, ne slishali”. Available: <https://spark.ru/startup/wehive/blog/17225/tsfrovaya-transformatsiya-net-ne-slishali> (accessed 15.05.2021).
- [23] A. Osterwalder, Y. Pigneur, “Business Models and their Elements”, **Position Paper for the International Workshop on Business Models, Lausanne, Switzerland, 4-5 October 2002**.
- [24] T. Clauss, “Measuring business model innovation: conceptualization, scale development, and proof of performance”, **R&D Management** Volume 47, no. 3, 2017, pp. 385–403, doi:10.1111/radm.12186.
- [25] A. Osterwalder, Y. Pigneur, C. L. Tucci, “Clarifying Business Models”, **Communications of the association for Information Systems**, Volume 15, no. 1, 2005, pp. 1–40.
- [26] D. Goerzig, T. Bauernhansl, “Enterprise Architectures for the Digital Transformation in Small and Medium-sized Enterprises”, **Procedia CIRP**, Volume 67, 2018, pp. 540–545, doi: 10.1016/j.procir.2017.12.257.
- [27] C. Zott, R. Amit, L. Massa, “The business model: Recent developments and future research”, **Journal of Management**, Volume 37, no. 4, 2011, pp. 1019–1042, doi:10.1177/0149206311406265.
- [28] R. Barone, “The Importance of Economic Growth and the consequences of its demise”, *Forbes*, 2017, 09 June.
- [29] A. С. Анискин, Ю. П. Дытыненко, П. Н. Сухманов, et al. Корпоративное управление деловой активностью в неравновесных условиях. *М.: Омега*. 2015.