

Case Study

Implementation of Digitization for Anti-crisis Management of Business Entities

Dmytro Kabachenko^{1*}, Olha Korolenko², Natalia Kutova², Olena Churikanova¹ and Rostyslav Shchokin³

¹Department of Economics and Economic Cybernetics, Dnipro University of Technology, Dnipro, Ukraine

²Department of Economics and Enterprise Organisation and Management, Kryvyi Rih National University, Kryvyi Rih, Ukraine

³Department of Administrative, Financial and Banking Law, Interregional Academy of Personnel Management, Kyiv, Ukraine

*Corresponding author: oценка_2000@i.ua (ORCID ID: 0000-0001-6126-4809)

Received: 12-11-2022

Revised: 09-01-2023

Accepted: 28-01-2023

ABSTRACTS

Digitalization in the crisis has contributed to increasing the level of resilience of business entities to economic downturns and bankruptcy risks. The article aims to empirically study the use of digital tools and crisis management methods in business entities. The research methodology is based on a case study of companies in various sectors of the economy on the integration of technological solutions during the pandemic in 2020. Statistical analysis was used to study the state of information technology financing during the crisis. Results. During the pandemic, since the beginning of 2020, the global level of funding for information technology (IT) by companies of different sizes has been growing. Depending on the size of the business entity, investments in technological solutions and equipment differ in volume: small firms invest more in hardware projects, and large firms - in commercial services. The critical digital tools for crisis management in companies are Big Data / Analytics (64%), Cloud Technology (50%), and Artificial Intelligence / Machine Learning (44%). Analysis of the volume of different segments of the Enterprise application software market in 2020 shows companies' use of different types of enterprise software for different purposes and management functions. The analysis of companies' cases in using digital technologies during the crisis shows a high return on digitalization in a short time (0.34 years). Business entities are focused on integrating technologies to solve problems related to improving relations with suppliers, and customers, optimizing business processes, personnel management, and increasing operational efficiency. Integration of digital tools into various subsystems of company management (suppliers, customers, staff, shareholders) provides instant qualitative and quantitative effects.

HIGHLIGHTS

- The article aims to empirically study the use of digital tools and crisis management methods in business entities' activities. Integrating digital tools into various subsystems of company management (suppliers, customers, staff, shareholders) provides instant qualitative and quantitative effects.

Keywords: Digital technologies, crisis management, enterprise software, crisis condition

In the context of the pandemic and the economic downturn, business entities have actively started using digital technologies and tools to stabilize the situation and overcome the negative consequences of the crisis (Hao, Xiao and Chon, 2020). Digital technologies today are a driver and catalyst for the development of the economy and society. During the pandemic, they have also become important

in counteracting the crisis. The impact of the pandemic has significantly changed the balance of supply and demand in various sectors, requiring

How to cite this article: Kabachenko, D., Korolenko, O., Kutova, N., Churikanova, O. and Shchokin, R. (2023). Implementation of Digitization for Anti-crisis Management of Business Entities. *Econ. Aff.*, 68(01s): 361-369.

Source of Support: None; **Conflict of Interest:** None



businesses to reassess their current business models and digitize them to increase competitiveness. To effectively manage the crisis, managers must check their state and capabilities to overcome crises in each organizational system: technical, human, and infrastructure, including digital, cultural, and emotional (beliefs, attitudes) (Pearson and Mitroff, 2019). Implementation of innovations in the activities of business entities during the crisis is one of the ways to overcome it (Wang *et al.*, 2020). Among the key innovations in the digitalization of the economy are digital tools that promote business flexibility and sustainability and remote management of relations with key stakeholders.

The article aims to empirically study the use of digital tools and crisis management methods in business entities.

Literature Review

The category “crisis management” is a specific type of management activity in conditions of significant deterioration of the situation at the enterprise, which threatens its further existence. Crisis management is, first of all, the process of saving the organization (management object) from destructive influences and creating conditions for development (Prokopyshyn, 2021).

Crisis management tools (toolkits) can be used at the enterprise level (Latysheva *et al.* 2020) and the level of public administration (Pogodayev, 2013; Koval *et al.* 2020). The concept of «tool», or «toolkit» is defined in specialized economic dictionaries and economic literature as a way to achieve something. The choice of anti-crisis tools depends on the crisis’s causes, scale, and phase. The set of anti-crisis management tools aims to implement regulatory, controlling, and preventive measures. It is proposed to classify all crisis management tools into three groups: (1) crisis detection tools, (2) tools that are used in crisis conditions, (3) tools that are used at the stage of the enterprise’s exit from the crisis. The literature also structures the tools of anti-crisis public administration by the following groups: institutional; innovation and technological; investment and economical; fiscal and regulatory.

Theory of crisis management

Obrenovic (2020) considers crisis management theories: crisis management team theory, stakeholder

theory, and distributed cognition theory. The combination of components of these theories makes it possible to build an innovative “model of enterprise efficiency and resilience during a pandemic”. This innovative approach to overcoming the consequences of the COVID-19 crisis includes organizational characteristics, business operations, digital transformation, and financial planning. The Obrenovic study (2020) results show that enterprises with distributed leadership, workforce and adaptive culture sustain the business during the pandemic. Moreover, enterprise resilience enables more informed and decentralized decision-making. Businesses are using the Internet and communication technologies (ICT) to succeed in times of crisis, integrating intranets, social media, and online communication platforms into business operations. Digital technologies help build trust and connections with employees, stakeholders, and customers during and after a crisis. The balance between accumulated resources and resilience is critical to effective crisis management. Business entities with financial plans to overcome unforeseen situations support their activities during the crisis. In the crisis management team theory context, the crisis management department develops a crisis management plan and is directly involved in overcoming crises. Reacting to the crisis, the team collects and quickly analyzes information, then makes decisions, implements the necessary measures, and coordinates the actions of various company departments and external resources. Kraus *et al.* (2020), based on the experience of Western European companies, show that managers use different strategies to overcome the crisis. Companies in all industries and of all sizes adapt business models to the environment in a short time.

On the one hand, the authors noted a strong level of solidarity and cohesion within companies, and on the other hand, the crisis has led to early digitalization. Among the digital ways of anti-crisis management are the digitization of workshops in production and the transition to digital meetings. Rapaccini *et al.* (2020) expect an acceleration of digitalization, especially in the service sector. Using the example of companies in Italy, the researchers identified four “elements of resilience: preparedness, agility, elasticity, and redundancy”.

Meanwhile, the authors found no tangible evidence of increased remote technical assistance contracts (e.g., digital assistance and customer support). In fact, in several cases, the readiness of suppliers and customers to work remotely based on technological solutions that have already been developed and are available on the market was discovered. However, these technological solutions have not been applied and activated, indicating a lack of growth in the sale of remote services.

Research also indicates that over the past ten years, scientists have responded to new challenges by establishing emergency management systems, developing an international framework for crisis management, and shifting the focus from response to mitigation with a particular emphasis on community resilience and sustainability (Oh and Lee, 2020).

MATERIALS AND METHODS

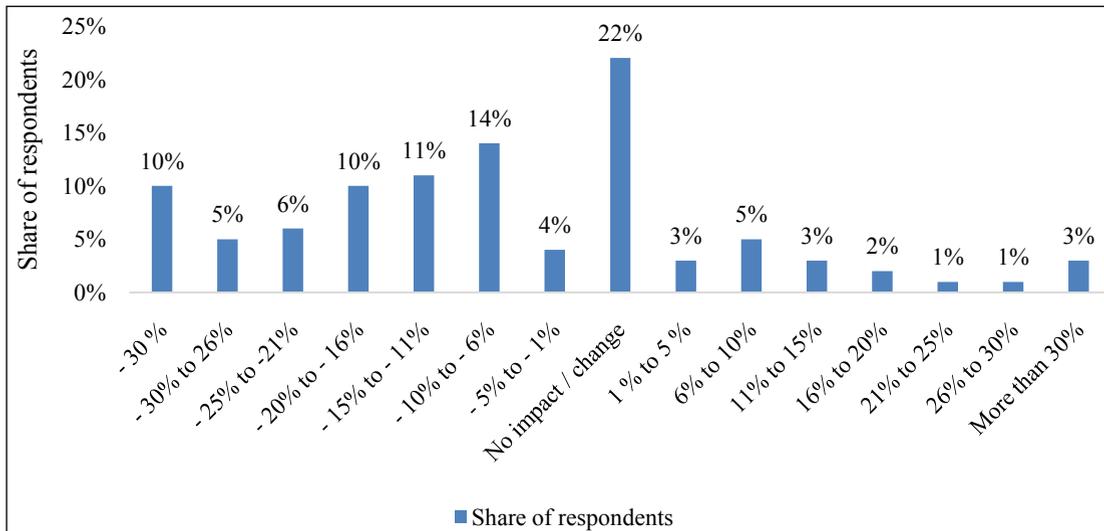
This article uses a case study design based on the case method of companies that have integrated digital tools (software solutions) for crisis management into various management subsystems. The considered case studies are based on a consistent methodology, which includes assessing direct and indirect benefits from implementing digital crisis management tools and their improvement. The case studies also include quantitative performance indicators: payback period, years; ROI, annual %; annual return on investment, USD; cost-benefit ratio (investment). Case studies of companies with integrated technologies are available on the official website of Nucleus Research, a global provider of technology research and consulting services focused on return on investment.

RESULTS

The digital crisis management toolkit includes enterprise software to meet a variety of business needs. Companies use the software to achieve corporate goals, for example, by tracking, analyzing, and improving supply chains, interacting with customers and suppliers, and managing resources (financial, human, material and technical, etc.). Digital tools for crisis management include a wide range of programs and technological solutions: office suites, accounting software, groupware,

customer relationship management (CRM), human resource management (HRM) systems, outsourcing relationship management, enterprise resource planning (ERP), business process management (BPM), supply chain management (SCM), business intelligence (BI), security software. During the crisis, companies have intensified their activities to implement these technological solutions to stabilize and adapt to new external conditions. Meanwhile, worldwide, spending on information technology (IT), hardware, enterprise software, and communication services grew slowly during the pandemic (Statista, 2023a). According to Statista (2023a), IT spending reached USD 4.26 trillion in 2021, USD 4.43 trillion in 2022 (+3%), and will reach USD 4.66 trillion in 2023. In the context of the coronavirus crisis, information services and digital tools have been a key segment in which businesses have invested to digitize various business functions. Examples include the setup of unified communications services, which during the period of restrictive measures, ensured virtual communication of employees and, as a result, business productivity (Statista, 2023a). Small businesses spend more of their IT budget on hardware (Statista, 2023b). A 2020 survey of IT leaders in North America and Europe estimates that small companies spend approximately 30% on hardware projects, while large companies spend 25% due to a focus on managed services (Statista, 2023b). Global IT spending has accelerated the digital transformation of businesses worldwide: the introduction of artificial intelligence for data analysis, moving data to cloud services and automating business processes. In addition, the pandemic has contributed to the strengthening of digitalization by forming strategic budgets for its financing (Statista, 2023a).

Different companies are responding differently to the coronavirus crisis and the changing operating environment. Some businesses are cutting costs, while others can continue to fund digital tools, particularly for crisis management purposes. According to a survey of IT buyers in 2020, 18% of respondents reported an increase in IT budgets, 60% of CIOs and IT managers reported budget cuts, and 20% reported no change (Statista, 2023c). On average, the impact of COVID-19 on IT budgets decreased by 7.7% globally (Fig. 1).



Source: Statista (2023c).

Fig. 1: Projected impact of COVID-19 on IT budgets worldwide in 2020

According to Statista (2023d), a global survey of IT leaders of organizations about the technologies that will provide a competitive advantage in 2023, the following digital tools are the leaders: Big Data / Analytics (64%), Cloud Technology (50%), Artificial Intelligence / Machine Learning (44%), Robotic Process Automation (29%), Internet of Things (20%), On-demand marketplace platform (17%), Augmented reality / virtual reality (8%), Blockchain (7%). Table 1 shows the volumes of various segments of the Enterprise application market in 2020 and the projected volumes of these segments, indicating significant growth of various types of enterprise software. Furthermore, these types of software provide vital functions in times of crisis, achieving the corporate goals of companies worldwide.

Integrating digital tools into various subsystems of company management (suppliers, customers, staff, shareholders) provides instant qualitative and quantitative effects. Qualitative effects can be measured based on indicators: time savings, cost savings, automation of tasks and business operations, improved analytics, business scalability, and speed of communication with customers. Quantitative effects can be measured through return on investment, payback period, ROI and annual return on investment, cash flow growth, productivity growth, and cost reduction. Table 2 systematizes the efficiency indicators of companies' integration of software solutions (technologies).

According to Nucleus Research (a global provider of technology research and advisory services focused on ROI), which assesses the financial and operational value of technology solutions, the average ROI period from implementing digital tools is 0.34 years (approximately 4 months), providing an average 520% ROI and \$3.45 million in annual return on investment. Companies in various sectors of the economy integrate technological solutions that improve financial and operational performance.

Complete Office Supplies (COS) integrated the Ariba network to improve supplier relationships and modernize much of its transaction processing. The company achieved time and cost savings by standardizing and automating many tasks associated with onboarding and managing supplier relationships. COS used internal resources to fine-tune its implementation of the Ariba Network, which accelerated the payback period and contributed to a high return on investment (Nucleus Research, 2021b).

A private multi-specialty hospital has integrated Salesforce Health Cloud, a patient management platform, and Tableau CRM (formerly Einstein Analytics), an analytics solution for Salesforce designed for Health Cloud. With the help of Salesforce, the company realized a wide range of benefits through scalability, increased employee productivity, reduced inventory costs, accelerated patient interaction processes, and increased cash flow.

Table 1: Volumes of different segments of the Enterprise application market in 2020 and forecasted volumes of these segments in 2025, USD million

Type of EAS	2020	2025	Enterprise application software goal	Enterprise application software function
Enterprise application software	263,9	288,7	—	—
Business intelligence and analytics software applications	15,2	18	Corporate goals: improve supply chain management, manage resources, or interact better with customers, among others.	Business intelligence applications help to collect and analyze current, actionable data to maintain, optimize or streamline business operations. Business analytics tools, on the other hand, are used to analyze data to be able to predict business trends.
Content management software application	43,9	46,973	CMS applications features are web content management, document management, digital rights management, authoring tools, and search and portal functions	Create, publish, maintain, and distribute digital content.
Customer relationship management (CRM) software	45,1	49,6	The goal of CRM is to improve companies' relationships with customers, increasing customer retention rates and ultimately driving sales growth.	CRM is used to analyze and manage a company's interaction with customers or potential customers.
Enterprise resource planning (ERP) software	89,4	100,7	ERP's goal is business process management. ERP can also include human resource management (HRM) systems, customer relationship management (CRM), office suites, etc.	ERP allows businesses to integrate different aspects of business operations in one database, application, and user interface.
Enterprise performance management (EPM) software	4,2	4,3	The EPM goal is performance and productivity management	Monitoring, evaluating, and controlling company productivity
Social and collaboration software	5,1	5,9	Collaboration technologies (Microsoft Teams, Slack) can foster workplace communications and higher efficiency.	Distance communication
Security software	61	63,2	The goal is an enterprise security management	Security of data, business process, operation, etc.

Source: Systematized by the author based on Statista (2023e).

Table 2: Performance indicators of integration of software solutions (technologies) of companies

Company / Sector	Payback period, years	ROI, annual	Annual return on investment, USD	The ratio of costs to benefits (investments)
Complete Office Supplies (COS), B2B office equipment supplier	0,4	259%	329432	1 / 3,9
MIMIT Health, B2C healthcare	0,2	459%	1730000	1 / 5,0
Ricoh South Pacific, B2B supplier of office equipment and solutions	0,4	243%	428141	1 / 4,1
Facility Management Company, B2B	0,7	296%	1240333	1 / 2,6
Private Research University, B2B education	0,2	507%	9653780	1 / 2,0
POWERHOME Solar, B2B energetics	0,2	1342%	5388960	1 / 5,1
Sequoia Financial Group, B2B, financial sector	0,4	361%	3268265	1 / 5,0
5P Consulting , B2B consulting	0,1	998%	120800	1 / 24,2
Food Delivery Company, B2C delivery service	0,5	217%	8877567	1 / 2,7
Mean value	0,34	5,20	3448586,44	—

Source: Nucleus Research (2021a).

Tableau CRM analytics and patient management capabilities with Health Cloud helped the company save more than USD 500,000 per year. Furthermore, the Salesforce platform includes MIMIT Health for a holistic understanding of patient information and a single source of reliable data to increase overall efficiency and improve customer experience. As a result, the company achieved a 459% return on investment and recouped its initial investment less than three months after implementation (Nucleus Research, 2021c).

Ricoh South Pacific, an office solutions provider in Auckland, New Zealand, has integrated Salesforce Service Cloud and Field Service to replace legacy applications and modernize scheduling, tracking, and reporting processes. With Salesforce, the company can handle 33% more service calls, freeing up one full-time employee to focus on more strategic tasks. Ricoh South Pacific achieved a 243% return on investment and a return on the initial investment in less than four months after the project implementation (Nucleus Research, 2021d).

The management company integrated Salesforce Field Service Lightning to unify and synchronize scheduling on a single platform and eliminate ad hoc processes, such as scheduling appointments using email, which led to difficulty scaling the organization. The company has proven the effectiveness of using the Salesforce platform to manage the business and minimize the complexity of IT processes. Since deploying Field Service Lightning, the company has improved its contract fulfillment rate by approximately 35%, streamlined existing contracts, resulting in fewer staff and vehicles needed to serve customers, and eliminated an inefficient mobile app (Nucleus Research, 2021e).

A private research university integrated Salesforce solutions, including Lightning Communities, Sales Cloud, and Marketing Cloud, to create a centralized interface to access university CRM projects, initiatives, profiles, and other information. The implementation has allowed the university to significantly save time in several areas, including preparing dean's reports, financial reporting, record retrieval, and information processing. The company could also reallocate an equivalent full-time employee, avoiding paper costs due to the digitization of data. The technology allowed users to process gift information more efficiently, resulting

in a significant net increase in the number of gifts processed yearly (Nucleus Research, 2021f).

POWERHOME Solar integrated the Salesforce Field Service Lightning (FSL) mobile app to connect with field agents to replace a legacy customer relationship management (CRM) solution that was inefficient due to limited capabilities and a lack of economies of scale to support the company's growth. Moreover, POWERHOME Solar needed to modernize its scheduling management and provide field technicians with real-time mobile access to critical information. Without hiring additional staff, the company could effectively manage a 70-75% daily increase in call center workload. POWERHOME also avoided hiring the additional staff that would have been needed to maintain and upgrade the legacy system, saving the company nearly three-quarters of a million dollars annually (Nucleus Research, 2021g).

Sequoia Financial Group has integrated Salesforce Financial Services Cloud to modernize its Customer Relationship Management (CRM) solution and enable growth in the number of customers served at any scale. Sequoia also implemented Salesforce Pardot for marketing, Quip for staff collaboration and productivity, and Salesforce Inbox to integrate email with Salesforce. The company also uses analytics and reporting technologies from Salesforce, Box for content management, and several applications from AppExchange to extend the platform's functionality. The resulting benefits include the elimination of hiring, terminating subscriptions to legacy software, and cumulative time savings across all Salesforce products, averaging over 700 hours per user per year (Nucleus Research, 2021h).

5P Consulting has integrated Salesforce Essentials to create a single, unified repository for customer and account data. The company uses automation and artificial intelligence (AI) to identify important information, eliminate manual processes such as data entry, and increase the number of leads through Web-to-Lead integration. By implementing Salesforce Essentials, 5P Consulting has built automated lead generation, saved each user approximately four hours per week by eliminating data entry and time spent searching for records, and avoided hiring employees for business development. The software was implemented and ready to use

within a week, and the ROI for 5P Consulting was 998% (Nucleus Research, 2021i).

A food delivery company deployed Salesforce Service Cloud in addition to its existing Sales Cloud implementation to leverage more agile technology, improve operational efficiency in customer service, and increase overall customer satisfaction. The successful project allowed the company to replace its forms-based customer comment program with live chat lines with agents in real-time, which increased overall agent productivity by 25%. The organization has also seen a dramatic reduction in the number of service calls and has been able to eliminate previous customer service software subscriptions. Since switching to Salesforce, customer, delivery agent, and supplier retention has improved by 10%, and customer satisfaction has increased by 15% (Nucleus Research, 2021j).

Thus, companies' use of digital tools, IT, and equipment for corporate governance purposes during the crisis proves their effectiveness and the availability of short-term and long-term financial results of technology implementation in various management systems. Technological solutions provide optimization of planning, tracking, and reporting processes; quality processing of a more significant number of requests to the support service; scaling of the organization; minimization of the complexity of IT and business processes, elimination of manual processes; increase in the contract fulfillment rate by approximately 35%; optimization of the organizations' contracts; reduction of the number of staff and vehicles; avoidance of hiring additional employees; growth in the number of customers; productivity growth; effective analytics technologies; overall time savings; increased operational efficiency of customer service and overall customer satisfaction; reduced number of service calls.

DISCUSSION

The study of the effects of integrating digital tools for managing the activities of business entities during the crisis proves the transformational digital impact on the structure and profitability of the enterprise. The concept of digitalization transforms the organizational structure, the system of recruitment, motivation, and training of personnel, strategic

guidelines of the enterprise. Changes occur in the subsystem of corporate management, sales, and marketing, logistics and warehousing, production, and supply of resources. As a result, irrational loyalty and commitment to the company's brand are formed, which provides instant growth in revenues and profitability, development of customer capital, and growth of the company's value. In the management subsystem, communication processes are changing, which are aimed at ensuring long-term relationships with various stakeholders.

Depending on the area of operation, companies use different strategies for managing relationships during the crisis (segmentation, selection of sellers, training, incentives, initiatives, and motivation systems). Digitalization reflects how technological solutions change the entire system of enterprise functioning and affect the company's value. Companies invest millions of dollars to integrate digital tools, the payback of which is, on average, four to five months. Empirical studies confirm the positive financial result from investments in digitalization (short-term returns, direct impact on profits, and the formation of the company's business reputation). The main qualitative effects are loyalty, trust, formation of common values, and commitment.

Analysis of the practical experience of international companies in implementing digital solutions is the basis for the statement of instant financial results from the implementation of technological solutions. The digitization process also implements the concept of customer relationship management, which is in its infancy. The trend toward digitalization of customer behavior is becoming increasingly common in practice.

The global IT market will grow in the next 5-10 years, accompanied by introducing technological solutions in companies in various sectors of the economy. The main qualitative effects of technology and digitization are time savings, automation of tasks and business operations, improvement of analytics, business scalability, and speed of customer communication. The quantitative effects of the company are assessed by measuring cost savings, return on investment, payback period, ROI and annual return on investment, cash flow growth, productivity growth, and reduction of order processing errors. The average payback period

of customer relationship management systems is 0.34 years (approximately 4 months), providing an average 520% ROI and \$3.45 million annual return on investment. Technological solutions provide optimization of planning, tracking, and reporting processes; quality processing of a larger number of requests to the support service; scaling of the organization; minimization of the complexity of IT and business processes, elimination of manual processes; increase in contract fulfillment rate by approximately 35%; optimization of organizations' contracts; reduction in the number of staff and vehicles; avoidance of hiring additional employees; growth in the number of customers; productivity growth; effective analytics technologies; overall time savings; increased operational efficiency of customer service and overall customer satisfaction; reduced number of service calls.

CONCLUSION

During the pandemic, since the beginning of 2020, the global level of financing of information technology by companies of different sizes has been growing. Depending on the size of the business entity, investments in technological solutions and equipment differ in volume: small firms invest more in hardware projects, and large firms - in commercial services. The critical digital tools for crisis management in companies are Big Data / Analytics (64%), Cloud Technology (50%), and Artificial Intelligence / Machine Learning (44%). Analysis of the volume of different segments of the Enterprise application market in 2020 indicates companies' use of different types of enterprise software for different purposes and management functions. These types of software ensure the performance of vital functions in times of crisis, achieving corporate goals of companies worldwide. The analysis of companies' cases in using digital technologies during the crisis shows a high payback of digitalization in a short time (0.34 years). Business entities are focused on integrating technologies to solve problems related to improving relations with suppliers, and customers, optimizing business processes, personnel management, and increasing operational efficiency. Integrating digital tools into various subsystems of company management (suppliers, customers, staff, shareholders) provides instant qualitative and quantitative effects.

Further research should be devoted to the methodology for integrating digital tools in management in the context of the digitalization of various sectors of the economy.

REFERENCES

- Hao, F., Xiao, Q. and Chon, K. 2020. COVID-19 and China's hotel industry: Impacts, a disaster management framework, and post-pandemic agenda. *Int. J. Hospitality Manage.*, **90**: 102636.
- Janssen, M. and Van der Voort, H. 2020. Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *Int. J. Inform. Manag.*, **55**: 102180.
- Koval, V., Mikhno, I., Udovychenko, I., Gordiichuk, Y. and Kalina, I. 2021. Sustainable natural resource management to ensure strategic environmental development. *TEM J.*, **10**(3): 1022-1030.
- Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A. and Tiberius, V. 2020. The economics of COVID-19: initial empirical evidence on how family firms in five European countries cope with the corona crisis. *Int. J. Entrep. Behav. and Res.*, **26**(5): 1067-1092.
- Latysheva, O., Rovenska, V., Smyrnova, I., Nitsenko, V., Balezentis, T. and Streimikiene, D. 2020. Management of the sustainable development of machine-building enterprises: A sustainable development space approach. *J. Enterprise Information Manage.*, **34**(1): 328-342.
- Nucleus Research, 2021a. ROI case study. Available at: <https://nucleusresearch.com/roi-case-studies/>
- Nucleus Research, 2021b. SAP Ariba Network ROI case study: Complete Office Suppliers. Available at: <https://nucleusresearch.com/research/single/sap-ariba-network-roi-case-study-complete-office-suppliers/>
- Nucleus Research, 2021c. Salesforce ROI Case Study – MIMIT Health. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-mimit-health/>
- Nucleus Research, 2021d. Salesforce ROI case study: Ricoh South Pacific. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-ricoh-south-pacific/>
- Nucleus Research, 2021e. Salesforce ROI case study: Facility Management Company. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-facility-management-company/>
- Nucleus Research, 2021f. Salesforce ROI case study: Private Research University. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-private-research-university/>
- Nucleus Research, 2021g. Salesforce Field Service Lightning ROI case study: POWERHOME Solar. Available at: <https://nucleusresearch.com/research/single/salesforce-field-service-lightning-roi-case-study-powerhome-solar/>
- Nucleus Research, 2021h. Salesforce ROI case study: Sequoia Financial Group. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-sequoia-financial-group/>

- com/research/single/salesforce-roi-case-study-sequoia-financial-group/
- Nucleus Research, 2021i. Salesforce Essentials ROI case study: 5P Consulting. Available at: <https://nucleusresearch.com/research/single/salesforce-essentials-roi-case-study-5p-consulting/>
- Nucleus Research, 2021j. Salesforce ROI case study: Food Delivery Company. Available at: <https://nucleusresearch.com/research/single/salesforce-roi-case-study-food-delivery-company/>
- Obrenovic, B., Du, J., Godinic, D., Tsoy, D., Khan, M.A.S. and Jakhongirov, I. 2020. Sustaining enterprise operations and productivity during the COVID-19 pandemic: "Enterprise Effectiveness and Sustainability Model". *Sustainability*, **12**(15): 5981.
- Oh, N. and Lee, J. 2020. Changing landscape of emergency management research: A systematic review with bibliometric analysis. *Int. J. Disaster Risk. Reduct.*, **49**: 101658.
- Pearson, C.M. and Mitroff, I.I. 2019. From crisis prone to crisis prepared: A framework for crisis management. In *Risk Management* (pp. 185-196). Routledge.
- Plikus, I.Y. 2020. Toolkit of anti-crisis management: problematic issues of application. *Young Scientist*, **1**(77): 259-264.
- Pogodayev, S.E. 2013. Marketing of works as a source of the new hybrid offerings in widened marketing of goods, works and services. *J. Bus. Ind. Mark.*, **28**(8): 638-648.
- Prokopyshyn, O. 2021. System of crisis management as a base for prevention of crisis phenomena at enterprises. *Investytsiyi: praktyka ta dosvid*, **9**: 40-45.
- Rapaccini, M., Saccani, N., Kowalkowski, C., Paiola, M. and Adrodegari, F. 2020. Navigating disruptive crises through service-led growth: The impact of COVID-19 on Italian manufacturing firms. *Ind. Mark. Manag.*, **88**: 225-237.
- Statista, 2023a. Information technology (IT) spending forecast worldwide from 2012 to 2023, by segment. Available at: <https://www.statista.com/statistics/268938/global-it-spending-by-segment/>
- Statista, 2023b. Information technology (IT) spending on enterprise software worldwide, from 2009 to 2023. Available at: <https://www.statista.com/statistics/203428/total-enterprise-software-revenue-forecast/>
- Statista, 2023d. Which of the following technologies are most likely to give your organization a competitive advantage in the next year? Available at: <https://www.statista.com/statistics/1224853/tech-helping-organizations-realize-business-goals-worldwide/>
- Statista, 2023e. Enterprise software – Statistics and Facts. Available at: https://www.statista.com/topics/1823/business-software/#topicHeader__wrapper
- Statista, 2023c. Projected impact of COVID-19 on IT budgets worldwide in 2020. Available at: <https://www.statista.com/statistics/1108094/covid-19-impact-on-it-budgets-worldwide/>
- Wang, Y., Hong, A., Li, X. and Gao, J. 2020. Marketing innovations during a global crisis: A study of China firms' response to COVID-19. *J. Bus. Res.*, **116**: 214-220.

