

Changing the Canvas of Business Value Proposals in the Context of Achieving Sustainable Development Goals

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DOI: 10.14595/CP/03/011

Abstract: The article highlights the issue of changing the canvas of business value proposals to ensure sustainable development under the influence of the armed conflict in the East, the Covid-19 pandemic and the war by the aggressor. The research methodology is based on a review of the literature, a survey and a qualitative case study. The obtained results allow to identify the vector of changes in business value proposals under the influence of conflicts and pandemics, as well as to propose an approach for adapting business to changes caused by crises, pandemics and armed conflicts.

Keywords: business value, sustainable development, management, change, armed conflict, war, pandemic Covid-19

JEL: M1, G22, Q01

Introduction

Approaches to doing business are transformed in the context of growing social imbalances and socio-psychological tensions caused by pandemics and crises in society, political and economic instability and military conflicts. Therefore, the development of new technologies is an important tool for successful operation and business development.

The study and use of new forms of business for the internal market has become an important aspect of effective business management in the context of sustainable development goals. The current activity of Ukrainian enterprises does not meet the needs of the modern market, which is reflected in lower profitability of institutions due to high costs associated with the operation and management.

In general, Ukraine lags behind European countries in meeting the goals and objectives of sustainable development (in particular, compared to Poland and Germany).

Statistics on HIV patients are alarming, showing low effectiveness in combating this type of disease, which is a sign of the poor state of the medical system and lack of public awareness. At the same time, the carbon capacity of GDP states that Ukraine is also lagging behind in terms of environmental policy, as there is a heavy air pollution (Redko et al., 2022).

Therefore, the priorities for achieving the Sustainable Development Goals (SDGs) are 1. Creating sustainable infrastructure (Cincalova, 2017; Trunina & Khovrak, 2019; Cincialova, 2020); 2. Promoting industry sustainability and innovation (Khovrak, 2013; Polinkevych, 2016; Khovrak & Chernenko, 2021); 3. Ensuring the inclusiveness and broad involvement of private business and society in the SDGs implementation (Khovrak et al., 2021), partnership at the international level (Grzebyk & Stec, 2015); 4. Ensuring effective management of the development of enterprises and territories (Danylkuv et al., 2020); increasing the institutional capacity of public authorities and business, as well as public awareness of these issues (Baranovsky et al., 2020; Tkachenko, 2020). 5. Ensuring the transition to rational models of consumption and production (Calinescu et al., 2020). These goals can be achieved through an understanding of the value proposition of business in the context of achieving SDGs.

Methodology

The research methodology is based on a literature review, a survey and a qualitative case study. The authors analyzed scientific publications from the scientometric database Web of Science, Scopus, Index Copernicus for the period 2003-2021 to determine aspects of the outline of business value proposals, as well as the relationship between business and sustainable development. This allowed identifying specific features of changing the outline of value proposals and to systematize the main factors of positive and negative impact on the processes of creating and implementing sustainable development goals.

As a result of the literature review, the authors constructed a questionnaire for the survey, which has 10 questions. The sample consists of 112 representatives from 35 enterprises operating in the industry.

For in-depth analysis, the authors used a case study, which revealed changes in the outline of business value proposals in 2014, 2019 and 2022. The years chosen for the study are not accidental. In 2014, the armed conflict in the East and the annexation of Crimea

began, in 2019 the COVID-19 pandemic and in 2022 the war in Ukraine, caused by Russian aggression.

Results

The results of the literature review

In 2014, Ukraine is in a condition unlike ever before. On the one hand, it is in a deep economic crisis and in need to reform key state institutions. On the other hand, the war in the east of the country and the annexation of Crimea require resources and mobilization of the whole society. The significance of the contribution of Donetsk, Luhansk regions and Crimea to the Ukrainian economy can be assessed through the following statistics – these territories occupy 13.5% of Ukraine, and produce 18% of Ukraine's GDP, 25% of industrial production, 25% of domestic exports (Ivanov, 2015).

The uniqueness of the crisis caused by the spread of coronavirus SARS-CoV-2 is that its manifestation is not so much a halt in the trajectory of development, but a significant change in the nature of development at both macro and micro levels against the background of radical changes in society. The changes affected all spheres of life (communication / work / study, etc.). At the same time, the forced introduction of permanent quarantine restrictions in the vast majority of countries and in Ukraine, which differed during the year in scale and timing, led to an unprecedented transformation of economic behavior at both consumption and production levels, when the dominant principle of motivation was caution against the background of permanent uncertainty.

In 2022, the coronavirus crisis was exacerbated by the war. This period is characterized by total destruction of infrastructure and forced relocation of enterprises from the East. Under the business relocation program, 300 enterprises have already been relocated from the war zone to the western regions of Ukraine (Ukrinform, 2002a). The physical damage to Ukraine's buildings and infrastructure as a result of the Russian invasion has reached around \$ 60 billion and will increase as hostilities continue. According to Ukrainian estimates, Ukraine has already lost around \$ 550 billion as a result of the full-scale Russian invasion, and needs almost \$ 7 billion monthly support. In the long run, rebuilding Ukraine will cost at least \$ 600 billion (Ukrinform, 2002b).

Table 1 shows the change in the main macroeconomic indicators of Ukraine for 2013-2021.

Table 1. Main macroeconomic indicators of Ukraine's development in 2013–2021

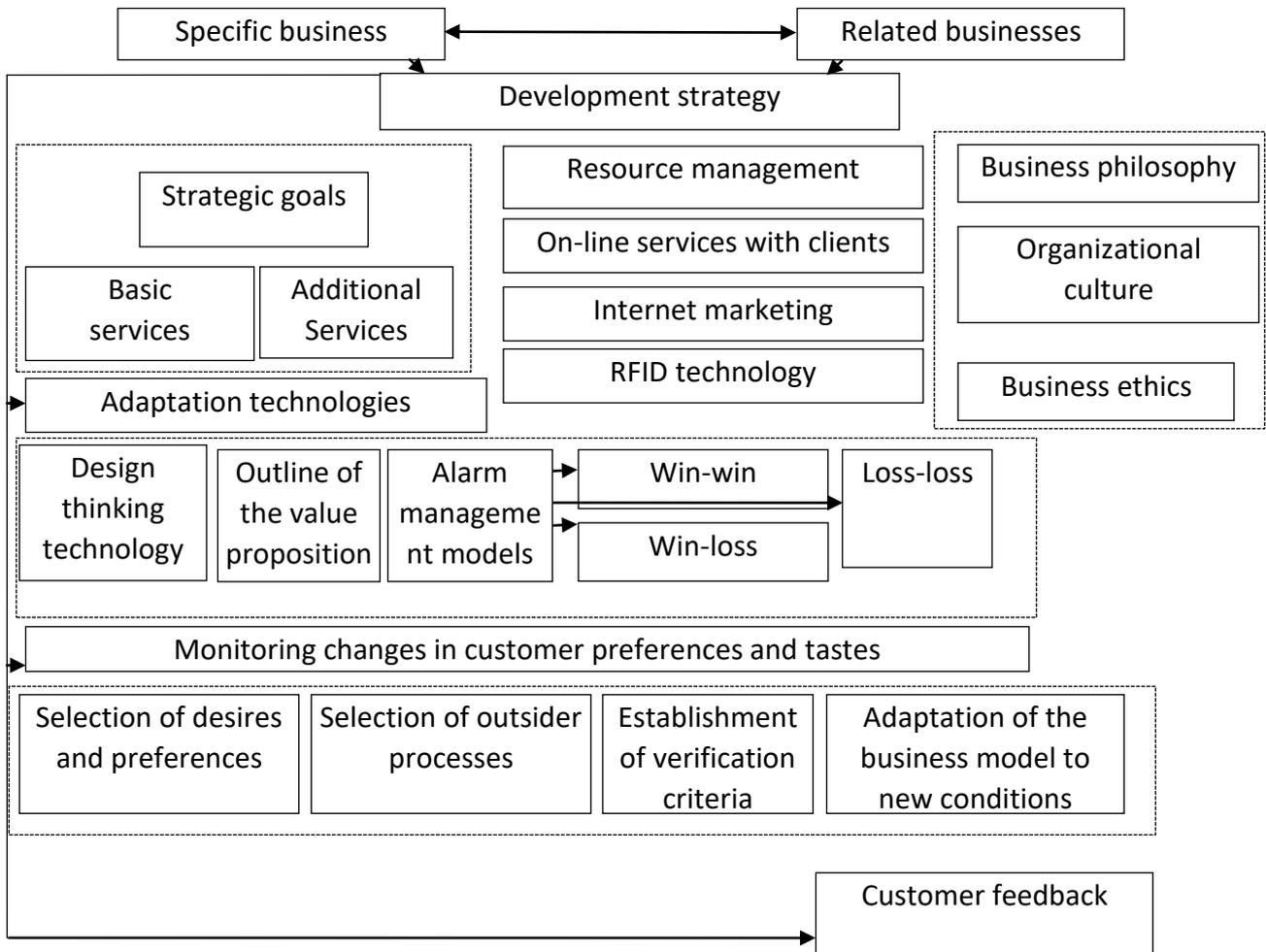
Indicator	2013	2014	2015	2018	2019	2020	2021	2021/ 2013, %
Nominal GDP, UAH billion	1466.2	1586.9	1988.5	3560.6	3978.4	4194.1	5459.6	272.36
Real GDP, %	0.0	-6.6	-9.8	3.4	3.2	-4.0	3.4	100
Inflation index, up to the previous year, %	99.7	112.1	148.7	110.9	107.9	102.7	109.4	9.73
Average monthly salary of employees, UAH	3282	3480	4195	8865	10497	11591	14014	327.0
Average exchange rate, UAH / USD USA	7.88	11.90	21.84	27.20	25.85	26.96	27.2	245.18
Average monthly salary of employees, USD	416.50	292.44	192.08	325.92	406.07	429.93	515.22	23.70

Source: <http://www.ukrstat.gov.ua/>

From the data in Table 1 we can conclude that nominal GDP increased in 2021 compared to 2013 by 272%, the inflation index by 9.73%, average monthly wages by \$ 23, and the exchange rate by 245%. With the onset of the military conflict in the East, real GDP declined by 48.5%, the inflation index rose by 33.6% and the average exchange rate by 83.5%, and wages fell to \$ 192 (34.3%). A similar trend was observed in the second period, after the Covid-19 pandemic. Real GDP growth fell significantly to -4% (225%), the average exchange rate by 4.3%, wages rose by 5.9%, although the inflation index decreased by 4.8%. Nominal GDP tended to slow down. Thus, in 2020 against 2019, it increased by only 5.4%, and in 2015 against 2014 by 25.3%.

Figure 1 shows the basic scheme of technologies for adapting the business to change.

Figure 1. Technologies for adapting the business to changes caused by crises, pandemics and armed conflicts



Source: Own work.

The main element in the technology of adaptation to change is the outline of the value proposition, which is changing (Polinkevych et al., 2021). The canvas of value proposals is a technology that promotes a service or product in the plane of value and takes into account the needs of the client. This technology is based on the analysis of the relationship between services, entities and the real needs of the market. It can be used to improve an existing proposal, as well as to study a new one. Thanks to Canvi's value proposition, a product or service can be studied through the prism of the preferences and expectations of a demanding customer. It will answer the question of how a product or service can help a customer solve their personal problems or meet their own expectations.

We present the main stages of implementation of technologies “Thinking Design” (Fig. 2) and the Canvas of value proposition (Fig. 3, Fig. 4).

Figure 2. Stages of the Thinking Design Technology Model (Rossokha V.V., & Cherednikova E.A., 2020)

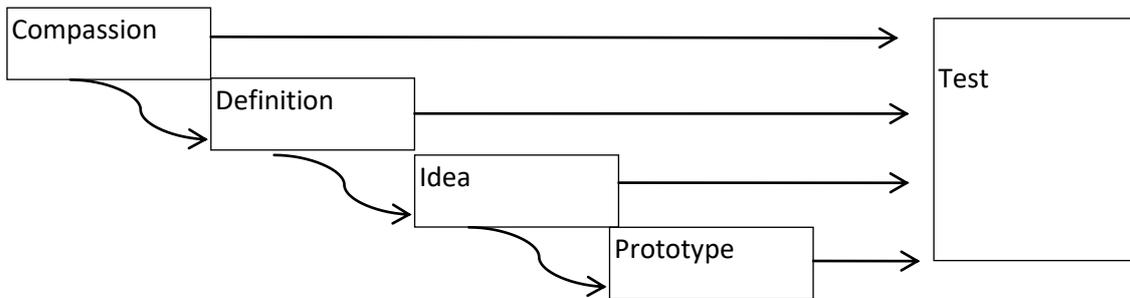


Figure 3. Model of Canvas value proposition technology (Rossokha & Cherednikova, 2020)

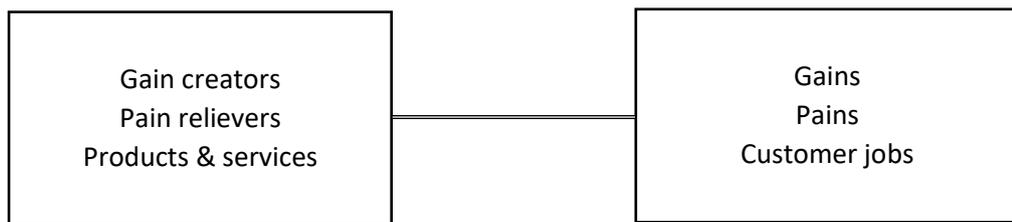
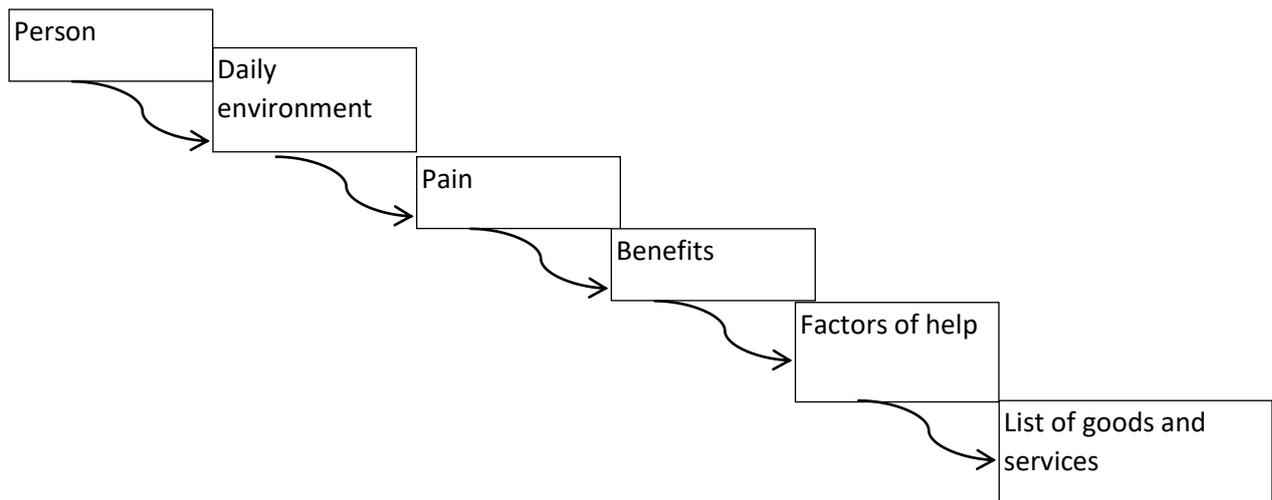


Figure 4. Stages of the Canvas value model supply model (Rossokha & Cherednikova, 2020)



Thus, we see that the value proposition outline directly describes the business response to military conflicts, crises and pandemics, as well as wars, as:

1. takes into account the changes in the external environment;

identifies customer demands and preferences that change under the influence of adverse environmental influences;

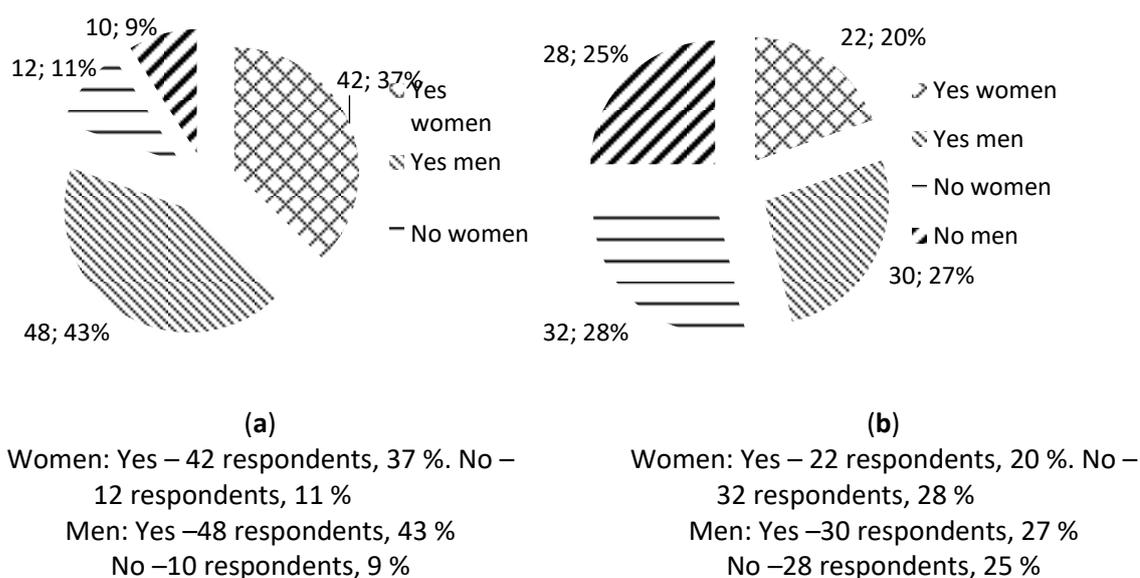
develops factors of mutual assistance that can change the situation;

offers a new list of goods and services that are relevant in the market, taking into account military conflicts, crises and pandemics, as well as wars.

The results of a survey among representatives of business

The authors conducted a survey of 112 respondents in September-October 2020, of which 58 were men and 54 women (52% of senior management and 48% of lower managers). The questionnaire asked the following questions: Has the business model changed under the influence of COVID-19? Has the business model of companies changed under the influence of the armed conflict in the East? Is the company able to transform the model to overcome the negative effects of COVID-19? Does the business model take into account the balance of economic, environmental and social pillars of sustainable development? (Figs. 5, 6).

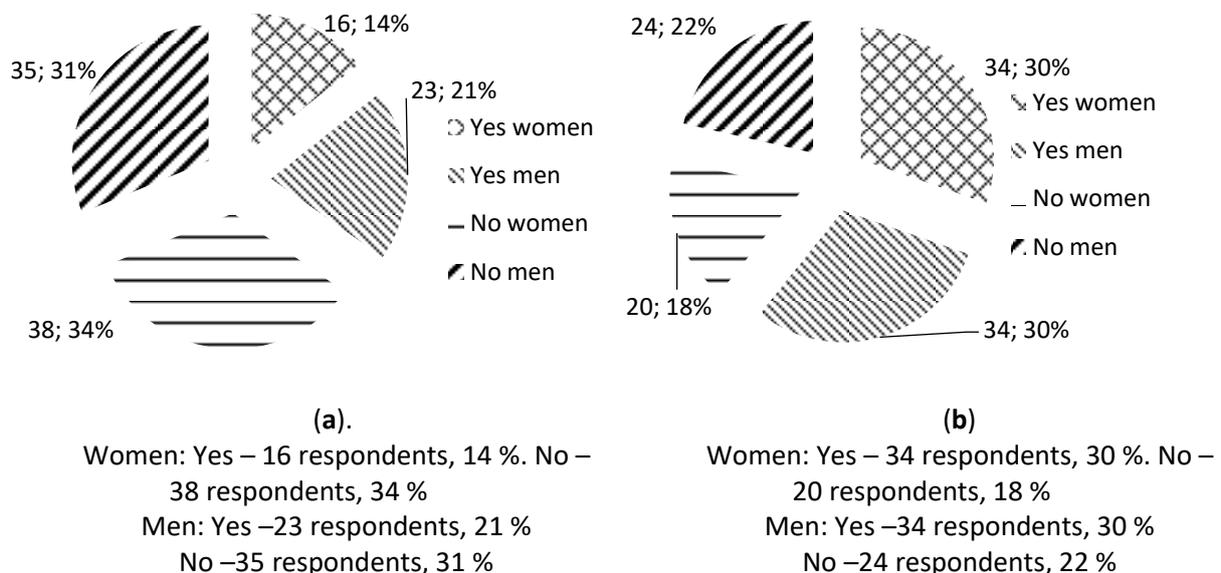
Figure 5. Impact on the COVID-19 Business Model and the Armed Confrontation in the East:
a) Have there been changes in the COVID-19 business model? (b) Have there been changes in the business model of enterprises under the influence of armed conflict in the East?



Source: Own work.

The majority of respondents noted that business in Ukraine has transformed its own model under the influence of COVID-19. In particular, this conclusion was reached by 37% of female respondents and 43% of male respondents. Only 11% of women and 9% of men disagreed that under the influence of COVID-19 they were forced to transform the business model. Also, 20% of women respondents and 27% of men believe that armed conflict has had a positive impact on business. At the same time, 28% of women managers and 25% of men managers believe it to have a negative impact. It should be noted that this is almost half of the respondents. If in the first case, it can be assumed that the majority of respondents are inclined to believe that their business has changed under the influence of COVID-19, then under the influence of the armed conflict in the East, opinions differed. Men are more committed to the transformation of business under the influence of COVID-19 and the armed conflict in the East.

Figure 6. The ability of enterprises to transform the business model under the influence of COVID-19 and the armed conflict in the East: (a) Is the enterprise able to transform the model so as to overcome the negative effects of COVID-19 and the armed conflict in the East? (b) Does the business model take into account the balance of economic, environmental and social pillars of sustainable development?



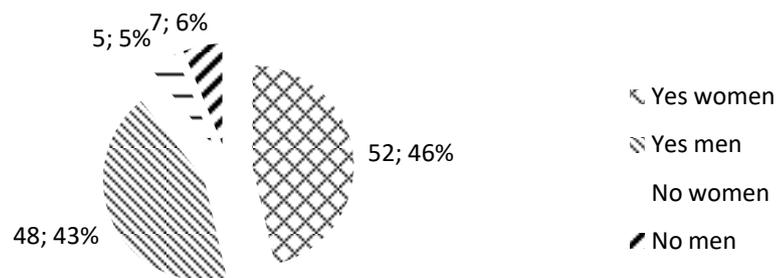
Source: Own work.

A minority of respondents said that in Ukrainian companies are able to transform their businesses under the influence of COVID-19 and the armed conflict in the East.

In particular, 14% of women and 21% of men came to this conclusion. Only 34% of women and 31% of men disagree that they are capable of transforming businesses under the influence of COVID-19 and the armed conflict in the East. Also, 30% of female respondents and 22% of male respondents believe that the balance of economic, environmental and social pillars of sustainable development in their business model is maintained. At the same time, 18% of women managers and 22% of men managers say the opposite. It should be noted that this is slightly less than half of the respondents. If in the first case it can be assumed that the majority of respondents are not able to transform their business under the influence of COVID-19 and the armed conflict in the East, and the views differed on maintaining a balance of economic, environmental and social pillars of sustainable development. Women are more likely to lose their ability to transform themselves under the influence of COVID-19 and the armed conflict in the East and to maintain a balance of pillars of sustainable development.

In March 2022, a survey was conducted among business representatives in Western Ukraine on the impact of the war on business. The results of the polls clearly showed the fact that the war is destroying the business and economy of the country (Fig. 7.)

Figure 7. Impact of the war on the business model: Is the war in Ukraine negatively affecting business?



Women: Yes – 52 respondents, 46 %. No – 5 respondents, 5 %

Men: Yes – 48 respondents, 43 % No – 7 respondents, 6 %

Source: own work.

Case study results

Figures 8 – 13 allow to compare CANVAS business model for the industrial sector with the change of external factors of influence.

Figure 8. CANVAS business model for the industrial sector before COVID-19.

Key partners <i>Agro-industrial complex Construction Transport Foreign producers</i>	Key activities <i>Maintaining competitive prices, expanding the trade network to different cities</i>	Value proposition <i>Own sales networks Blogging platform</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Entrepreneurs, small business</i>
	Key resources <i>Human, financial</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Introduction of innovative technologies, renewal of fixed assets</i>			Revenue streams <i>Trade revenue through trade establishments</i>	

Source: own work.

Figure 9. CANVAS business model for the industrial sector under the influence of COVID-19.

Key partners <i>Domestic producers</i>	Key activities <i>Development of platforms and blogs</i>	Value proposition <i>Internet establishments, YouTube channel, Tik-tok channel, virtual establishments for sale and Internet tasting, online 24/7 ordering of products, access to the range, analysis of the presentation of goods and services, online consultations</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Large retail chains</i>
	Key resources <i>Human, informational</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Development of new platforms for product sales and services, marketing and sales</i>			Revenue streams <i>Trade revenue through online sales</i>	

Source: own work.

Figure 10. CANVAS business model for the industrial sector before the armed conflict in eastern Ukraine.

Key partners <i>Foreign and domestic producers</i>	Key activities <i>Development of interaction platforms</i>	Value proposition <i>Discount system, cash and non-cash payment</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Big, small and medium business</i>
	Key resources <i>Human, financial</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Introduction of innovative technologies, renewal of fixed assets</i>			Revenue streams <i>Trade revenue through trade establishments</i>	

Source: own work.

Figure 11. CANVAS business model for the industrial sector under the influence of the armed conflict in eastern Ukraine.

Key partners <i>Domestic producers of products Transport</i>	Key activities <i>Development of platforms and blogs</i>	Value proposition <i>Internet establishments, cashless payment</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Large business</i>
	Key resources <i>Human, informational</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Development of new platforms for product sales and services Marketing and sales</i>		Revenue streams <i>Trade revenue through online sales</i>		

Source: own work.

Figure 12. CANVAS business model for the industrial sector before the war.

Key partners <i>Foreign and domestic producers</i>	Key activities <i>Development of interaction platforms</i>	Value proposition <i>Discount system, cash and non-cash payment</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Large, medium and small business</i>
	Key resources <i>Human, financial</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Introduction of innovative technologies, renewal of fixed assets</i>		Revenue streams <i>Trade revenue through trade establishments</i>		

Source: own work.

Figure 13. CANVAS business model for the industrial sector under the influence of war.

Key partners <i>Foreign producers Transport</i>	Key activities <i>Development of platforms and blogs</i>	Value proposition <i>Internet establishments, cashless payment</i>	Customer relationships <i>Support service, self-service</i>	Customer segments <i>Large business</i>
	Key resources <i>Human, informational</i>		Channels <i>Social Networks, Website</i>	
Cost structure <i>Development of new platforms for product sales and services Marketing and sales</i>		Revenue streams <i>Trade revenue through online sales</i>		

Source: own work.

From the proposed CANVAS business models for the industrial sector, it can be concluded that the value proposition has changed under the influence of the armed conflict in the East, the Covid-19 pandemic and the war. Thus, under the influence of the armed

conflict in the East, the value proposition has changed from a system of discounts, cash, and non-cash payments to online establishments and non-cash payments. Under the influence of Covid-19, the value proposition of creating one's own platforms for blogs and sales networks moved to the formation of Internet establishments, YouTube channels, Tik-Tok channels, virtual sales outlets and Internet tastings, online 24/7 product ordering, analysis of the representation of goods and services, as well as online consultations. Under the influence of the war, value offers changed the vector from a system of discounts, cash, and non-cash payments to Internet institutions and non-cash payments. Thus, the value proposition after the Covid-19 pandemic and during the war is similar, due to the pandemic's impact on business.

Conclusions and recommendations

The analysis of literature sources shows the change in the value proposition of business in terms of sustainable development, due to the relocation of enterprises from the East during the war. Moreover, each of the stages left its own imprint on the formation of business value proposals. The change in the business model began in 2014 with the armed conflict in the East. However, this was only the first step of change that hindered business development and negatively affected Ukraine's economy. The Covid-19 pandemic has intensified negative trends in business development and transferred it to another format, i.e. remote. Accordingly, customer service models changed, and channels of presentation of goods and services expanded. During the pandemic, more attention was paid to sustainable development and environmental security. During this period of retardation of development eached the logistics network, which facilitated the delivery of goods and services to end-users without their prior physical inspection. The war contributed to the curtailment of small and microbusinesses, their relaxation in the West.

The results of a survey of 112 respondents at 35 companies show that the majority of respondents are unable to transform their business under the influence of COVID-19 and the armed conflict in the East. Opinions on maintaining the balance of economic, environmental and social pillars of sustainable development differed. Women are more likely to lose their ability to transform themselves under the influence of COVID-19 and the armed conflict in the East, and to maintain a balance of pillars of sustainable development.

Practically all respondents believe that the war in Ukraine has a negative impact on doing business. The survey was conducted among business representatives in Western Ukraine. The results of the polls clearly explained the fact that the war is destroying the country's business and economy. That is, it can be stated that today the philosophy of society regarding the understanding of the consequences of armed conflicts and the annexation of Crimea on the country's economy has changed.

The results of the case method confirm that in the industry the business has changed the value proposals from the system of discounts, cash and non-cash payments to online establishments and non-cash payments. Social networks and SMM marketing also continue to develop. In particular, there are such changes as the creation of sustainable infrastructure, active implementation of innovations in all spheres of activity, focusing on the inclusiveness of the process, and ensuring effective management of enterprise and territorial development. Most companies are moving to rational models of consumption and production.

The outline of value changes is the basis for the development of technology to adapt businesses to change from crises, pandemics and armed conflicts. It contains three interrelated blocks: development strategy, adaptation technology and change monitoring. The outline of the business value proposition is placed in the technology of adaptation, which is an important element of successful business development in compliance with the goals of sustainable development.

References

- BARANOVSKY, A., TKACHENKO, N., GLONTI, V., LEVCHENKO, V., BOGATYROVA, K., BERIDZE, Z., BELINSKAJA, L., & ZELENITSA, I. (2020). *Non-Price Criteria for the Evaluation of the Tender Offers in Public Procurement of Ukraine*. *International Journal of Financial Studies*, 8, 44. <https://doi.org/10.3390/ijfs8030044>
- CALINESCU, T., LIKHONOSOVA, G., & ZELENKO, O. (2020). *Regulators of Financial Invulnerability of Ukraine: International Factors of Influence and Accounting Methodology*. Proceedings of the 36th International Business Information Management Association Conference (IBIMA), 4-5 November 2020, Granada, Spain. Sustainable Economic Development and Advancing Education Excellence in the era of Global Pandemic. Editor Khalid S. Soliman. Cranada, Spain: International Business Information Management Association (IBIMA), 1360 – 1369.
- CINCALOVA, S. (2017). *CSR in the logistics sector and its analyses*. Proceedings of the 30th International Business Information Management Association Conference, IBIMA 2017 - Vision 2020: Sustainable Economic development, Innovation Management, and Global Growth, Madrid, Spain, November 8–9, 548–555.
- CINCALOVA, S. (2020). *Inequalities in Social Responsibility across Europe Focused on Work-Life Balance*. *Quality - Access to Success*, 21(174), 142-146.

**Proceedings of the 2022 IX International Scientific Conference Determinants
of Regional Development, No 3, Pila 27 - 28 October 2022**

- DANYLKIV, K., GORBOVA, K., HEMBARSKA, N., TRYNCHUK, V., PAIDA, Y., HAVRAN, V. (2020). Montenegrin Journal of Economics, 16(4), 67-84. DOI:10.14254/1800-5845/2020.16-4.6
- GRZEBYK, M., STEC, M. (2015). *Sustainable Development in EU Countries: Concept and Rating of Levels of Development*. Sustainable Development, 23(2), 110–123.
- IVANOV, S.V. (2015). The impact of armed conflict (war, hostilities) on the value of the enterprise: a monograph. Dn-vsk: Makovetsky Publishing House, 175.
- KHOVRAK, I. V. (2013). *Financing of innovative development: realities and prospects*. Marketing and Management of Innovations, 1, 229-235.
- KHOVRAK, I., POLINKEVYCH, O., & TRYNCHUK, V. (2021) *Management of financial institutions on the basis of corporate social responsibility as a driver of sustainable development*. VIII International Scientific Conference Determinants of Regional Development, n. 2, p. 246-264, Dec. 2021. Conference Proceedings. doi: <https://doi.org/10.14595/CP/02/015>.
- KHOVRAK, I., & CHERNENKO, S. (2021). *Management of Innovation Activity in the Conditions of Industry 4.0*. 2021 IEEE International Conference on Modern Electrical and Energy Systems (MEES). doi:10.1109/mees52427.2021.9598621
- POLINKEVYCH, O.M. (2016). *Factors in the formation of advanced development of enterprises in the global crisis*. Economic Journal – XXI, 156 (1-2), 59–63 DOI: <http://dx.doi.org/10.21003/ea.V156-0013>
- POLINKEVYCH, O., KHOVRAK, I., TRYNCHUK, V., KLAPKIV, Y., & VOLYNETS, I. (2021). *Business Risk Management in Times of Crises and Pandemics*. Montenegrin Journal of Economics, 17: 3, 117-127.
- REDKO, K., & MIROSHNYCHENKO, V. (2022). *Study of sustainable development in Ukraine: Assessment of the state of implementation of goals*. Entrepreneurship and Innovation, (22), 5-13. <https://doi.org/10.37320/2415-3583/22.1>
- Ukrinform (2002a). *300 companies have already been relocated under the business relaxation program*. <https://www.ukrinform.ua/rubric-economy/3456260-za-programou-relokacii-biznesu-peremistili-vze-300-pidpriemstv.html>
- Ukrinform (2002b). *The World Bank has estimated Ukraine's physical damage from the Russian invasion at \$ 60 billion*. <https://www.ukrinform.ua/rubric-economy/3464391-svitovij-bank-ociniv-fizicnij-zbitok-ukraini-vid-rosijskogo-vtorgnenna-u-60-milardiv.html>
- ROSSOKHA, V., & CHEREDNIKOVA, E. (2020). *Marketing technologies of product design*. Efficient economy, 6, DOI: 10.32702/2307-2105-2020.6.4
- TKACHENKO, N., MANVELIDZE, R., KHOVRAK, I., GLONTI, V., ZELENITSA, I. (2020). *Public Procurement Performance: Criteria and Indicators for Ukraine*. 35 International Business Information Management Association Conference. 1-2 April, Seville, Spain. Conference Proceedings
- TRUNINA, I., & KHOVRAK, I. (2019). *Harmonization of the Interests of Employers and Institutions of Higher Education as a Basis for the Sustainable Regional Development*. Proceedings of the IEEE International Conference on Modern Electrical and Energy Systems (MEES). doi: 10.1109/MEES.2019.8896688