



FINANCIAL NEEDS OF MICRO-ENTERPRISES IN THE PERIOD BEFORE AND DURING THE COVID-19 CRISIS

 **Ilona Beizitere**¹, Mg.oec. / researcher;

 **Biruta Sloka**², Dr.oec./ professor, senior researcher;

Julija Bistrova³, Dr.oec./ assoc.professor, senior researcher;

 **Ieva Brence**⁴, Dr.sc.admin./ researcher;  **Elita Jermolajeva**⁵, Dr.oec./ leading researcher

¹Parliament of the Republic of Latvia; ²University of Latvia; ³Riga Technical University;
⁴Academy of Sciences; ⁵Latvia University of Life Sciences and Technologies

Abstract. The economic crisis caused by the coronavirus COVID-19 led to changes in companies' demand for funding. Therefore, financial institutions were forced to develop new types and directions of financing offer. The aim of our study is to find the financial needs of the micro-enterprises and the possible solutions to meet these needs. Micro-enterprises are more than 90% of all the SMEs in Latvia; therefore, analysis on their performance is essential. The survey in empirical research was focused to find out to what extent companies had access to finance, whether they needed new or additional funding and for what purposes financial support was needed. Research methods: analysis of scientific publications and pre-crisis research results, survey of entrepreneurs. Based on survey data, the authors have used main indicators of descriptive statistics and cross-tabulations, have conducted correlation analysis. In addition, the entrepreneurs were asked to disclose the funding used for their development and entrepreneurship. During the COVID-19 crisis, companies were seeking to fund their working capital to compensate for business disruptions caused by the loss of revenue, while in the long-term they seek capital to develop new products and services, to digitize and optimize the processes, to raise employee competence. The survey results have also revealed that micro-enterprises suffered to greater extent than larger ones, though they used much less of the offered state support, attempting to rely mainly on their internal resources. Moreover, even before the current economic crisis, it was found that micro-enterprises had more limited access to external finance than other types of SMEs. Based on the survey results, main conclusion points to the need to improve availability and diversity of public financial support for micro-enterprises, which is vital during crisis period, and as well as to adopt solutions to promote the further development of micro-enterprises.

Keywords: access to finance, financial needs, micro-enterprises, public financial support.

JEL code: G23, G32, L25.

Introduction

With the important role of SMEs in national economies, ensuring investment in employment and GDP growth, authors are focusing on researching the needs of micro-enterprises and the corresponding supply of financial support in Latvia. The study of this SME segment is based on the fact that micro-enterprises have accounted for about 93% of all economically active enterprises since 2017 (Official Statistics Portal..., 2022). In 2019, 49% of all employees were employed in micro-enterprises. An alarming sign is that the total number of micro-enterprises in the COVID-19 pandemic period is declining, with 2020 having the lowest number of newly registered enterprises in the last 17 years. In 2020, the age of companies liquidated in Latvia decreased to 7.4 years (in 2018 – 11 years); 57.5% of all newly established companies were small-cap companies, and 43.4% of them had a share capital of less than 10 euros (Lursoft IT, 2021). Against this background, it is important to provide support not only for the survival of micro-enterprises, but also for their smooth operation and further development.

In the previous study, authors have stated that in the conditions when Latvia has enough funds for state aid granted by the EU, the availability of financing for public support was still a challenge for many Latvian micro-enterprises. Although about half of the micro-enterprises needed funding for their development, they

1 Ilona.Beizitere@gmail.com

2 Biruta.Sloka@lu.lv

3 Julija.Bistrova@rtu.lv

4 Ieva.Brence3@gmail.com

5 Elita.Jermolajeva@gmail.com (corresponding author)

relied more on internal rather than external funding. Prior to the COVID-19 crisis, micro-enterprises did not make full use of the state aid financing instruments offered by the joint stock company "Development Finance Institution Altum" (ALTUM), the principal intermediary of EU funds in Latvia. At that time, micro-enterprises' reluctance to turn to ALTUM was most likely due to a lack of knowledge or awareness of how to obtain the necessary funding through ALTUM. They felt discouraged and lacked the confidence to address their needs at ALTUM (Beizitere, I., Brence, I., 2020).

It is important to note that, despite Latvia's policy of improving access to public finances, including support for micro-enterprises, the range of targeted measures has been limited and their offer has not always met its intended targets. In the pre-crisis period, the refusal of Latvian micro-enterprises to turn to external financing was mainly due to insufficient cash flow, insufficient collateral and insufficient equity. Financial institutions have been very cautious in financing micro-enterprises, including ALTUM, which offers programs with public financial support to companies, for example in cases where the collateral is insufficient or at an early stage when financial performance is not sufficiently stable (Beizitere I. *et al.*, 2021).

Access to finance remains one of the main constraints on SME growth, while the funding gap for micro-enterprises was even higher. Micro-enterprises represent the segment of the most financially vulnerable SMEs (European Central Bank, 2021). Thus, a well-designed financial support system that is tailored to the different financial needs of micro-enterprises is essential to support their competitiveness and growth.

The aim of the study is to find out the financial needs exhibited by the micro-enterprises during COVID-19 and the possible solutions to meet these needs. The following tasks were set for the research: analysis of scientific literature, previous conducted research results, policy planning documents and normative acts on the financial support for SMEs and survey-based analysis of the main needs and challenges faced by micro-enterprises in receiving financial support during Covid-19. When conducting analysis and making recommendations authors also have paid attention to the distinguished micro-enterprises' financing needs to overcome the impact of Covid-19 in the short-term and to finance their further long-term development.

In order to achieve the purpose of the study, the data obtained in the two surveys of enterprises have been analysed - on questions of the needs of business development and the received financial support in the pre-crisis period and on the public financial support in the COVID-19 period.

Prior to the COVID-19 pandemic in early 2018, a web interview (CAWI) questionnaire was sent to publicly available companies' e-mail addresses to investigate the financing problems faced by Latvian entrepreneurs. A total of 32,308 companies registered in the Latvian Business Register were included in the studied segment. Valid responses were received from 2511 enterprises, most of which (1879) were micro-enterprises. The companies reported on the diversity of financial sources used, including the financial instruments available for public support, and answered whether additional funding was needed and vital for the development of their activities in the near future.

The survey on the impact of COVID-caused lockdowns on corporate operations and companies' ability to withstand economic challenge has been conducted in September-November 2020, when relevant restrictions were imposed. This period was chosen as the most appropriate to detect and assess the impact of the pandemic on the financial support needs of companies and to match them with the actual public support offer in Latvia. One of the aims of the survey was to find out the subjective assessment of the company's management about the financial needs of companies and available support measures to help overcome the crisis. Within the present research the authors are focusing on the sections of questionnaire, which cover the issues of the support instruments used and required by micro-enterprises as well as their financing needs as compared to larger enterprises. The questionnaire was sent to more than six thousand companies, which are the members of Latvian Chamber of Commerce and Industry, members of regional

and industry associations, clients of the company Firmas.lv. Overall 334 filled questionnaires were received. Size-wise, the most represented was the group of micro-enterprises having 10 and fewer employees with 153 responses (46%).

The data from the surveys were processed by the data analysis programme in the SPSS environment.

Theoretical findings

Aspects of the development of micro-enterprises are on the research agenda of many academic researchers around the world, as they tend to operate effectively in niche areas, remote areas and social entrepreneurship. When it comes to successful business development, a lot of attention is paid to the marketing aspects (Batraga A. *et al.*, 2018; Batraga A. *et al.*, 2019), to financing aspects (Romanova I. *et al.*, 2018; Schwarze C. L., 2008), to ergonomic aspects (Kalkis H. *et al.*, 2020; Kalkis H. *et al.*, 2021), to digital aspects (Rivza B. *et al.*, 2020, Rivza B. *et al.*, 2019). Researchers have paid special attention to social enterprises (Anderson A. R. *et al.*, 2019). Many countries have different approaches to supporting micro business (Atmadja A. S. *et al.*, 2018; De Martino M., Magnotti F., 2018; Mittal S. *et al.*, 2011; Mohd Thas Thaker M. A. B. *et al.*, 2016) and there are aspects related to local government decisions (Savrina B. *et al.*, 2020; Seimuskane L. *et al.*, 2019). Researchers have indicated that gender and social status for entrepreneurs is important for development of strategic solutions for micro-enterprises (Ukanwa I. *et al.*, 2018).

The financing needs of micro-enterprises in the course of their evolution (Prijadi R. *et al.*, 2020) are aspects analysed by academic researchers with practical recommendations that could be useful for many countries. In one of the first large-scale studies on micro-enterprise financing, the authors (Masiak C. *et al.*, 2017) emphasized that micro-enterprises differ in their funding models from those of larger-size SMEs. Even before the crisis caused by COVID-19, many studies have shown that financing is one of the most important factors for the performance and development of SMEs, including micro-enterprises (e. g. Pissarides F., 1999; Beck T. *et al.*, 2008). The inability to access adequate start-up capital has been identified as a major obstacle to the development and growth of micro-enterprises (Hernandez-Trillo F. *et al.*, 2005). Researchers have long found that one of the success factors for microfinance institutions is adapting to the needs of customers, mainly small businesses, to support economic development (Hartungi R, 2007). Aspects of the availability of financial instruments as a challenge for micro-enterprises (Beizitere I., 2018) are on research agenda as well as aspects of public financing support options to micro-enterprises for innovation (Beizitere I. *et al.*, 2020a) and restrictive factors for micro-company growth in Latvia (Beizitere I. *et al.*, 2020b).

At the EU level, access to finance has already been recognized in 2012 as one of the biggest constraints on growth and entrepreneurship in Europe (European Commission, 2013). Several authors have emphasized the role of politicians and government in shaping state aid, including financial measures to support SMEs (Daugeliene R., 2016; Ruchkina G. *et al.*, 2017; Hellmann T. *et al.*, 2019; Lamoureux S. M, 2019; Paul J., 2020).

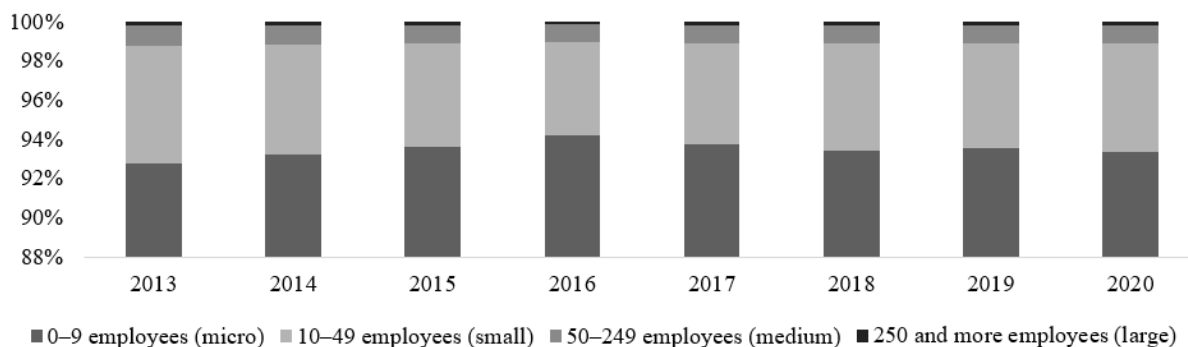
Back in 2019, shortly before the crisis, the situation in the EU with access to finance was generally insufficient. Regarding the availability of public financial support, the proportion of SMEs reporting deterioration was higher than the number of SMEs reporting improvements. Micro and small-size enterprises were less confident to talk with banks about financing than medium-sized and large enterprises (Kwaak T *et al.*, 2019). The authors (Bakhtiari S. *et al.*, 2020.) have raised the question of whether programs and policies that help "average" SMEs are well-suited to micro-enterprises.

During the Covid-19 pandemic, the financing small and micro-enterprises remains difficult, Yan X. and Quan L. (2021) have emphasized that in order to fully solve the problem of financing small and micro-enterprises, the key is to create a long-term risk compensation mechanism to reduce banks' reliance on collateral and to improve government supportive policies. In the 2021 survey, only 16% of companies in Latvia, compared to the average of 47% in the EU-27, have indicated that they do not face difficulties in accessing finance. From April to September 2021, only 11% of companies in Latvia had used a public support grant or subsidized bank loan, while 67% of them had stated that such support was not relevant (Kwaak T. *et al.*, 2021).

In Latvia, the financial institution ALTUM has been actively involved in mitigating the negative impact of Covid-19 since March 2020, when the demand for specialized financial instruments to overcome the crisis rose sharply. In 2021, however, the demand for financial support instruments to overcome the Covid-19 crisis had declined. Also, the level of pre-crisis funding for entrepreneurship was not reached in 2021, although various support programs are available from EU funds, including micro-enterprises (JSC Development Finance Institution..., 2021).

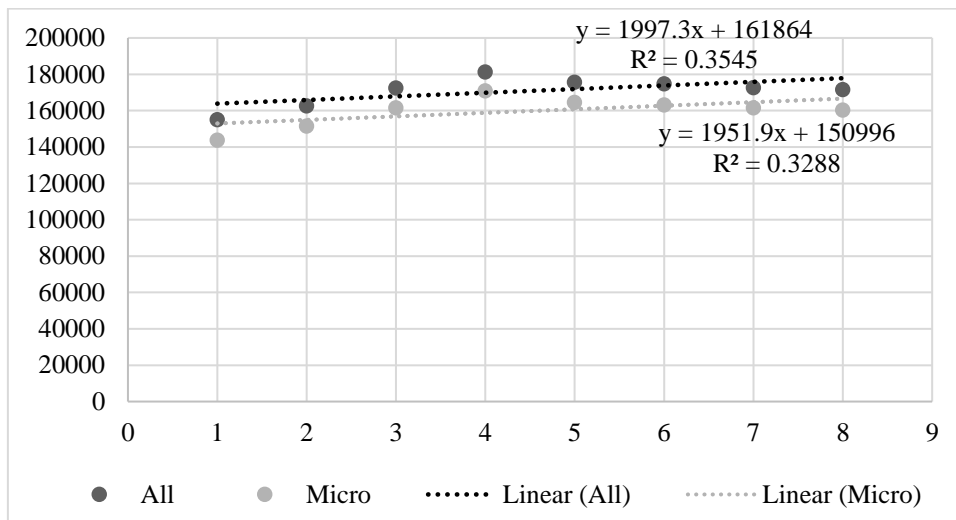
Research results and discussion

The actual number of enterprises can be estimated according to the number of economically active enterprises registered in the Latvian Register of Enterprises and is conducted by the Central Statistics Bureau of Latvia in accordance with the European Union's Joint Harmonized EU Programme of Business and Consumer Surveys, using funding from the European Commission. The aggregated data on the number of enterprises are available on the Official Statistics Portal of Latvia. Share of number of enterprises in Latvia and trend in their number changes is included in Figure 1 and Figure 2. The decrease in the number of companies already in the pre-crisis period, which was exacerbated by the crisis caused by Covid-19 in 2020, raises concerns about the successful development of companies in Latvia as a whole.



Source: Authors' calculation and construction based on statistics of the number of enterprises 2013-2020 (Official Statistics Portal..., 2022)

Fig. 1. Distribution of the number of enterprises by size group according to the number of employees, 2013-2020



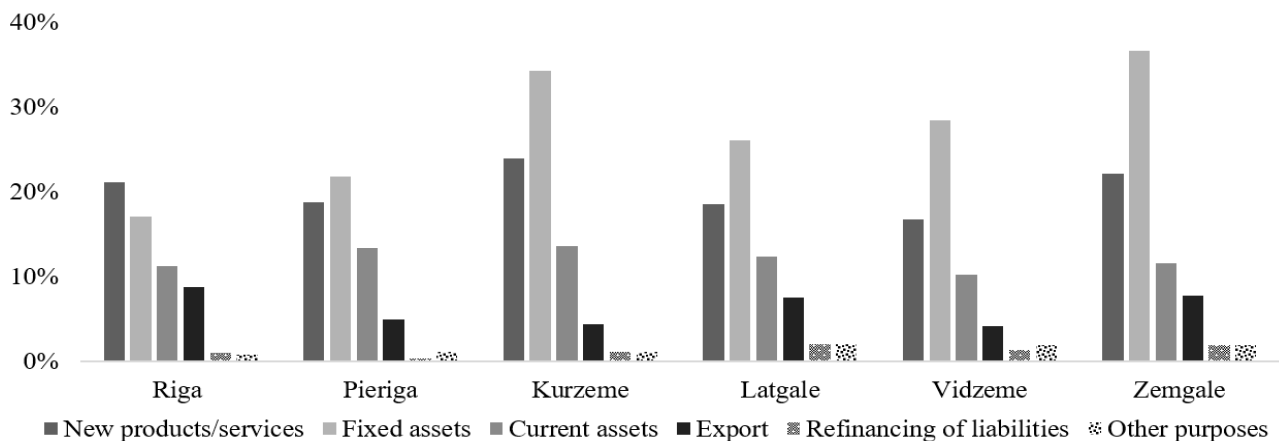
Source: Authors' construction based on the statistics of the number of enterprises (Official Statistics Portal..., 2022)

Fig. 2. Tendencies on the development of enterprises and micro-enterprises in Latvia, 2013-2020

Data indicate that there is increase of number of total enterprises as well as micro-enterprises in analysed period.

In a survey of entrepreneurs in the pre-crisis period, 38% of all micro-enterprises indicated the need to obtain new or additional external financing, while the same was indicated by 47% of larger enterprises. Micro-enterprises relied more on internal financing to finance their needs. In this survey to the question "For what purpose does the company you represent currently need new or additional external financing?" 1203 responses were received from 1879 respondents representing micro-enterprises. Among the regions of Latvia, the micro-enterprises of Zemgale (82%) and Kurzeme (78%) expressed the most active needs for attracting financing, but the least responses were received from entrepreneurs in Riga and Pieriga (60% each).

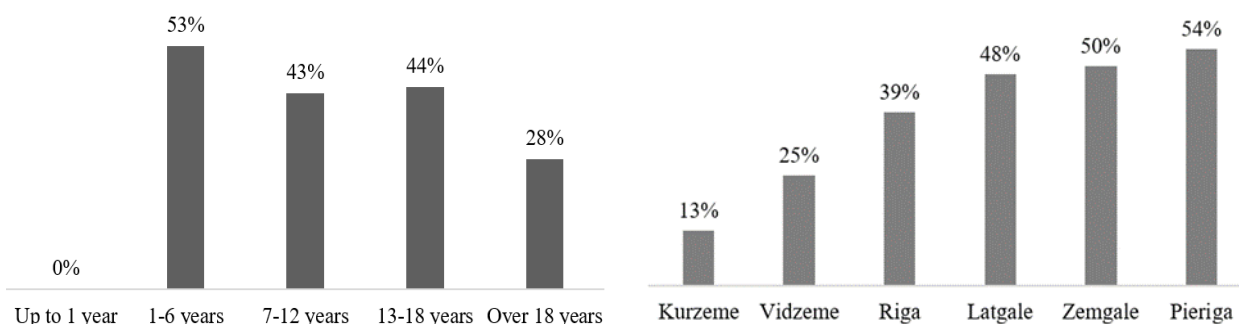
Respondents in all regions indicated that the majority of micro-enterprises wanted funding for their development - investment in fixed assets (real estate, plant, equipment), launch of new products or services (Figure 3). The results of the 2020 questionnaire confirmed the critical need for micro-enterprises to invest in the development of new products and services (Figure 7), while in the short term other aspects were prioritized, as disclosed below.



Source: Authors' construction based on the survey in the pre-crisis period

Fig. 3. Share of micro-enterprises that needed new or additional external financing in the regions of Latvia

The results of the survey on the impact of COVID-19 revealed that the pandemic has adversely affected the performance of micro-enterprises more than that of larger companies. 41% of micro-enterprises' managers admitted that their managed company experienced moderate to significantly negative impact, while only 31% of large companies admitted the same fact. Within the group of small and medium size enterprises we saw that 37-48% of companies felt negative effect caused by the pandemic spread.



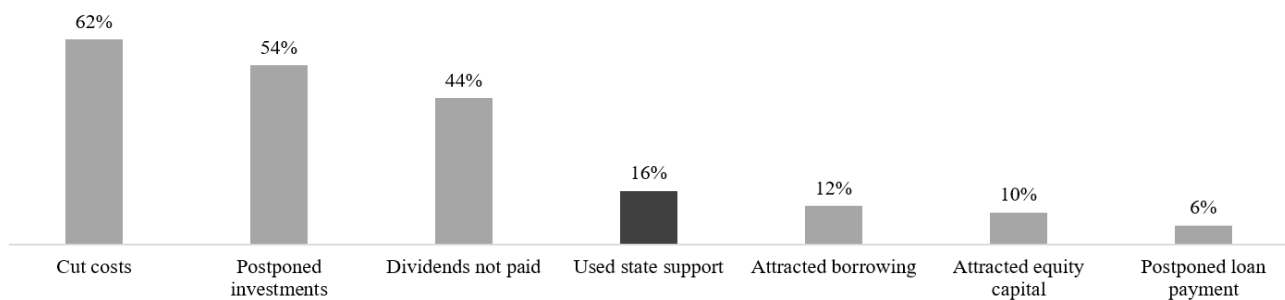
Source: Authors' construction based on the survey on the impact of COVID-19

Fig. 4. Share of micro-enterprises affected negatively during COVID-19 by age groups

Fig. 5. Share of micro-enterprises affected negatively during COVID-19 in regions

Looking at detailed response split by age of the companies, it becomes clear that the least affected are the companies being present on the market, which gained substantial experience in overcoming crisis periods, while most affected ones were relatively young companies in their early development phase (Figure 4). Regional answer split indicates that the companies, which remained most resilient were the ones that are located in Kurzeme and Vidzeme regions, which traditionally are homes to the agricultural sector as well as manufacturing companies, which were to a lesser extent affected by the disruptions in demand and supply. The biggest drawdown in operations has been experienced by companies in the Pieriga region, according to their management (Figure 5). This might be explained by relatively high share of companies operating in service sector, which suffered the most during the pandemics, particularly leisure, catering and trading operations.

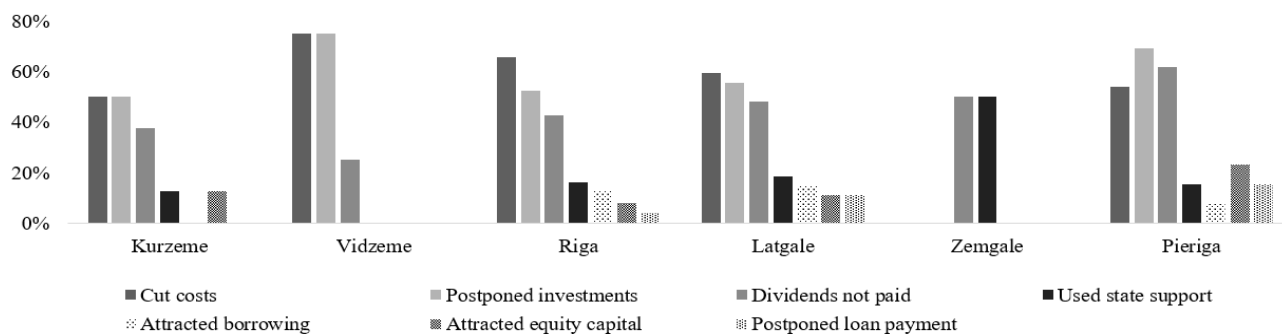
The companies were also asked what kind of measures they had been taken to overcome the crisis, focusing on financing issues. Majority of companies focused on cost cutting and were forced to postpone planned investment. 44% of companies decided to cancel dividend payments for the companies to keep liquidity in the critical environment. As mentioned before, micro-enterprises were modest in using the state finance support. This could have been due to lack of knowledge on the provided aid or uncertainty with regards to suitability criteria. Additional financing in the form of equity or loans was significantly less popular measure. It is worth noting that only 6% of micro-enterprises were able to postpone loan payments (Figure 6).



Source: Authors' construction based on the survey on the impact of COVID-19

Fig. 6. Share of micro-enterprises that had taken certain measures to overcome the crisis

State provided support instruments were used only by 16% of companies coming from all parts of Latvia, with exception of Vidzeme, where companies relied mainly on their own resources such as cutting costs, postponing dividend payments and investments. While Zemgale-located companies were most active in using state support and not paying out the dividends to overcome the crisis. Companies based in Riga, Pieriga and Latgale used all spectrum of the available crisis management options, with the emphasis on the internal resources, making operations as efficient as possible (Figure 7).



Source: Authors' construction based on the survey on the impact of COVID-19

Fig. 7. Share of micro-enterprises that had taken certain measures to overcome the crisis in regions of Latvia

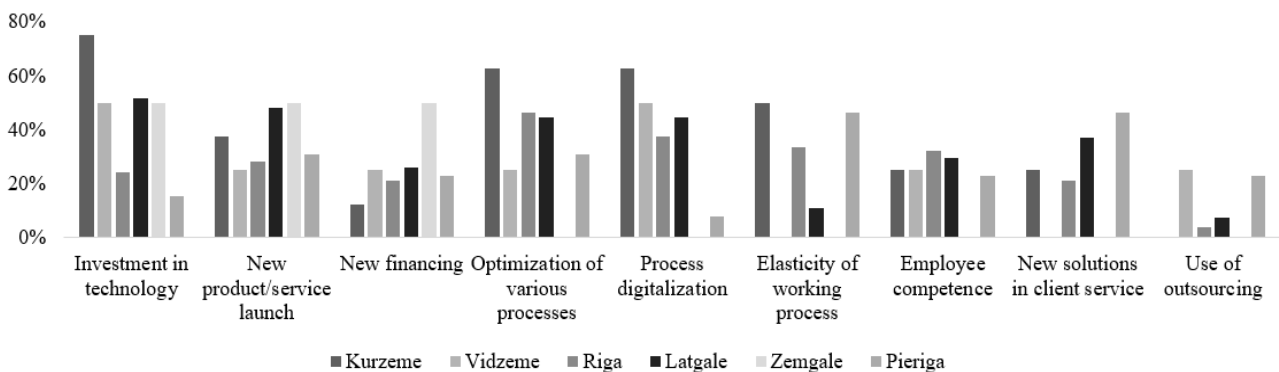
Selection of the measures to overcome crisis based on the corporate age is quite similar with exception of the youngest group exhibiting quite a difference from the broad pattern: they did not apply for loan payment postponement, did not use state aid and external financing, much rarely were engaged in cost cutting, while were most active in attractive new financing to overcome temporary difficulties in business environment. The behavior of the youngest ones was similar to the behavior of the older ones - both groups were most active in attracting new financing and less active than other groups in postponing dividend payments.

However, when asking the companies on what kind of measures would be the most appropriate for the companies to normalize their operations, 13% of micro-enterprises admitted that this would be postponing repayment of loans. This answer was more often selected by micro-enterprises as contrasted to the larger companies, indicating that there is a need for more attention towards financing access for micro-enterprises.

The survey included also the question on the long-term development and the required financing to support sustainable business operations. 23% of surveyed micro-enterprises admitted that to develop in the long-term they would need to obtain additional funding. Similar requirements for capital are observed in all groups of companies, regardless of the number of employees.

The responses on micro-enterprises' further development have confirmed that over 70% of the companies intend to optimize processes. About half of the respondents mentioned digitization and investment in technologies, new product launch and focus on employee competence increase. These initiatives are going to be financed primarily with the internal funding, but around a fifth of companies would need to attract external financing.

Attraction of capital is most widely required by Zemgale-based companies, who did not require it on the short-term basis but obviously seek for capital to sustainably develop in the long-term. Additional capital is less needed by Kurzeme companies. Investment in technologies and process digitalization, admitted to be efficient tool to increase corporate productivity in the current modern environment, are less required by Riga and Pieriga based companies, possibly because of the already high digital maturity level. These two measures were most needed by the companies from Kurzeme and Vidzeme as well as Latgale. Companies from Latgale were betting more on new products and services, employee competence and optimization of various processes (Figure 8).



Source: Authors' construction based on the survey on the impact of COVID-19

Fig. 8. Share of micro-enterprises seeing the following processes as the base for sustainable long-term development in regions of Latvia

Although the needs of micro-enterprises were quite diverse and assessed at different levels of need in the regions (as shown in Figure 8), almost all of these needs can be financed from the range of public support programs offered by the financial institution ALTUM. The question remains as to why there is a gap between the actual needs of micro-enterprises and the insufficiently used range of support measures developed by the Latvian government to overcome the COVID-19 crisis, as well as the large supply of EU funds in Latvia for 2021-2027.

Acknowledgements

The paper is supported by National Research Programme *INTERFRAME-LV*.

The survey was conducted within the National Research Program (NRP) Economic, Political and Legal Framework for Preserving Latvia's Economic Potential and Promoting Competitiveness after the Pandemic Crisis (reCOVary-LV) (VPP-COVID-2020/1-0010).

Conclusions, proposals, recommendations

- 1) Large proportion of micro-enterprises had financial needs to overcome the COVID-19 crisis and their further development, but only a small proportion had used the solutions offered by financial institutions as state aid in Latvia. As in the pre-crisis period, micro-enterprises relied heavily on their own internal resources and solutions.

- 2) Covid-19 has adversely affected more than 40% of micro-enterprises. Results of the research indicate that the biggest drawdown in performance was experienced in the companies located in Pierīga region. Micro-enterprises located in Kurzeme and Vidzeme regions remained the most resilient. Although various public support solutions have been developed in Latvia, in the regions, except Zemgale, they have not been popular among micro-enterprises.
- 3) One of the most common solutions to overcome the negative effects of Covid-19 for micro-enterprises was to preserve internal financial resources: reduce costs (62%), postpone investments (54%), abolish dividend payments (44%). In contrast, only 16% of micro-enterprises used public financial support instruments as an external source of funding. Additional financing in the form of equity or loans was significantly less popular.
- 4) In order to normalize their performance, 13% of micro-enterprises indicated that the most appropriate solution was to postpone repayments of the loan rather than to attract additional financing. In turn, for long-term development, 23% of micro-enterprises expressed interest in attracting additional funding.
- 5) For future development the majority (70%) of micro-enterprises plan to optimize their business processes. About half of the micro-enterprises intend to implement digitalisation and investment in technology, launch new products and focus on increasing the competence of employees. These initiatives are expected to be financed mainly from internal funding, but about a fifth of companies would need to attract external funding.
- 6) Micro-enterprises have acknowledged that access to finance for micro-enterprises is much lower than for larger-sized companies. It is essential for the further development of micro-enterprises that policy makers in support of entrepreneurship ensure that the financial programs available to micro-enterprises are more in line with their specific financial needs.

Bibliography

1. Anderson, A.R., Younis, S., Hashim, H., Air, C. (2019). Social Enterprising Informing our Concept; Exploring Informal Micro Social Enterprise. *Social Enterprise Journal*, Volume 15, Issue 1, pp. 94-110.
2. Atmadja, A.S., Sharma, P., Su, J.-J. (2018). Microfinance and Microenterprise Performance in Indonesia: an Extended and Updated Survey. *International Journal of Social Economics*, Volume 45, Issue. 6, pp. 957-972.
3. Bakhtiyari, S., Breunig, R., Magnani, L., Zhang, J. (2020). Financial Constraints and Small and Medium Enterprises: A Review. *IZA DP*, No. 12936, January 2020. Retrieved: <http://ftp.iza.org/dp12936.pdf>. Access: 10.11.2021.
4. Batraga, A., Salkovska, J., Braslina, L., Legzdina, A., Kalkis, H. (2019). New Innovation Identification Approach Development Matrix. *Advances in Intelligent Systems and Computing*, 783, pp. 261-273.
5. Batraga, A., Salkovska, J., Legzdina, A., Rukers, I., Bormane, S. (2018). Consumer Behavior Affecting Factors Leading to Increased Competitiveness During Holiday Season, *Economic Science for Rural Development*, Issue 48, pp. 329-337.
6. Beck, T., Demirguc-Kunt, A., Laeven, L., Levine, R. (2008). Finance, Firm Size, and Growth, *Journal of Money, Credit and Banking*, Volume 40, Issue 7, pp. 1379-1405.
7. Beizitere, I. (2018). Is Availability of Financial Instruments a Challenge for Micro-Enterprises? *Proceedings of 10th International Scientific Conference on New Challenges of Economic and Business Development - Productivity and Economic Growth*, University of Latvia, May 10-12, 2018, pp. 30-41
8. Beizitere, I., Brence, I. (2020). The Use of Public Financial Support: Study of Microenterprises. *Proceedings of the 2020 International Conference "Economic Science for Rural Development"*, No 53, Jelgava, LLU ESAF, 12-15 May 2020, pp. 159-167.
9. Beizitere, I., Brence, I., Sloka, B. (2020a). Public Financing Support Options to Micro-Enterprises for Innovation. *European Integration Studies*, Issue 14, pp. 172-184.
10. Beizitere, I., Sloka, B., Brence, I. (2020b). Restrictive Factors for Micro-Company Growth in Latvia. *European Integration Studies*, Issue 14, pp. 238-248.
11. Beizitere, I., Sloka, B., Brence, I. (2021). The Role of Financial Support for the Performance and Survival of Micro-Enterprises. *Proceedings of the International Scientific Conference "Contemporary Issues in Business, Management and Economics Engineering, 2021"*, 13-14 May 2021; pp. 254-261.
12. Daugeliene, R. (2016). EU's Political Actions for the Enhancement of Macroeconomic Stability in Con-frontation with Great Economic Recession. *Entrepreneurship, Business and Economics*, Volume 2, Issue 3-2, pp. 647-663.

13. De Martino, M., Magnotti, F. (2018). The Innovation Capacity of Small Food Firms in Italy. *European Journal of Innovation Management*, Volume 21, Issue 3, pp. 362-383.
14. European Central Bank, 2021. *Survey on the Access to Finance of Enterprises in the euro area. April to September 2021*. November 2021. Retrieved: https://www.ecb.europa.eu/stats/ecb_surveys/safe/html/index.en.html. Access: 10.02.2022.
15. European Commission, 2013. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Entrepreneurship 2020, Action Plan. Reigniting the entrepreneurial spirit in Europe /*COM/2012/0795 final*/ Retrieved: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52012DC0795>. Access: 12.02.2022.
16. Hartungi, R. (2007). Understanding the Success Factors of Micro-Finance Institution in a Developing Country. *International Journal of Social Economics*, Volume 34, Issue. 6, pp. 388-401.
17. Hellmann, T., Schure, P., Vo, D. (2019). Angels and Venture Capitalists: Substitutes or Complements? Saïd Business School WP 2015-2, European Corporate Governance Institute – Finance Working Paper No. 628.
18. Hernández-Trillo, F., Pagan, J.A., Paxton, J. (2005). Start-up Capital, Microenterprises and Technical Efficiency in Mexico, *Review of Development Economics*, Volume 9, Issue 3, pp. 434-447.
19. JSC Development Finance Institution ALTUM, 2022. Unaudited Interim Condensed Financial Report for the year ended 31 December 2021. Retrieved: <https://www.altum.lv/en/about-altum/financial-information/>. Access: 12.03.2022.
20. Kalkis, H., Andza, K., Roja, Z. (2020). Physical Load and Preventive Measures in Metal Manufacturing Industry. *Advances in Intelligent Systems and Computing*, Volume 1215, pp. 48-55.
21. Kalkis, H., Graveris, I., Roja, Z. (2021). Ergonomic Indicators and Physical Workload Risks in Food Production and Possibilities for Risk Prevention. *Lecture Notes in Networks and Systems*, Volume 273, pp. 47-53.
22. Kwaak, T., Cheikh, N., de Kok, J., Kruithof, B., Snijders, J., Stoilova, V. (2019). *Survey on the Access to Finance of Enterprises (SAFE)*. Analytical Report 2019. November 2019. European Commission. Retrieved: <https://ec.europa.eu/growth/access-to-finance/data-surveys>. Access: 18.12.2021.
23. Kwaak, T., Cheikh, N., de Kok, J., Snijders, J., Tollenaar, S., Galesloot, S., Sadilek, M.-L., O. (2021). *Survey on the Access to Finance of Enterprises (SAFE)*. Analytical Report 2021. November 2021. European Commission. Retrieved: https://ec.europa.eu/growth/access-finance-smes/data-and-surveys-safe_en. Access: 07.03.2022.
24. Lamoureux, S. M., Movassaghi, H., Kasiri, N., 2019. The Role of Government Support in SMEs' Adoption of Sustainability. *IEEE Engineering Management Review*, Volume 47, Issue 1, pp. 110-114.
25. Lursoft IT, Ltd (2021). 2020. gada bijis zemakais jaunregistreto uzņēmumu skaits pēdējo 17 gadu laikā (In 2020, it was the lowest number of newly registered companies in the last 17 years). 04.01.2021. Retrieved: <https://blog.lursoft.lv/2021/01/04/2020-gada-bijis-zemakais-junregistreto-uznemumu-skaits-pedejo-17-gadu-laika/>. Access: 11.02.2022.
26. Masiak, C., Block, J.H., Moritz, A., Lang, F., Kraemer-Eis, H. (2017). Financing Micro Firms in Europe: An Empirical Analysis. *Working Paper 2017/44*, EIF Research and Market Analysis. Retrieved: http://www.eif.org/news_centre/publications/eif_wp_44.pdf. Access: 09.12.2021.
27. Mittal, S., Gupta, P., Jain, K. (2011). Neural Network Credit Scoring Model for Micro Enterprise Financing in India. *Qualitative Research in Financial Markets*, Volume 3, Issue 3, pp. 224-242.
28. Mohd Thas Thaker, M.A.B., Mohammed, M.O., Duasa, J., Abdullah, M.A. (2016). Developing Cash Waqf Model as an Alternative Source of Financing for Micro Enterprises in Malaysia. *Journal of Islamic Accounting and Business Research*, Volume 7, Issue. 4, pp. 254-267.
29. Official Statistics Portal of Latvia (2022). Database UZS030, Economically Active Enterprises of Market Sector in Statistical Regions, Cities and Counties by Size Group According to the Number of Employees and Main Economic Activity (NACE Rev. 2) 2013 – 2020. Retrieved: https://data.stat.gov.lv/pxweb/en/OSP_PUB/START__ENT__UZ__UZS/UZS030/table/tableViewLayout1/. Access: 11.02.2022.
30. Paul, J. (2020). SCOPE Framework for SMEs: A New Theoretical Lens for Success and Internationalization. *European Management Journal*, Volume 38, Issue 2, pp. 219-230.
31. Pissarides, F. (1999). Is Lack of Funds the Main Obstacle to Growth? ERBD's Experience with Small and Medium-Sized Businesses in Central and Eastern Europe, *Journal of Business Venturing*, Volume 14(5-6), pp. 519-539.
32. Prijadi, R., Wulandari, P., Desiana, P.M., Pinagara, F.A., Novita, M. (2020). Financing Needs of Micro-enterprises along their Evolution. *International Journal of Ethics and Systems*, Volume 36, Issue. 2, pp. 263-284.
33. Rivza, B., Kruzmetra, M., Rivza, P., Mickeikiene, A., Balezentis, A. Jasaitis, J. (2020). E-commerce as a Consequence of Innovation and the Cause of New Innovations for SMEs: the Perspectives of Latvia and Lithuania. *Comparative Economic Research – Central and Eastern Europe*, Volume 23, Issue 3, pp.7-20.
34. Rivza, B., Vasilevska, D., Rivza, P. (2019). Impact of Digital Innovation on Development of Agriculture In Latvia. *Proceedings of 18th International Scientific conference Engineering for Rural Development, Latvia University of Life Sciences and Technology*, May 22-24, 2019, pp. 682-687.
35. Romanova, I., Grima, S., Spiteri, J., Kudinska, M. (2018). The Payment Services Directive II and Competitiveness: The Perspective of European fintech companies. *European Research Studies Journal*, Volume 21, Issue 2, pp. 3-22.
36. Ruchkina, G., Melnichuk, M., Frumina, S., Mentel, G. (2017). Small and Medium Enterprises in Regional Development and Innovations. *Journal of International Studies*, Volume 10, Issue 4, pp. 259-271.

37. Savrina, B., Seimuskane, L. (2018). Income and Quality of Life Influence on Citizens' Participations in Activities of Local Governments in Latvia. *CBU International Conference Proceedings 2018: Innovations in Science and Education*, Volume 6, pp. 424-432.
38. Schwarze, C.L. (2008). Involving the Accounting Profession in the Development of Financial Management Skills of Micro-Enterprise Owners in South Africa. *Meditari Accountancy Research*, Volume 16, Issue 2, pp. 139-151.
39. Seimuskane, L, Vilka, I., Brekis, E. (2017). Assessment of Socio-Economic Status Relevance for Latvian Electoral Participation. In: *Local Government and Urban Governance in Europe*. Editor: Silva, C.N. and Buček, J., *Springer*, pp. 209-232.
40. Ukanwa, I., Xiong, L. Anderson, A. (2018). Experiencing Microfinance: Effects on Poor Women Entrepreneurs' Livelihood Strategies. *Journal of Small Business and Enterprise Development*, Volume 25, Issue 3, pp. 428-446.
41. Yun, X., Quan, L. (2021). Research on Financing of Small and Micro Enterprises in Postepidemic Period: Based on Evolutionary Game and Numerical Simulation, *Mathematical Problems in Engineering*, vol. 2021, Article ID 4796485, p. 7.