
Managing Economic and Social Changes during the COVID-19 Pandemic: A Case Study for Szczecin and Krakow

Submitted 03/10/21, 1st revision 21/10/21, 2nd revision 12/11/21, accepted 30/11/21

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Abstract:

Purpose: The aim of the article is to analyze the economic and social changes during the Covid-19 pandemic on the example of economic centers such as cities.

Approach/Methodology/Design: In the framework of the presented article, the main research methods are the quantitative analysis of financial data on changes in city budgets and the qualitative analysis of the impact of actions taken on the further situation in the economies in question, based on the example of selected cities.

Findings: The obtained results will indicate the sectors of major socio-economic changes and will allow for recommendations on the issues of crisis management of budgets of public institutions and saving economies as a whole.

Practical Implications: The practical implications of the research results in the article are recommendations for practical actions managing the economy of cities, which bring tangible results and are effective in crisis management as a result of various pandemics.

Originality/Value: The original value of the article is the analysis of financial data influenced by the unprecedented Covid-19 pandemic and developed recommendations for practical actions to save economies reflected in their centers, which are cities.

Keywords: Economics, management, economic centers, crisis management, pandemic, health and socio-economic development.

JEL classification: A13, E01, E24, E71, G32, H12, H51, I15.

Paper Type: Research article.

Funding: The project was financed within the framework of the program of the Minister of Science and Higher Education in Poland under the name "Regional Excellence Initiative" in the years 2019–2022, project number 001/RID/2018/19, the amount of financing PLN 10,684,000.00.

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1. Introduction

Cyclically in the history of the world, we deal with events that have a huge impact on all aspects of socio-economic life. The global pandemic of the infectious COVID-19 disease, which is caused by the SARS-CoV-2 coronavirus, is currently underway. That is why the world took action on an international scale to prevent the spread of the pandemic. Travel was limited, quarantines and curfews were introduced (UNWTO, 2021). At the same time, a number of economic and social events: business, sports, religious and cultural events were postponed or canceled (IOC, 2021).

Also, during the periods of greatest incidence, many countries closed their borders or introduced border traffic restrictions and restrictions on people crossing the borders. Temperature controls for people in many places of activity and movement have been introduced as a symptom of possible illness and transmission of the coronavirus. Due to the outbreak of the pandemic, schools and universities were closed in 192 countries (Our World in Data, 2021) at national or local level, which at the global peak affected nearly 1.27 billion pupils and students (72.4%) (UNESCO, 2021). The pandemic caused global social and economic disruptions, including the worst world recession since the Great Depression in the early 20th century (ECDC, 2021).

The aim of the article is to analyze the economic and social changes during the Covid-19 pandemic on the example of economic centers such as cities. The main research methods are the quantitative analysis of financial data on changes in city budgets and the qualitative analysis of the impact of the actions taken on the further situation in the given economies. The obtained results will indicate the sectors in which the greatest socio-economic changes took place and will allow for the formulation of recommendations in the field of crisis management to save the socio-economic functioning of economies.

2. Research Results

The economic and social changes in the economy of Szczecin and Krakow and the implementation of the budget of these cities in 2020 were conditioned by activities related to the prevention and combating of the Covid-19 coronavirus pandemic. This year, many countries, including Poland, introduced a number of administrative restrictions in the functioning of the economy, public administration units and other institutions (Espinosa-Méndez and Arias, 2021).

Additionally, for local government units, including cities, the epidemiological threat translated into the need to introduce preventive elements of the spread of the pandemic and activities supporting management units in order to avoid an economic catastrophe (Fernandes, 2020). The main activities supporting the economy in cities include (IMF, 2021):

- support for entrepreneurs and non-governmental organizations (including subsidies and subsidies, or exemption from certain fees),
- suspension of parking fees,
- organization of distance learning,
- purchase of disinfectants and personal protection,
- extension of payment terms,
- subsidizing the salaries of employees from industries affected by the pandemic.

Additionally, many of the implemented measures resulted from the specificity of specific cities. During the first wave of the pandemic in the country, the Municipal Crisis Management Team in Szczecin made decisions related to the safety of residents. Cultural events were canceled, swimming pools and libraries were closed.

The functioning of public transport was limited, direct service of clients and visits to nursing homes were suspended. The first restrictions and restrictions introduced by the Polish government were intended to slow down the development of the epidemic. As a consequence, further restrictions quickly appeared, which limited the normal economic and social functioning (Ashraf, 2020). It was particularly hard hit by sectors of the economy that could not function in such conditions (He *et al.*, 2021).

Therefore, employees of these industries received financial support from the city of Szczecin. In addition, many necessary expenses have appeared within the city budget to ensure the functioning of many institutions. For example, there were expenditures on computer equipment for distance learning for students and teachers in order to ensure the functioning of education in conditions of remote work (Business Insider, 2021). There were also many additional costs related to the protection of health and life, for example the adaptation of hospitals and quarantine facilities to the specific conditions required during a pandemic.

Maintaining the business and jobs has proved to be a challenge. From the beginning of the pandemic, to the best of its abilities and competences, the city of Szczecin introduced many instruments and aid programs for entrepreneurs. The activities of the city of Szczecin for entrepreneurs include:

- deferring or spreading into installments the payment of local taxes, primarily real estate tax, but also, for example, on means of transport. It is also possible to apply for the cancellation of tax arrears. So far, over 100 entities have been released or extended the deadline for paying real estate tax installments for a total amount of PLN 1.35 million.
- the market fee was abolished. The abolition of the market fee contributes to the reduction of operating costs incurred by entrepreneurs who sell on city streets, fairs or bazaars.
- the rate for running food gardens was reduced by 90%.

- entrepreneurs can also apply for a loan on preferential terms from the Szczecin Loan Fund. Financial assistance is provided at 0% interest, without any additional costs. 83 companies were granted preferential loans from the Szczecin Loan Fund for a total amount of nearly PLN 8.7 million.
- fees for the concession for the sale of alcohol to gastronomic establishments were reduced.
- as part of the "Szczeciński, Lokalny, Solidarny" campaign, residents supported their favorite companies or cultural institutions by purchasing vouchers for products and services for a total amount of nearly PLN 35,000 zloty.
- at al Jana Pawła II (on the section of Aleja Fontann), restaurateurs were given access to the area to create gastronomic gardens.
- the Good Life Festival was initiated, ie a several-week fair with attractions, artistic performances and commercial stands in the city center to support economic activity.

Many implemented programs and aid instruments are still in operation today. For this, it is also necessary to support employees of the health care system and seniors. Currently, it seems that the largest "lockdown" (3 waves of the pandemic) is behind us, although no one is able to predict whether subsequent mutations of the coronavirus will not cause an increase in infections and the return of economic and social restrictions. Today, despite the economic recovery, many entrepreneurs are still struggling with problems and restrictions, and the coronavirus continues to wreak havoc on society. Additionally, it has a huge impact on public finances, including the city's budget. As a result of the pandemic, the budget of Szczecin has decreased by over PLN 90 million, and this is only the data until the end of 2020, as shown in Table 1.

Compared to the previous year (2019), the largest decreases in the city's revenues in the category of revenues from fees and provided public services were recorded as part of:

- revenues from public transport tickets (- PLN 31.1 million),
- share in personal income tax (- PLN 18.4 million),
- revenues from the Paid Parking Zone (- PLN 7.3 million),
- loss of income of cultural institutions (- PLN 5.9 million).

Table 1. *The main losses in the sources of income for the city of Szczecin in connection with Covid-19*

Category	Income plan	Execution of revenues for 2020	Loss of income
Proceeds from fees and provided public services	148 071 639 zł	87 476 152 zł	60 595 487 zł
Share in personal income tax	639 802 828 zł	621 356 094 zł	18 446 734 zł
Influence from rental / lease	87 874 845 zł	82 093 423 zł	5 781 422 zł

Tax revenues and fees	42 531 200 zł	37 207 310 zł	5 323 890 zł
SUM	918 280 512 zł	828 132 979 zł	90 147 533 zł

Source: Krzystek, 2021.

On the one hand, there was a decrease in the city's income, and on the other hand, it was necessary to incur a number of additional (previously described) expenses related to the prevention, counteraction and combating the effects of the Covid-19 pandemic. The data until the end of 2020 indicate that their total value is PLN 34.5 million, and the sources of their financing are shown in Table 2.

Table 2. Sources of financing of expenses related to the Covid-19 pandemic

Category	Amount
Own funds	19 936 137 zł
Subsidies and funds from the EU	10 945 495 zł
Government subsidy	2 667 500 zł
Resources from the Labor Fund	914 522 zł
SUM	34 463 654 zł

Source: Stępiński, 2021.

Despite the extraordinary situation in 2020, the implementation of the revenue plan amounted to PLN 3,063.9 million, which accounts for 105% of the planned annual revenues. On the other hand, expenses were incurred in the amount of PLN 3,333.6 million, which constitutes 91.5% of the annual plan.

Therefore, it can be concluded that the situation of public finances, despite the extraordinary expenses, did not deteriorate, and even lower expenses were achieved in relation to the plan, and the revenues increased. In the income group, due to the situation, the revenues from fees and provided public services decreased only slightly to the level of 97% in relation to the implemented plan.

On the other hand, tax revenues increased to 112% in relation to the assumed plan. Other items in the income group also showed an upward trend, which is surprising in such an extraordinary pandemic situation. However, this state was achieved, inter alia, through the sale of land for ownership (implementation in the amount of 216% compared to the plan), i.e., thanks to the sale of property and financial resources from international funds and other domestic sources, which results in the debt of the city budget.

In terms of expenses, the greatest savings were recorded as a result of their reduction in promotional activities and international cooperation (56.2% of plan implementation) and financial settlements (56.1% of plan implementation). An example is the lack of spending funds on the organization of "Tall Ships Races". The remaining categories of expenses are basically slightly different from the plan. Even social welfare and health expenditures were cut by 2% from plan. The capital expenditure basically follows the investment program plan set out in the Long-Term

Financial Forecast. The sphere of transport and communication has the highest share in these investments. Tourism and recreation are second in line, which also allowed for shifts in aid for this industry.

Overall, the situation on the labor market is stable, but despite this, there are large flows of workers between industries and companies. Of course, on the one hand, this applies to workers in sectors directly affected by the crisis, such as:

- Tourism, gastronomy, hotel industry,
- Retail and retail trade,
- Activities related to culture, entertainment and recreation,
- Consumer services

However, employees from the industry also decided to change their employers:

- IT and telecommunications,
- Media, marketing and e-commerce,
- Pharmacy, laboratories and medical equipment,
- Banking and financial services, and employees of settlement centers

However, in these cases it was due to the good situation in these sectors of the economy. The outbreak of the coronavirus pandemic and the growing demand for experts in these fields meant that employees assessed their value in the market better and chose more favorable employment conditions. The situation is somewhat different for industries particularly affected by the pandemic, and they continue to grapple with its consequences. Because despite the possibility of some forms of assistance, employers were often forced to cut jobs.

Within these industries, practically every second employee had to look for a new job in 2020. An example is the retail and retail industry, which has lost the possibility of selling through traditional channels (closing shopping centers and points of sale). Therefore, as a result of the pandemic, industries that could not adapt to the new realities for various reasons were destabilized. In addition, many other industries also struggled with a lack of resources or the need for transformation. Currently, both employers and employees are opening up to distance work. The future of work is hybrid and flexible.

Therefore, the reality after the pandemic may trigger new trends in the organization and ways of working in the economy. Additionally, during the pandemic, the sense of security became the primary factor determining career decisions. The year 2020 closed with a deficit of PLN 269.7 million, which does not differ from the values obtained in the last two years, PLN 255.1 million in 2018 and PLN 282.4 million in 2019, respectively (European Financial Congress, 2021). However, for example, in 2016, the city's budget had a surplus of PLN 234.8 million (CSO, 2021).

Therefore, the tendency itself is worrying, and it does not result from a pandemic situation, but from the adopted strategy, which is also used in other Polish cities. In addition, the balance of long-term liabilities of the city of Szczecin due to bank loans, including other debt titles and bonds, as at December 31, 2020, amounted to PLN 2,399.8 million. So, from the presented analysis it can be concluded that despite the difficult period of the pandemic, the economic situation of Szczecin does not depend on these economic and social perturbations, as these are insignificant changes in relation to the entire city budget. The adopted development strategies and governmental and EU programs are of greater importance.

However, the period of the pandemic undoubtedly causes changes that affect the general climate of the economic situation and it is certainly necessary to introduce aid programs for economic entities. Especially that the situation in the city budget has not deteriorated. Also, despite the fact that due to the acceleration of vaccination actions it may seem that the pandemic is about to end, the economy should be supported, because the economic and social effects will be long-lasting (WHO, 2021).

Mitigating a pandemic will require cooperation and planning at all levels of government and the private sector to boost the economy quickly. For example, the Governmental Fund for Local Investments was introduced as a mechanism to mitigate the negative impact of the loss in the income of municipalities. The financial resources of this fund are allocated to supporting capital expenditures, which are to stimulate the economy with public investments. It was from these funds that the city of Szczecin obtained PLN 101.9 million in 2020 for this type of investment.

The SARS-CoV-2 pandemic had a strong impact on the functioning of other Polish cities, very often pointing to problems that had already existed for a long time (WHO, 2021). Cities are therefore faced with the need to implement instruments and take actions that will enable them to take advantage of the opportunity to significantly accelerate their development, making them more resistant to any economic, social and climate challenges. Krakow, located about 650 kilometers from Szczecin, also stood up to fight the negative effects of the pandemic. It is one of the cities that reacted fastest to the increase in the incidence. Its rapid action in the field of public transport and support for the cultural sector ("Resilient Culture" - the first comprehensive package to support culture, launched on March 30, 2020) should be considered exemplary.

Due to the fact that culture is an integral part of the local economy, such activities as, for example, awarding the City of Krakow Awards, additional scholarships, organizing competitions as part of "online culture", purchasing works by cultural institutions. It was a huge initiative, in which a key role was played by the appeal of the Mayor of the City, Jacek Majchrowski, to the Minister of Culture and National Heritage, Piotr Gliński, to create tools that will enable local governments to provide

real support for the cultural sector. In March 2020, decisions were made to close schools, kindergartens and parks. The ability to move around the city for bicycles was also limited (e.g. no driving on the Boulevards). In the meantime, special bus lines for medics began to be organized. On April 6, 2020, ten buses marked with the MED symbol were put into operation, running on eight lines, used to transport doctors and nurses from municipalities near Krakow to work.

Another measure demonstrating the fight against the negative effects of the pandemic was the abolition of fees in paid parking zones, which was motivated by the willingness to introduce facilitations for people who, for safety reasons, still decided to choose transport using a passenger car. The large financial losses suffered by the city in April 2020 resulted from the partial shutdown of public transport, which is considered a very radical decision of the city authorities. The decision was dictated, among others, by the aforementioned suspension of fees in the paid parking zone and a sharp reduction in revenues from ticket sales. Some savings were achieved by switching off the lighting of city streets at night (from midnight to 4 am).

The support programs proposed by the Krakow authorities, addressed to entrepreneurs, are very similar to those initiated by other cities, which results from the provisions on public finances. The scale of this support may be the main differences. About 86,000 applications for assistance were submitted to the Grodzki Labor Office in Krakow. Thanks to the initiation of the so-called The anti-crisis shield made it possible to provide Krakow entrepreneurs with financial support for a total amount of over PLN 465 million, of which approximately PLN 70 million came from the Krakow authorities. Assistance in the form of loans and subsidies was granted primarily to preserve jobs. Examples of activities aimed at supporting local enterprises, initiated by the Krakow City Hall, include, among others:

- Pause program - aimed mainly at shops, restaurants and service establishments that use municipal infrastructure - suspension of fees, reduction to a symbolic amount or total exemption, discounts on rent, fees and local taxes (e.g. discounts on fees for commercial premises, discounts on catering and commercial activities, concessions for food gardens and marketplaces, reduction of fees for waste management) - almost PLN 70 million was allocated to this program in 2020,
- launching Crisis Advisory Points, which, together with the Entrepreneur Service Point, support local business, in particular people planning to start their own business (e.g. free legal support provided by Krakow attorneys),
- creation of a package of websites enabling the use of the offer of Krakow producers and entrepreneurs (examples of websites: www.jestemaktywny.krakow.pl, www.jerzenie.krakow.pl, www.rynek.krakow.pl).

During the pandemic, enterprises could also take advantage of forms of assistance offered by other institutional entities, such as, for example, the Grodzki Labor Office, the Social Insurance Institution, the Tax Office, Bank Gospodarstwa

Krajowego, Małopolskie Centrum Przedsiębiorczości, Polish Development Fund or the Polish Agency for Enterprise Development. Examples of forms of support for these institutions include:

- co-financing of employees' salaries,
- co-financing a part of the costs of running a business,
- loans from the Labor Fund,
- postponement of payment of social security contributions,
- exemption from paying contributions,
- downtime benefits,
- deferred tax payment,
- spreading the tax into installments,
- income tax relief,
- write-off of all or part of tax arrears,
- biznesmax guarantees,
- de minimis guarantees for securing the repayment of the working capital or investment loan,
- EU loans,
- compensation vouchers,
- grants,
- PFR Financial Shield,
- subsidies.

In the era of a pandemic, due to limited revenues, the best solution for entrepreneurs seems to be, above all, low, fast and non-returnable forms of financing. Apart from a wide range of support for enterprises, hospitals also received assistance. Krakow provided financial aid in the amount of PLN 1 million to two city hospitals. Additionally, it was decided to purchase coronavirus tests for healthcare professionals. The expenses of the Municipality of Krakow along with the funds from the European Union were also allocated to the purchase of personal protective equipment (including disposable gloves and masks), as well as the purchase and delivery of food and medicines for the most needy people (including the homeless).

Additionally, audiovisual equipment (including laptops, cameras and headphones) for remote learning for children in foster care was also purchased. Significant changes also took place in city offices, as mechanisms for the remote operation of various departments were created. In Krakow, about 60% of officials worked remotely in the first weeks of the pandemic. This is a very high share, taking into account that the average for voivodship cities was about 21% of officials working remotely.

The crisis situation increased the intensity of city authorities in communicating with residents and providing current information on news related to the pandemic. In order to better coordinate and create more transparent information about the city's activities for the benefit of its inhabitants, Krakow (and 4 other cities) decided to

establish the Municipal Crisis Management Teams, meetings of which ended with press conferences. In addition, Krakowskie Centrum Wspierania Przedsiębiorczości has created a special website called "City Support", intended for people who need support or detailed information on the current offer of assistance for entities located in Krakow.

As in the case of Szczecin, the size of the losses caused by the pandemic in some income categories in 2020 finally turned out to be smaller than assumed, and therefore the economic slowdown did not fully affect the condition of local government finances. This may result from taking numerous actions aimed at maintaining investment activity, as well as supporting entrepreneurs and residents. Of course, most decisions depended on top-down government regulations (tightening and loosening pandemic restrictions), which had a significant impact, for example, on the situation on the Krakow labor market, causing fluctuations in the number of job offers and a slight increase in unemployment in the city, which concerned in particular the hotel and catering industry, event and service.

The total income of the Municipality of Krakow in 2020 was realized in 96.4% (amounted to approximately PLN 6.2 billion) (Ministry of Finance, 2021). The decrease in revenues was mainly related to the reduction in tax revenues (PIT and CIT), which accounted for almost one third of all obtained funds. In turn, the total expenses in the same year amounted to approx. PLN 6.67 billion and they were realized at the level of 97.69% of the plan (CSO, 2021). As the chairman of the Audit Committee points out, under normal circumstances budget execution could be assessed negatively.

Due to the pandemic situation, which practically every inhabitant of our planet had to contend with, it was impossible to avoid its impact on deviations of income and expenses from the assumed plan. Ultimately, the losses in the city's income were much lower than originally assumed. In addition, the American rating agency Standard & Poor's upheld in 2020 a long-term rating of creditworthiness at the A-level (the highest rating obtained by local government units in Poland). This rating also means that an economic revival can be expected in the coming periods, which will stabilize the city's budgetary situation and allow it to achieve stable financial results again.

In 2020, Krakow allocated over PLN 107 million to the fight against the coronavirus. These funds were allocated, inter alia, to for the purchase of personal protective equipment (e.g. masks, disinfectants), decontamination of rooms, ensuring safe working conditions, increasing the number of public transport courses, subsidies for non-governmental organizations and hospitals, purchase of ICT equipment, providing access to the Internet that was used for work remote. Thanks to the measures taken, the protective mechanisms introduced and the use of support under the anti-crisis shield, it was possible to maintain many jobs and avoid a larger scale of bankruptcy.

Additionally, as in Szczecin, some industries in Kraków underwent a new development during the pandemic. These were, among others: the IT industry, e-commerce or IT services.

3. Conclusion

The successive waves of the pandemic do not inspire optimism about the future of enterprises and the entire Krakow community. The support of the city authorities will still be necessary, which will include, inter alia, further postponing payment deadlines, canceling debts or introducing reliefs. Unfortunately, such activities may lead to a significant deterioration of the city's financial condition in the long run.

Due to the pandemic, industries that could not adapt to the new realities for various reasons were destabilized. In addition, many other industries also struggled with a lack of resources or the need for transformation. Currently, both employers and employees are opening up to distance work. The future of work is hybrid and flexible. Therefore, the reality after the pandemic may trigger new trends in the organization and ways of working in the economy.

Additionally, during the pandemic, the sense of security became the primary factor determining career decisions. Undoubtedly, the period of the pandemic causes changes that affect the general climate of the economic situation and it is certainly necessary to introduce aid programs for economic entities. Mitigating a pandemic will require cooperation and planning at all levels of government and the private sector to boost the economy quickly.

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