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Business continuity of official statistics

Business continuity of Serbian statistics during the COVID-19 crisis

Prepared by Serbia

Summary

This document explains in detail how the Statistical Office of the Republic of Serbia (SORS) has responded to the COVID-19 outbreak and increasing demands for statistical data, especially in the domain of assessment of the economic impact of the crisis. SORS introduced new organizational changes to preserve business continuity. Fast, responsive, predictive statistics were also introduced through the concept of decision-making system as a new role of official statistics, showing that the position of the statistical institute is very important in these unpredictive situations.

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I. Introduction

1. The Statistical Office of the Republic of Serbia (SORS) strongly believes in the new role of official statistics. Official statistics must be active participant in the decision-making process and data system stewardship instead of following the previous traditional passive approaches, which included only producing and disseminating large amounts of data. Decision-making support, on all levels, provides accurate and timely data to policymakers on which they will have a clear picture of numerous issues.

2. The situation with COVID-19 outbreak was a stress test and final "proof of concept" for this new paradigm for official statistics.

II. What we did and how we did it – preserve business continuity

3. The rapid growth of teleworking – all SORS employees have been provided with the technical possibility to work from home, including interviewers who used cloud technology for CATI data collection method. Work organization has significantly changed, and that change will affect the future organization of SORS – all employees in central and regional offices are put in the same position regardless of their location of work.

4. In order to obtain high quality information on the current economic situation and to predict short-term trends in the business of economic entities it was crucial to keep conducting Business climate and population consumption surveys (BCS) using CATI method. SORS conducts five surveys, in monthly dynamics from the following business sectors: manufacturing, construction, business services, trade and surveys covering households as consumers.

5. In addition to standard CATI surveys, seven new ad hoc CATI and MIX mode surveys (CATI+CAWI) were introduced, related to businesses and COVID-19 crisis. Data collected and processed through these surveys, monitoring and auditing were visualized in a way that is easy to use and helps to gain deeper data insight.

6. Prior to the crisis, SORS used two on-premises CATI centres with 40 possible places for interviewers. All equipment, software, servers and telecom links were on-premise. The crisis forced SORS to look at things in another way and find solutions to work from home, but with the same capacity as on-premise. In order to achieve that, MS SQL Server services on Azure cloud were introduced, and all relevant databases were exported to those services. SORS developed an IST metadata-based platform for collecting and processing, data and all IST CATI programs were redirected to use Azure cloud MS SQL Server services instead of using the on-premise MS SQL Server.

7. The IST platform was, also, adjusted to use encrypting functions, developed by SORS, in order to preserve encrypted data on the cloud and to use decrypt functions when reading data from the cloud database. Data, in encrypted form, can only be seen through an application on the IST platform. High security was achieved through having only encrypted data on the MS SQL Server services on Azure. Data were daily transferred to an on-premise location and erased from the cloud. Actively using the cloud and with upgrading IST platform, SORS broadened possibilities for CATI data collection. Now there is a possibility to continue to work in this way.

8. It is very important to emphasize that IT in Serbian statistics is not typical IT. Fast and agile IT, capable of directing the necessary resources to where they are most needed in a time of crisis is crucial. SORS has always been aware that IT is not IT that simply maintains a system. We have changed the ratio between the so-called "maintenance" and investment in new technologies and knowledge and thus launched innovations that contribute to being better, faster, and more reliable.

III. Adding new ad hoc business surveys on industrial production capacities, trade and construction

9. Using the network of SORS statistical data centres, we managed to successfully monitor the industrial production capacities, trade and construction in the situation when special measures caused by the COVID-19 virus are being implemented.

10. SORS always pays special attention to industrial production through statistical surveys using the questionnaires on a monthly basis. The questionnaire IND-1, which serves the purpose of collecting data on the total produced quantities, sub-contracted produced quantities, the quantities of stocks at the end of the reporting months and on sold industrial products from the beginning of the current year. The questionnaire for small-size business entities IND-1 sample, which serves the purpose of collecting data on a monthly basis concerning the income generated by the sale of own products and services of producers belonging to the section “Manufacturing”.

11. Reporting units are enterprises. Observational units are enterprises registered in sections B (mining and quarrying), C (manufacturing) and D (electricity, gas, steam and air conditioning supply) of the Classification of Activities NACE 2, as well as kind of activity units (KAU) of non-industrial enterprises performing the industrial activity.

12. Thanks to its territorial organization, SORS is managing to successfully monitor the industrial production capacities through the regional departments in the situation when special measures caused by the COVID-19 virus were implemented. In order to monitor industrial production capacity during an emergency, SORS has intensified communication with enterprises, i.e. conducted two “surveys” as an upgrade of the existing IND1 survey, to assess the production situation at the end of March and estimate the expected industrial production in April and May.

13. The first survey was conducted via telephone and email, and over 1100 companies were contacted through this process. Reporting units provided information on their capacity engaged, and they were instructed to supplement the report with two more questions when submitting the report for March. Additional questions were related to the status of the activity of the company and the data on expected production in April. Following a survey conducted in March, two independent surveys were conducted in the first five days for the next two months to assess industrial capacity utilization in April and May.

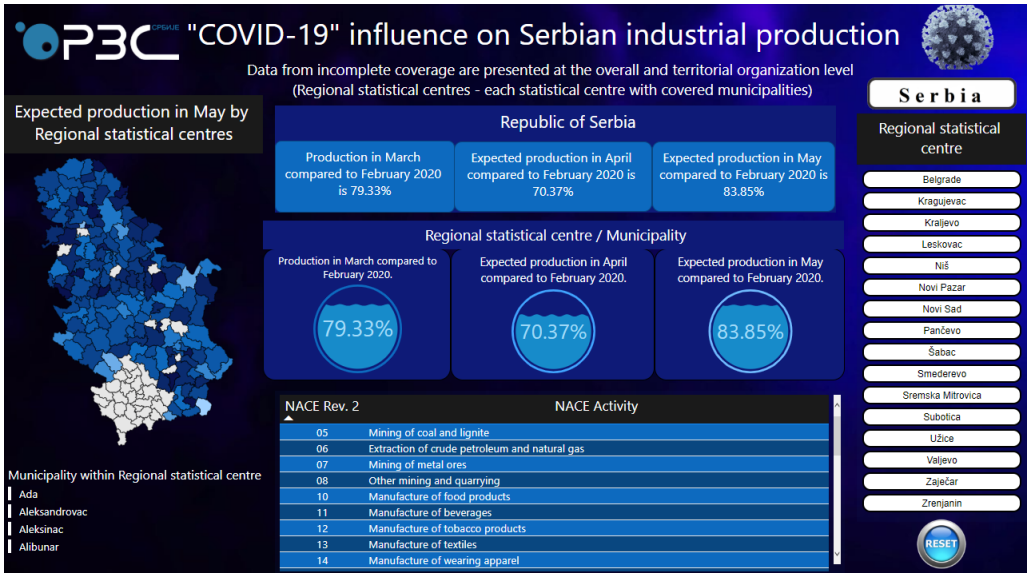
14. SORS used the same approach in the monthly assessment of the situation in construction and domestic trade.

15. The main objective of the new survey on construction was to assess the construction activity for a month in advance and thus to assess the impact of the COVID-19 on construction in the Republic of Serbia. Reporting units were legal units with principal activity classified in NACE Rev.2 sections F (Construction), either as the main contractors or subcontractors. We have also included business entities whose main activity is not in section F, but that have significant turnover in this section (as secondary activity).

16. Another important field which can give us deep insight in the current economic situation is domestic trade. SORS conducted another ad-hoc survey by phone with the main objective is to assess the indicator of retail trade turnover for one month in advance. Reporting units of this statistical survey were legal entities (enterprises) which are registered under the activity “Retail trade” and legal entities (enterprises) which are registered under other activities according to the principle activity but are also engaged in retail trade.

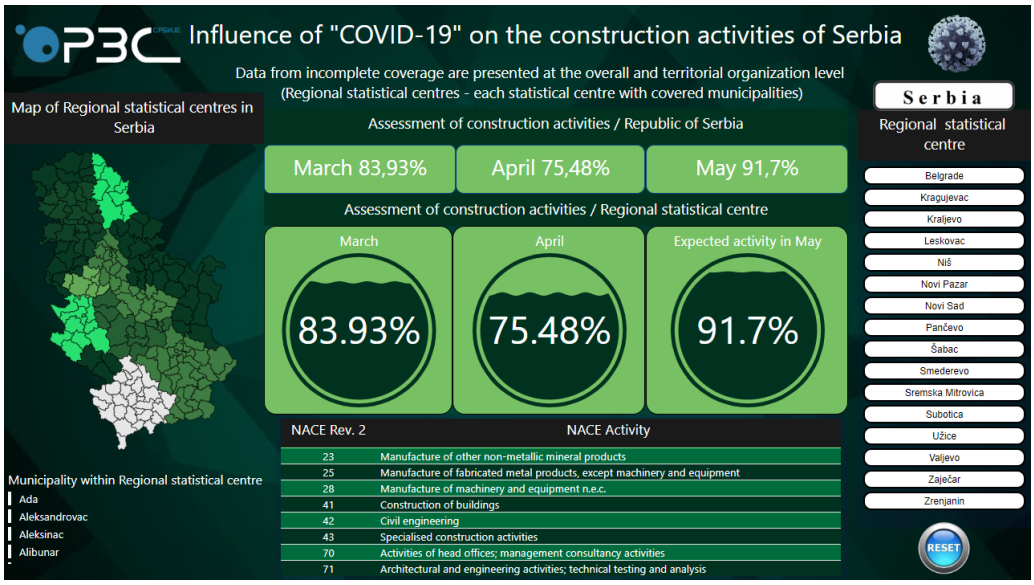
17. For the purpose of presenting the research results and facilitate survey monitoring, an interactive PowerBI report was prepared which offers multiple opportunities to present data at the territorial level as well as at the business activity NACE classification level.

Figure 1
COVID-19 influence on Serbian industrial production



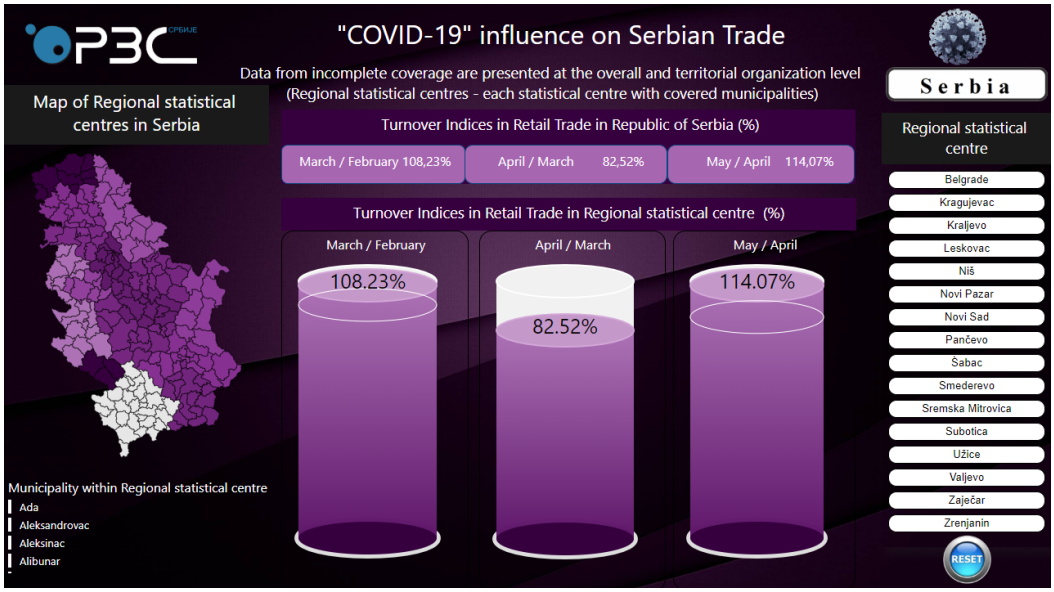
Link: Interactive Report of results from COVID-19 influence on industrial production

Figure 2
Influence of COVID-19 on the construction activities of Serbia



Link: Interactive Report of results from COVID-19 influence on construction activity

Figure 3
COVID-19 influence on Serbian trade



Link: Interactive Report of results from COVID-19 influence on retail trade

IV. Establishing a survey on business activity, expectations and constraints in collaboration with the Serbian Chamber of Commerce and Industry

18. The survey on business activity of economic actors, conducted by the Statistical Office of the Republic of Serbia in collaboration with the Serbian Chamber of Commerce and Industry, aims at advancing the quality of the analysis of movements in the domestic market, with special emphasis on the analysis of the factors influencing the supply and demand for goods and services in the country, as well as the evaluation of the business done with foreign countries.

19. The survey has been designed with the aim of providing an objective overview of the expectations and problems that economic actors face at the operational level. In addition, the survey results provide a systematic insight into business conditions at the domestic market from the perspective of economic actors segmented in accordance with the selected economic activities as well as into the effects of the economic policy measures and the Government subsidies in effect.

20. The information obtained by the survey represents another aspect of the Decision-making Support System (DMS), defined with the aim of extracting the data from various sources to enable easier understanding and monitoring of economic phenomena. Therefore, an insight into the business activity movements of economic actors facilitates understanding of the changes at the macroeconomic level and, in this way, substantially contributes to the creation of public policy and to improving strategies and decisions.

V. Increasing timeliness processing data from administrative sources for monitoring of registered employment

21. Statistics on registered employment, based on data from the Central Register of Compulsory Social Security and the Statistical Business Register, have been processed, since the introduction of the state of emergency, on a weekly basis instead of monthly. The aim of this change was to monitor changes in the number of employees in various activities, in and outside the public sector, by type of employment (employment / out of employment) to support timely decision-making and with the purpose of examining the consequences of COVID-19 and the effects of economic measures adopted by the government.

22. The main administrative source for data on registered employment is the Central Register of Compulsory Social Security (CROSO). The main task of CROSO, regarding SORS, is to collect data about employees in public and non-public companies and various associations since all legal and natural persons registered for performing economic activity are obliged to provide data about its employment to CROSO.

23. Administrative sources have not still established a reliable system of following employment per:

- NACE activity in which they are engaged
- Geographical locations on which activities have been performed and
- Number of employees broken down to employment type in performing these activities.

24. Therefore, data from the Statistical Business Register (SBR) are also included in this statistical analysis. SBR, from its side, has an obligation to follow all NACE activities and employment classified by type which perform it and localities on which activities are performed. The main idea is to make synergy between statistical and administrative sources, in order to improve the quality of produced statistical data.

25. Since the beginning of the COVID-19 outbreak, interest in the employment data has drastically increased as the Serbian government needed more timely information on the employment, to be fully prepared to make a proper decision in that domain. In response to this, all resources from our office have been regrouped. Data on registered employment were needed on a weekly basis. CROSO has been informed about it, so all the analysis that was aimed to be monthly has been carried out weekly. SBR continues to update its data on a monthly basis from administrative sources and from statistical sources, so full support to this survey has been established.

26. The benefits are various. SORS has proven its concept of including data-driven Decision Making Support, as very useful. The need for data was shown. The resources have been identified. The organization was moved in this direction. The requested data have been collected, analysed and sent to the government. The government was informed of the employees' situation in time.

VI. Promoting the essential role of official statistics

27. The Chief Statistician was regularly a guest on different national television channels. Themes were various but mostly focused on the consequences of COVID-19 on the domestic market and national economy. SORS was pointed out as the institution of trust, by having the ability to adapt to the new circumstances, and to provide a fast response to the requests arising from the stakeholders from all levels. At the same time, SORS has practically shown the integration and the leadership role in the national statistical system, by gathering all relevant public and private companies and associations and giving direction in providing reliable and accurate data.

V. Conclusions

28. In SORS, the Decision-Making Support System was initiated in accordance with the capacities and capabilities. SORS developed a close and lasting cooperation with other state institutions and bodies (ministries, chambers of commerce, working groups, etc.). The next steps are the establishment of a decision support system at the local level, at the level of cities and municipalities. The integration of all available statistics and all levels of statistical expertise together in response to increasing needs of local communities strengthens the new and significant role of official statistics and at the same time creates a completely new analytical perception at the state level. When it comes to making any analysis and creating any strategic plans, statistics need to be the focal point be it at the state or local level.

29. COVID-19 outbreak showed us that we need to maintain a different communication channel with reporting units as our valuable source of data. At the same time, official

statistics must be able to quickly respond to unforeseen circumstances, and the best way for that is to add new and fast statistics surveys which can help us to better anticipate and react in those situations. For the same reasons, SORS has immediately introduced several new and fast online monthly surveys under the joined name “Assessment of economic indicators” in the domain of industry, construction, retail trade and tourism.

30. Regarding IT infrastructure, the decision to develop and to invest in our own resources and highly automated IT proved to be, again, the right decision.