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Post-Covid: sustaining organisational and product innovation in national statistical offices.

Innovation in national statistical offices organization and working arrangements

Covid-19 Situation Room: successful partnership with academia and public sector organisations

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Summary

The document describes the experience of establishing the Covid-19 Situation Room by Statistics Finland and Helsinki Graduate School of Economics. The Situation Room uses data from private and public sources and has enabled providing extensive and timely information for policymaking during the crisis. The document describes the creation of the Situation Room, its main achievements, lessons learnt in the process and future plans.

The document is presented to the Conference of European Statisticians' session on "Post-Covid: sustaining organisational and product innovation in national statistical offices - Innovation in national statistical offices organization and working arrangements" for discussion.



I. Quick response to support decision making amid the coronavirus crisis

1. When the Covid-19 pandemic hit Europe in February 2020, an acute and strong need for analyses on effects of the virus on the economy and society arose. In March 2020, Statistics Finland established an internal working group with the aim to guarantee the continuation of statistics production and provide users with relevant information for decision making during the exceptional circumstances. Around the same time, Statistics Finland was also contacted by Helsinki Graduate School of Economics (HGSE) with an idea of launching the Covid-19 Situation Room. HGSE is an academic initiative bringing together three Finnish universities – Aalto University, Hanken School of Economics, and University of Helsinki.

2. The Situation Room includes leading economists from Helsinki GSE, VATT Institute for Economic Research, as well as members from several public authorities. It utilizes data from relevant public and private sources and produces regular reports for policymakers.

3. Statistics Finland's Research Services unit was considered an appropriate partner for the Situation Room as it already offered unit-level data, i.e. microdata, for scientific studies and statistical surveys. Even if the remote access system for efficient data delivery and user license procedures existed, several issues had to be solved in a short period of time:

- Contracts and other agreements with a new partner
- Permission to access the data before the official release of statistics
- Prioritizing the new service despite the fact that other Researcher Services users were forced to wait for their services to be delivered
- Organization of the new service
- Negotiations with data providers regarding new data needs.

4. In just about two weeks, most of the issues were solved and the new service was opened. Researchers had already at that time a large number of datasets available for the estimation of economic impacts of Covid-19, and more data was constantly added to the service. The first HGSE [report](#) (only in Finnish), on enterprises most hit by the pandemic with up-to-date figures on furloughed or laid-off workers and business subsidies, was published on 15 April 2020.

5. In addition to data sources administrated by Statistics Finland, the Situation Room also gained access to data from the Finnish Institute for Health and Welfare, the Ministry of Economic Affairs and Employment, the Tax authority, the Social Insurance Institution of Finland, Finnish Customs, Bank of Finland and many other public and private sector organizations.

6. Statistics Finland allocated resources for this new service. User license applications and data processing related to the Situation Room partnership were prioritized. Many new data sets administrated by Statistics Finland were also opened to researchers along with the implementation of the new service. For example, the recently launched Incomes Register was provided to the situation room researchers by decision of Statistics Finland's director general, even if the register was not yet utilized in official statistics production.

7. With this partnership with academia, Statistics Finland has enabled extensive and fast production of information for policymaking during the Covid-19 crisis. In the future, experiences on this co-operation will help Statistics Finland to speed up its own production of statistics and to improve services provided for researchers. Additionally, some of the new data sources will hopefully also be used in regular statistics production, which improves the relevance and quality of regular statistics.

II. Situation Room reports provide insights into economy and society

8. Analyses by the Situation Room have provided quick and innovative support for decision-making during the Covid-pandemic. Access to up-to-date data has enabled insights into, for example, economic developments, employment, and regional differences on short notice. The Situation Room has provided standardized reports as well as ad-hoc analyses based on current developments and needs during the pandemic, and results have primarily been communicated as reports¹, in live webcasts and by access to the Covid-19 Data & Graph Vault².

9. The main publication, named *Situation Room report – latest developments in the labour market, households and firms*, is published every two weeks and follows economic developments from the perspective of labour markets, households and firms. The report includes data on labour earnings, furloughs, housing allowances and unemployment benefits, to name a few, and is based on data provided by various public authorities. The publication focuses on recent developments but also provides information for the past two years as a reference. For example, the most recent report (published 15 April 2021) shows that total labour earnings were higher in February and March 2021 compared to the respective months in both 2019 and 2020.³

10. Effects of the Covid-19 pandemic on firms and individuals have varied significantly between different areas of Finland, increasing the need for detailed information. In addition to aggregate developments, the Situation Room provides insights according to, for example, municipality and industry breakdowns and individuals' properties such as age, gender, and profession. For example, the latest report shows that labor earnings for young employees (age under 25 and 25-29 years) were lower in March 2021 compared to March 2019, while labour earnings for almost all other age groups were higher in 2021 than in 2019.³ Results on labor earnings are based on data from the Incomes Register, a practically real-time source of individual-level income information, which has proven valuable in estimating effects of the pandemic on different groups of citizens.

11. As an extension to the biweekly report, the Situation Room put together a separate report for the Uusimaa region in April 2021. The region, including the capital city Helsinki, has seen the most extensive effects of the Covid-pandemic, leading to, for example, long term restrictions on businesses. The report provides more in-depth analyses on municipalities in the capital region, focusing on the same topics as the biweekly country report, and is simultaneously a pilot for the more extensive use of detailed regional data during the pandemic and in the future.⁴

12. The Situation Room has also provided ad-hoc analyses on current topics during the pandemic. In April 2020, when the effects of the pandemic were still highly uncertain and many firms used furlough schemes to ease labour costs, the Situation Room published a report and hosted a webinar on the topic of furloughs and unemployment among different groups of employees.⁵ The Situation Room continued reporting on new unemployment spells throughout 2020, including a report stating that the number of persons seeking unemployment benefits increased by more than 100 000 during the first six months of 2020 compared to the same period in 2019.⁶ The Situation Room further reported on unemployment effects among entrepreneurs and employees, stating at the end of April 2020 that unemployment had increased significantly more among entrepreneurs than among employees. Reports on furloughs and unemployment are primarily based on data provided

¹ [Helsinki GSE News](#)

² [Covid-19 Data & Graph Vault](#)

³ [Tilannehuoneen raportti 15.4.2021 – viimeisimmät kehityskulut työmarkkinoilla, kotitalouksissa ja yrityksissä](#)

⁴ [Uudenmaan kunnat saamassa tarkat tiedot koronan vaikutuksista niiden talouteen \(1.3.2021\)](#)

⁵ [Koronakriisin aiheuttamat lomautukset ja irtisanomiset ovat osuneet eri lailla eri työntekijäryhmiin \(23.4.2020\)](#)

⁶ [Kela työttömyysetuutta on hakenut yli 100 00 ihmistä enemmän kuin viime vuonna \(27.5.2020\)](#)

by the local Centres for Economic Development, Transport and the Environment (ELY-keskus).

13. The Situation Room has also conducted analyses outside the scope of economic and unemployment developments. In January 2021, inspired by increasing public discussion and the ongoing planning of vaccination schedules, a report on the spread of the Covid-virus in different socioeconomic groups was published. According to the report, spread of the virus was most significant among high income individuals during the first wave of the pandemic (March-June 2020) and most significant among low income individuals during the second wave (July-November 2020). Fairly unsurprisingly, individuals working in healthcare were reported to run the highest risk of being infected with the virus, while construction workers were also found to be overrepresented among the infected.⁷

14. The Situation Room has strived to evaluate some of the containment measures taken by the Finnish government and thereby provide input on how measures can be reused and improved during later stages of the pandemic. In March 2021, the Situation Room released preliminary results regarding the effects of remote education in primary and second-degree schools on the spread of the virus – containment measures taken two times and considered a third time during the time of pandemic. The report states that infection numbers declined significantly in municipalities where remote education was put in place for 16-18-year-old students, both among the students and their family members. The decline in infection numbers could not be directly tied to remote education, as other restrictions were enforced simultaneously, and the evaluation will continue to better find relations between containment measures and effects on the pandemic.⁸

III. Lessons learned so far

15. When Statistics Finland was contacted about the need for a novel Covid-19 Situation Room, there was a flood of extra work to be done. Research Services, which would offer the operational platform for the Situation Room, was already overburdened with research data requests. However, Statistics Finland acknowledged the value of the proposed Situation Room for handling the pandemic as well as for testing new ways of providing data linking services.

16. The Situation Room had sufficient funding for their desired operation. Initially, Statistics Finland used a substantial amount of resources in order to build the required processes and license procedures. These initial costs were covered by Statistics Finland but later, as the need for process development diminished, Research Services started to charge the Situation Room for its work. This was communicated to the Situation Room in a transparent manner which was key in all other communications as well.

17. Two staff members of Research Services were named for the daily data linking and management work and one additional member took lead on administrative matters such as license processing and communications. These three people formed the operational core of the Situation Room on Statistics Finland's side, but a lot of work was and is still conducted by different statistics units, heads of departments, directors etc. Furthermore, in delivering new kinds of real-time data to the Situation Room internal and external cooperation and expertise on the data contents was essential. Particularly the knowledge on the new Incomes Register accrued by statistical experts proved to be very valuable.

18. Because there were so many people involved directly and indirectly, it was sometimes difficult to communicate the current situation and forthcoming needs in a timely and precise manner. Especially since the Situation Room required decisions where data could be delivered for the researchers before the release of official statistics. Statistics Finland had also launched an internal working group for coordinating communications and tasks related to the pandemic. This working group was helpful also in facilitating communications regarding the Situation Room.

⁷ [Koronavirukseen sairastuu sairaanhoitajien sijaan nyt rakennusalan työntekijät \(1.4.2021\)](#)

⁸ [Etäopetuksen vaikutus koronatartuntoihin – Alustavia tuloksia \(12.3.2021\)](#)

19. A substantial amount of data came from outside of Statistics Finland and the Situation Room handled negotiations with data owners directly. Researchers applied for licenses for external data from the data owners and involved Statistics Finland when data transfer and linking procedures were required. This was a novel situation for many external data providers. They needed to establish routines for compiling data and transferring it over to Statistics Finland. The structure of each dataset needed to be as static as possible so that continuous deliveries could be done without making changes in the data linking and pseudonymization processes.

20. Some novel features were introduced in the remote access system out of necessity of the Situation Room. For example, some researchers preferred to use R as their analysis tool and this requires deploying external packages, which are normally downloaded from the Internet. Due to data security measures, the remote access system is a closed environment, and downloading packages is not possible. The administrators of the system introduced the R CRAN library inside the environment, which made it possible for the researchers to use most of R packages without waiting for the administrators to install them at request. The R CRAN library is now available for all projects in the remote access system. The Situation Room also needed a faster way of writing and reading their temporary work files in the system, and an SSD solution proved to serve this need. The option for an SSD will be introduced for other projects in the remote access system as well.

21. Normally when researchers want to export results from the remote access system the results go through a manual output checking process by the Research Services staff so that it can be ensured that no microdata leaves the environment. Because of the rapid nature of the Situation Room activities, Statistics Finland made an exception and enabled researchers to export results by themselves. Named members from Research Services checked a sample of the exported results afterwards on a weekly basis. This exception was based on trust that researchers in the Situation Room knew their responsibilities when exporting results. The responsibility of the researchers was stressed in meetings. In the early phases, there were some human errors with the aggregation levels of the exported results, but communication about these cases was open and the issues subsided.

IV. Seed for the new role of NSI: from Situation Room to Data Room?

22. The Covid-19 Situation Room has demonstrated that there is significant potential in improving fact-based decision making in society by utilizing data reserves more extensively and efficiently. The high-quality data registers that Finland has enables this, but additional resources are needed to develop processes that enable researchers and analysts access to timely data.

23. Helsinki GSE, in association with VATT Institute for Economic Research, made a budget proposal to the Finnish government in April 2021 for establishing a new Data Room, which would provide timely data for decision making in the future. The Covid-19 situation Room is considered a prototype for this type of a service for the government, parliament, ministries, and municipalities. The governance of this new service is planned to be in close connection to the State Treasury and the Ministry of Finance.

24. The aim of the Data Room is to help decision making by:

- Providing flexible data production for researchers and analysts
- Data mining and interpretation of data services to stakeholders
- Promoting data-based decision making in society.

25. In this new Data Room, the role of Statistics Finland would be to gather and process data considering confidentiality issues. In addition to this, Statistics Finland would maintain the technical infrastructure of the service and administrate license procedures. The Data Room would buy this service from Statistics Finland with a fixed-term contract.

26. Experiences from the Covid-19 Situation Room have been positive and the need for this type of a service clearly exists also after the Covid-19 crisis. Statistics Finland's strategy for the future also includes actions to strengthen data production for decision making, with tasks going beyond regular statistics production.

27. In addition to additional resources, a new role in data production would require modifications to existing legislation. For example, access to some register data, which is not used for statistical purposes, is not possible with the current legislation.

28. Statistics Finland also needs to consider whether current legal base is adequate for these new data needs and demand for fast data. There is a need to deliver "raw data" faster to researchers to do fast analysis. Is there a way to resolve this need and make sure that results are delivered at the same time or after than official statistics are published? Or should it be accepted that research might be able to deliver faster results than official statistics?

29. Essential aspects for Statistics Finland are also that the agency is not willing to expand its operations to research activities or participate in the preparation of policy recommendations. Statistics Finland also considers important that the research community is treated equally, and that data sets processed for the Data Room should be available to all researchers with an appropriate study plan.

30. The Data Room initiative has clear synergies with the production of statistics but delivering data quickly from data providers to researchers would require a lot of process development. The organization of a longer-term activity also requires more in-depth consideration than Covid-19 Situation Room, which was created in a tremendous hurry.
