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6. Economic Analyses

6.1 Introduction

The ongoing Covid-19 pandemic represents one of the most severe shocks that have hit the global economy and has caused a significant disruption to economic activity worldwide. The nature of this unprecedented shock and its ongoing impact have led governments to impose measures aiming at restricting the movement of individuals and in effect shutdown sectors of economic activity that are relying on social interaction and are thus considered as higher risk in terms of transmitting the virus. This “Great Lockdown” has had a major impact on economic activity worldwide³⁷.

The following sections examine various economic parameters, available from the European Commission Eurostat database.

6.2 Gross Value Added

In order to examine the impact on the macroeconomy, Figure 13 depicts the year-on-year growth rate of gross value added. We observe that some interesting patterns arise across countries. Firstly, the initial impact of the pandemic, as captured by the developments in the first quarter of 2020, is relatively benign. In particular, with the exception of Finland, whose value added declined with respect to the first quarter of 2019, the rest of the countries saw an increase in value added with Ireland recording a growth rate of 10%.

The bulk of the negative effect is concentrated in the second quarter of the year, with the average decline being equal to almost 6 percentage points compared to the second quarter of 2019 and the largest decline being recorded in Sweden (7.8 percentage points).

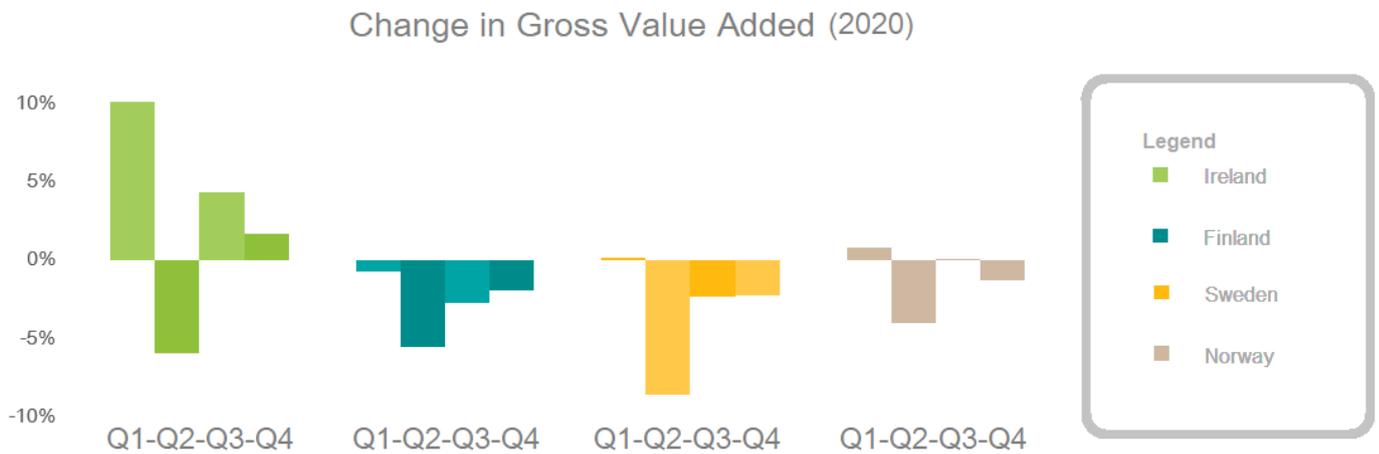
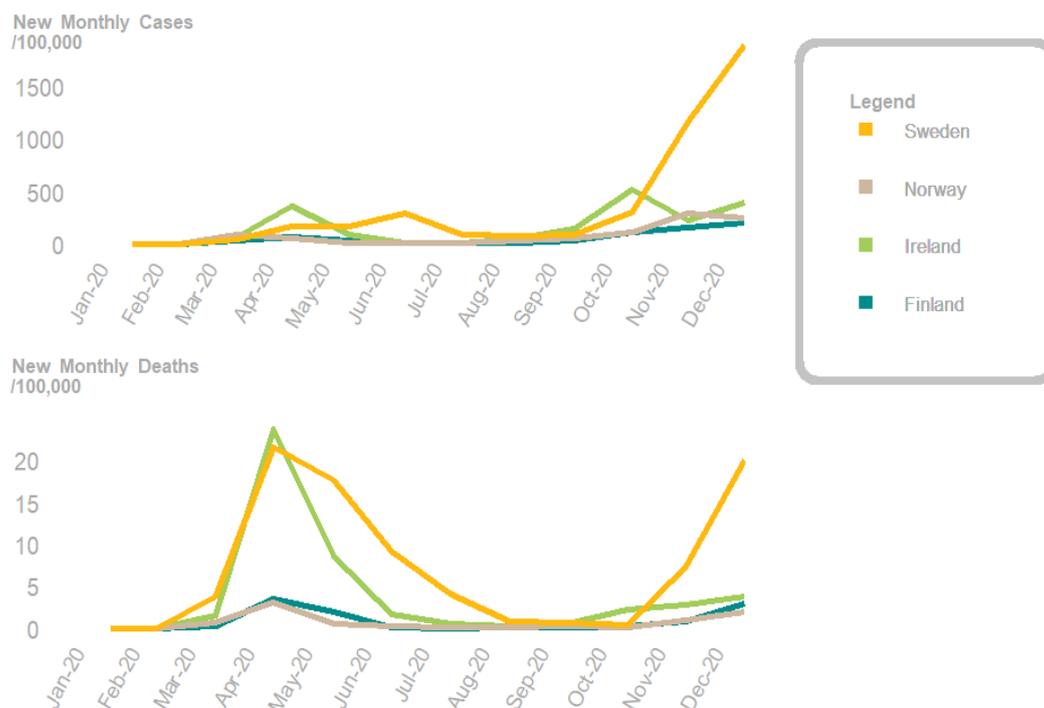


Figure 1- Change in Gross Value Added year-on-year by Quarter for Ireland, Finland, Sweden and Norway

During the second half of 2020, when the restrictive measures were gradually eased, we observe that the only country recording a significant rebound is Ireland, exhibiting positive growth rates both in Q3 and Q4 2020; the rest of the countries in the sample performed better compared to the second quarter but still remained in a negative territory compared to 2019.

6.3 Retail Trade Volume and Turnover Index

Turning to the impact of the pandemic on short-run indicators of economic activity and on the expectations of the private sector, we examine how the increase in the number of infections and COVID-related deaths affected retail trade, as depicted in Figure 14.



The Retail Trade indicator is a business indicator which measures the monthly changes of the turnover of retail trade. As is evident, Ireland experienced the largest drop after the outbreak of the pandemic which lasted until April 2020, a period which saw a large spike both in the number of infections and the number of deaths. Then, a V-shaped recovery period followed that could potentially be explained by the fact that consumers resumed to spending in order to satisfy the demand of previous months, as the severity of the pandemic subsided and they felt safer.

Finland and Sweden experienced a much milder decline in the first two months of the pandemic, and by May 2020 their retail sales index had surpassed its pre-pandemic level; Norway is a clear outlier in this sample, with the sales indicator exhibiting a robust upward trend that was reversed in July 2020. When the number of cases and deaths started increasing in October and November 2020, the retail index started declining again, with the decline being larger for the Nordic countries of the sample.

6.4 Economic Sentiment Index

The second short run indicator we consider is the Economic Sentiment Index, a composite indicator that captures the evolution of the expectations of the private sector regarding the future path of the economy. The index is calculated as a weighted average of the balances of replies to selected questions addressed to firms in five sectors covered by the EU Business and Consumer Surveys and to consumers (industry (weight 40%), services (30%), consumers (20%), retail (5%) and construction (5%).

As can be seen in Figure 15, in the first two months of the ongoing pandemic, economic sentiment collapsed. However, despite an initial recovery in all countries, economic sentiment started declining again in Finland by July 2020.

Ireland did not face a decline until October 2020, and again in December 2020 when the number of infections and COVID-related deaths started increasing, negatively affecting expectations. In Sweden, in the post-April 2020 period, economic sentiment followed an uninterrupted upward path.

The effect of the pandemic on expectations is evident in the oscillating patterns of the consumer confidence index, one of the subcomponents of the Economic Sentiment index, with Irish consumers being most pessimistic.

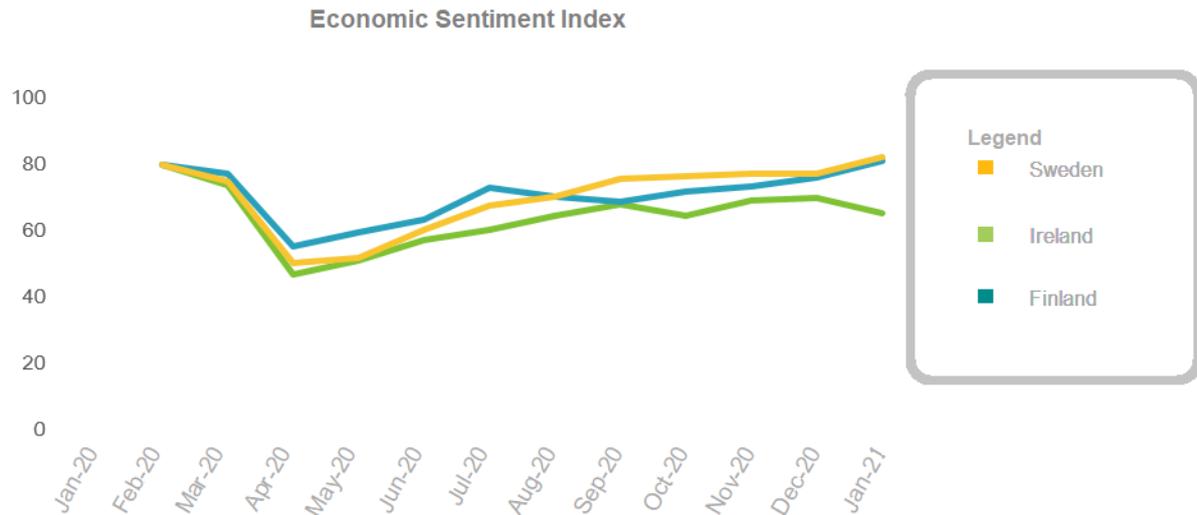


Figure 3- Economic Sentiment Index

6.5 Discussion

The widespread implementation of policies restricting movements and closing non-essential businesses in order to contain the spread of the virus has initiated a debate related to the effects of such measures on economic activity and whether they are the main cause of the observed decline.

At first sight, there seems to be a strong correlation between the two, especially in light of the evidence presented above, which indicate that the easing of the restrictive policies coincides with a surge in economic activity (both in terms of the value added produced and the increases in consumption expenditure).

However, this assessment neglects the effects that the pandemic has on the behaviour of individuals. Recently published research [e.g. Goolsbee and Syverson (2021)³⁸] utilizes mobile phone usage data and highlights the fact that the decline of economic activity is largely explained by the choice of the consumers to reduce their visits to stores for shopping due to their fear of being infected. In particular, this research provides evidence that in areas where the number of COVID-related deaths is high, consumers voluntarily reduce in-store visits, even more so in the case of large stores and establishments which do not provide an online shopping alternative. This finding is crucial in terms of policy design, as it implies that it is the impact on consumers' behaviour rather than the policy measures implemented that actually impact on economic activity.

6.6 Conclusion

Overall, the descriptive evidence presented suggest that the negative effects on economic activity are largely concentrated in the second quarter of 2020, with the magnitude of the impact varying across countries, indicating that the structure of each country's economy plays a crucial role in determining the effects of the pandemic.

Moreover, the evidence suggests that increases in the rate of infections and mortality rates due to the pandemic have a bearing on the private sector's response, affecting both consumer behaviour and expectations, potentially contributing to the observed economic outcomes.

References

1. Jones N R, Qureshi Z U, Temple R J, Larwood J P J, Greenhalgh T, Bourouiba L et al. Two metres or one: what is the evidence for physical distancing in covid-19? *BMJ* 2020; 370 :m3223 doi:10.1136/bmj.m3223
2. The Atlantic. America Is Trapped in a Pandemic Spiral. 09/09/2020. Available at: <https://www.theatlantic.com/health/archive/2020/09/pandemic-intuition-nightmare-spiral-winter/616204/> (accessed 20/03/21)
3. Cao C, Chen W, Zheng S, Zhao J, Wang J, Cao W. *Biomed Res Int.* Aug 2016. Analysis of spatiotemporal characteristics of Pandemic SARS spread in mainland China. 2016;2016:7247983. doi: 10.1155/2016/7247983. Epub 2016 Aug 15. PMID: 27597972; PMCID: PMC5002496. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5002496/>
4. World Health Organisation (WHO) Regional Office for Europe Website. Jan 2021. The WHO European Healthy Cities Network: a response to the COVID-19 pandemic close to the people <https://www.euro.who.int/en/health-topics/environment-and-health/urban-health/who-european-healthy-cities-network/the-who-european-healthy-cities-network-a-response-to-the-covid-19-pandemic-close-to-the-people>
5. Levin AT, Hanage WP, Owusu-Boaitey N. et al. Assessing the age specificity of infection fatality rates for COVID-19: systematic review, meta-analysis, and public policy implications. *Eur J Epidemiol* 35, 1123–1138 (2020). <https://link.springer.com/article/10.1007/s10654-020-00698-1>
6. Public Health England (PHE) Report. July 2020. Excess Weight and COVID-19: Insights from new evidence. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907966/PHE_insight_Excess_weight_and_COVID-19_FINAL.pdf
7. Popkin BM, Du S, Green WD, et al. *Obesity Reviews.* Aug 2020. Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships. <https://doi.org/10.1111/obr.13128>
8. Deeks JJ, Dinnes J, Takwoingi Y, Davenport C, Spijker R, Taylor-Phillips S, Adriano A, Beese S, Dretzke J, Ferrante di Ruffano L, Harris IM, Price MJ, Ditttrich S, Emperador D, Hooft L, Leeftang MM, Van den Bruel A. *Cochrane Database Syst Rev.* Jun 2020. Cochrane COVID-19 Diagnostic Test Accuracy Group. Antibody tests for identification

- of current and past infection with SARS-CoV-2. 25;6(6):CD013652. doi: 10.1002/14651858.CD013652.
9. Department of Health (DOH) Ireland. Mar 2020.
Press release- Statement from the National Public Health Emergency Team - Wednesday 11 March
Available at: <https://www.gov.ie/en/press-release/451b35-statement-from-the-national-public-health-emergency-team-wednesday-1/>
 10. US Centre for Disease Control Website. New Variants of the Virus that Causes COVID-19 (updated 12-02-21). Available at <https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant.html> (accessed 19/03/2021).
 11. Tang JW, Tambyah PA, Hui DSC. Journal of Infection. December 28, 2020
Emergence of a new SARS-CoV-2 variant in the UK
[https://www.journalofinfection.com/article/S0163-4453\(20\)30786-6/fulltext#articleInformation](https://www.journalofinfection.com/article/S0163-4453(20)30786-6/fulltext#articleInformation)
 12. World Health Organisation (WHO). Apr 2020.
International Guidelines for Certification and Classification (CODING) of COVID-19 as Cause of Death. Available at -
https://www.who.int/classifications/icd/Guidelines_Cause_of_Death_COVID-19.pdf?ua=1 (accessed 20/03/2021)
 13. Raleigh V. British Medical Journal (BMJ). June 2020.
Editorial. Tackling UK's mortality problem: Covid-19 and other causes.
<https://www.bmj.com/content/369/bmj.m2295.full>
 14. World Health Organisation (WHO). Apr 2020. COVID-19-virtual press conference -30 March 2020. Available at: https://www.who.int/docs/default-source/coronaviruse/transcripts/who-audio-emergencies-coronavirus-press-conference-full-30mar2020.pdf?sfvrsn=6b68bc4a_2 (accessed 20/03/2021)
 15. Oran DP, Topol EJ. Prevalence of Asymptomatic SARS-CoV-2 Infection: A Narrative Review. Ann Intern Med. 2020;173:362-367. [Epub ahead of print 3 June 2020]. doi:10.7326/M20-3012
 16. Ioannidis JPA. Infection fatality rate of COVID-19. Bulletin of the World Health Organization. Oct 2020. Available at:
https://www.who.int/bulletin/online_first/BLT.20.265892.pdf (accessed 20/03/2021)
 17. Eurostat. Excess Mortality Statistics. Available at:
https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Excess_mortality_statistics#Excess_mortality_in_the_European_Union_between_January_2020_and_January_2021 (accessed 20/03/2021).
 18. Central Statistics Office (CSO), Ireland. Measuring Mortality Using Public Data Sources 2019-2020. 2nd November 2020. Available at:

- <https://www.cso.ie/en/releasesandpublications/fb/b-mpds/measuringmortalityusingpublicdatasources2019-2020/> (accessed 20/03/2021)
19. Scottish Government. Statistics.gov.scot website. Available at: <https://statistics.gov.scot/data/deaths-involving-coronavirus-covid-19> (accessed 20/03/2021)
 20. National Records of Scotland. Deaths involving coronavirus (COVID-19) in Scotland. Available at: <https://www.nrscotland.gov.uk/files/statistics/covid19/covid-deaths-data-week-53.xlsx> (accessed 12/03/2021)
 21. Northern Ireland Statistics and Research Agency (NISRA). Excess Mortality & Covid-19 Related Deaths. Mar 4 Update. Available at: <https://www.nisra.gov.uk/publications/excess-mortality-covid-19-related-deaths> (accessed 20/03/2021)
 22. UK Government. GOV.UK official website. Coronavirus (COVID-19) in the UK – Scotland figures. Available at: <https://coronavirus.data.gov.uk/details/deaths?areaType=nation&areaName=Scotland> (accessed 20/03/2021)
 23. Northern Ireland Statistics and Research Agency (NISRA). Statistical bulletin- Excess Mortality and Covid-19 Related Deaths in Northern Ireland March to December 2020. Available at: <https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/Excess%20mortality%20%26%20Covid-19%20related%20deaths%20in%20Northern%20Ireland-Mar-Dec%202020.pdf> (accessed 20/03/2021)
 24. UK Government. GOV.UK official website. Coronavirus (COVID-19) in the UK – Northern Ireland figures. Available at: <https://coronavirus.data.gov.uk/details/deaths?areaType=nation&areaName=Northern%20Ireland> (accessed 20/03/2021)
 25. Kontis V, Bennett JE, Rashid T et al. Nature Med 26, 1919–1928. Oct 2020. Magnitude, demographics and dynamics of the effect of the first wave of the COVID-19 pandemic on all-cause mortality in 21 industrialized countries. <https://www.nature.com/articles/s41591-020-1112-0>
 26. EuroMOMO project: European mortality monitoring. EuroMOMO Bulletin, Week 1, 2021 Available at- <https://www.euromomo.eu/> (accessed 20/03/2021)
 27. World Health Organisation (WHO). Mink-strain of COVID-19 virus in Denmark. Nov 2020. Available at- <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/11/mink-strain-of-covid-19-virus-in-denmark> (accessed 02/02/2021)
 28. Government of Ireland, GOV.IE website. Mandatory Hotel Quarantine. Updated 11/03/2021. Available at: <https://www.gov.ie/en/publication/a6975-mandatory-hotel-quarantine/> (accessed 20/03/2021).

29. Department of Foreign Affairs (DFA), Ireland. Guidance on Travel to Korea, Republic of (South Korea). Updated 8th Jan 2021. <https://www.dfa.ie/travel/travel-advice/a-z-list-of-countries/republic-of-korea/> (accessed 20/03/2021)
30. Australian Government- Department of Home Affairs Website. COVID-19 and the border- Travel restrictions and exemptions. Updated 19/03/2021. Available at <https://covid19.homeaffairs.gov.au/travel-restrictions> (accessed 20/03/2021)
31. Ministry of Health, New Zealand. COVID-19: Border controls. Updated 15/03/2021. Available at: <https://www.health.govt.nz/our-work/diseases-and-conditions/covid-19-novel-coronavirus/covid-19-response-planning/covid-19-border-controls> (accessed 20/03/2021)
32. Burton JK et al. Evolution and effects of COVID-19 outbreaks in care homes: a population analysis in 189 care homes in one geographical region of the UK. October 2020. The Lancet Healthy Longevity, Volume 1, Issue 1, e21 - e31.
33. Public Health Scotland. Vaccination Update Dashboard. Available at: https://public.tableau.com/profile/phs.covid.19#!/vizhome/COVID-19DailyDashboard_15960160643010/Overview (accessed 20/03/2021)
34. International Monetary Fund (IMF). Reopening from the Great Lockdown: Uneven and Uncertain Recovery. June 2020. Available at: <https://blogs.imf.org/2020/06/24/reopening-from-the-great-lockdown-uneven-and-uncertain-recovery/> (accessed 20/03/2021)
35. Goolsbee A, Syverson C. Fear, lockdown, and diversion: Comparing drivers of pandemic economic decline 2020. Journal of Public Economics, Volume 193. November 2020. DOI: <https://doi.org/10.1016/j.jpubeco.2020.104311>.
36. Hart JT. The Inverse Care Law. Lancet, 1971(1): p. 405-412.
37. Pavelka M, Van-Zandvoort K, Abbott S, Sherratt K, Majdan M. The impact of population-wide rapid antigen testing on SARS-CoV-2 prevalence in Slovakia. Science. 23 Mar 2021. DOI: 10.1126/science.abf9648
38. Colizza, V., Grill, E., Mikolajczyk, R. et al. Time to evaluate COVID-19 contact-tracing apps. Nat Med 27, 361–362 (2021). <https://doi.org/10.1038/s41591-021-01236-6>
39. Fonseca L, McMaster I. Coronavirus and the NPA: EPRC Briefing paper. 2020, European Policies Research Centre.