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Containment Measures and Job Loss: Evidence from SHARE Corona Surveys

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Μέτρα περιορισμού και απώλεια εργασίας

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ΠΕΡΙΛΗΨΗ

Από την έναρξη της πανδημίας Covid-19, οι κυβερνήσεις έχουν θέσει σε εφαρμογή διάφορα μέτρα περιορισμού για τον μετριασμό και τον έλεγχο της εξάπλωσης του ιού. Τα μέτρα προστασίας και περιορισμού, όπως το κλείσιμο σχολείων και χώρων εργασίας, οι ταξιδιωτικές απαγορεύσεις, η κοινωνική απόσταση και οι περιορισμοί μετακίνησης είχαν ως κύριο στόχο να αναχαιτίσουν την πανδημία. Τα μέτρα περιορισμού οδήγησαν σε σοβαρές κοινωνικο-οικονομικές επιπτώσεις. Η πανδημία Covid-19 οδήγησε πολλούς εργαζόμενους εκτός αγοράς εργασίας.

Ποιος είναι ο αντίκτυπος των μέτρων περιορισμού του Covid-19 στην απώλεια απασχόλησης; Πρόσφατες έρευνες υπογραμμίζουν ότι οι αυστηρότερες κυβερνητικές πολιτικές συνδέονται με υψηλότερα ποσοστά απώλειας θέσεων εργασίας στο πρώτο κύμα της πανδημίας.

Ωστόσο, με τη διαθεσιμότητα πιο πρόσφατων δεδομένων για τον κορονωοϊό, είναι σημαντικό να διερευνηθεί πώς τα μέτρα περιορισμού επηρεάζουν και διαμορφώνουν την αγορά εργασίας. Καθώς η πανδημία συνεχίζει να εξελίσσεται παγκοσμίως, οποιαδήποτε πιθανή διαφορά μεταξύ του βραχυπρόθεσμου και μεσοπρόθεσμου αντίκτυπου στην αγορά εργασίας, θα μπορούσε να βελτιώσει την κατανόηση της κατάστασης και να οδηγήσει σε πιο αποτελεσματική λήψη αποφάσεων.

Σε αυτή την έρευνα, εξετάζουμε την επίδραση των μέτρων που επέβαλαν 27 Ευρωπαϊκές χώρες και το Ισραήλ για την καταπολέμηση της πανδημίας Covid-19 στην αγορά εργασίας και κατά συνέπεια στην απώλεια θέσεων εργασίας. Χρησιμοποιώντας δύο κύματα της έρευνας SHARE (SHARE Corona Surveys) διαπιστώνουμε ότι οι αυστηρότερες κυβερνητικές πολιτικές συνδέονται με μεγαλύτερη πιθανότητα απώλειας εργασίας. Ωστόσο, αυτό το εύρημα έχει μόνο προσωρινή επίδραση, καθώς είναι εμφανές μόνο στο πρώτο κύμα δεδομένων SHARE. Το γεγονός αυτό υποδηλώνει ότι η αγορά εργασίας προσαρμόστηκε μετά το πρώτο κύμα της πανδημίας. Αυτό μπορεί να οφείλεται στη κρατική οικονομική στήριξη προς τις επιχειρήσεις, στον εμβολιασμό κατά της νόσου και σε διάφορες εργασιακές ρυθμίσεις, όπως η εργασία από το σπίτι.

Επίσης βρίσκουμε σημαντική ανομοιογένεια μεταξύ των χωρών που υποδηλώνει ότι διαφορετικές χώρες επέβαλαν διαφορετικές πολιτικές για την καταπολέμηση της

πανδημίας και αυτό έχει συνέπειες για το ποιος είναι πιο πιθανό να επηρεαστεί στην αγορά εργασίας. Άτομα που αντιμετωπίζουν γενικά μειονεκτήματα στην αγορά εργασίας, όπως οι ηλικιωμένοι, τα άτομα με χαμηλό μορφωτικό επίπεδο και τα άτομα με προβλήματα υγείας είναι πιο πιθανό να χάσουν τη δουλειά τους κατά τη διάρκεια της πανδημίας. Αυτό είναι ιδιαίτερα σημαντικό καθώς η απώλεια απασχόλησης για αυτές τις ομάδες μπορεί να συνεχιστεί μεσοπρόθεσμα ή μακροπρόθεσμα και να επηρεάσει τις μελλοντικές τους πιθανότητες απασχόλησης.

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Containment Measures and Job Loss: Evidence from SHARE Corona Surveys

Nikolaos Theodoropoulos[1] and Georgios Voucharas

Abstract

The Covid-19 pandemic has driven many people out of their jobs. This paper looks at the effect of stringency measures on job loss across 27 European countries and Israel by utilizing two SHARE Corona survey datasets. We account for relevant sociodemographic individual and household characteristics such as gender, age, education, health, partner in household and household income. Simple graphical analysis suggests that stricter government policies create higher job losses. Preliminary findings suggest that low-educated, older and individuals with health problems are more likely to lose their jobs. The effect of containment measures and policies on job loss is short lived. It is evident only at the beginning of the pandemic and eliminated afterwards. This finding has important policy implications for distinguishing short-term from medium-term effects of government policies on labour market outcomes.

Keywords: Covid-19, Job loss, Stringency index, Labour market outcomes.

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1. Introduction

Since the outbreak of the Covid-19 pandemic, governments have put into place various containment measures to mitigate and control the spread of the virus. Lockdown and quarantine measures, such as school and workplace closures, travel bans, social distancing and movement restrictions have had one main objective: "flattening the curve". Even so, societies have not escaped from severe socio-economic implications. The coronavirus has affected the labour market and consequently has driven many individuals out of their jobs.

What is the impact of Covid-19 containment measures on employment loss? Existing literature suggests that stricter government policies are associated with higher rates of job loss. For instance, Ang and Dong (2021) show that government containment interventions led to higher unemployment rates in a sample of 59 countries. Similarly, Jiskrova et al. (2021) using the first wave of the SHARE Corona data find evidence of a positive relationship between job loss and stringent government policies.

The literature so far focuses on the first wave of the pandemic capturing the short-term labour market shocks. Yet, with the availability of more recent Covid data, it is crucial to explore how containment responses shape the labour market. As the pandemic continues to evolve globally, any potential difference between the short-term and medium-term impact on the labour market, could improve our understanding of the situation and lead to more efficient decision making. This paper addresses this gap.

2. Data

We utilize two SHARE Corona survey datasets and focus on 27 EU states and Israel.[2] Part of the analysis is based on preliminary SHARE wave 9 Covid-19 Survey release 0. Thus, the analysis, results and conclusions are preliminary. We restrict the analysis to individuals actively engaged in the labour market who are equal or younger than 65 years old. Our sample comprises of all adults that declared "employed or self-employed when COVID-19 broke out" in the first Corona survey.

The dependent variable Jobloss, is equal to 1 if the respondent answered that is unemployed, laid off, or his/her business was closed due to the pandemic, zero otherwise. Our main control variable is the containment measures as captured by the well-established measure in the literature of the Stringency Index, obtained by the Oxford Coronavirus Government Response Tracker (OxCGRT) project. Higher

[2] See Börsch-Supan (2020) and Börsch-Supan (2021).

values of the index correspond to stricter policies. The index is calculated daily by aggregating governments' responses on school and workplace closures, cancellation and restrictions on public events and gatherings, stay-at-home requirements, closures of public transport, travel and movement restrictions and public information campaigns. We follow Bassoli et al. (2021) and construct a country-specific cumulative measure of the stringency index. Thus, for every single country in our sample, we sum up all daily index values from 1st of January 2020 until each interview date. Then, we divide this value by the total number of days elapsed between the start of the pandemic and the corresponding interview date.

Other controls variables include the age of the individuals in two age groups dummies (56-60, 61-65, omitted category: 49-55), a Female dummy, a Partner dummy (irrespective of marital status), two dummy variables capturing educational level (secondary, tertiary education, omitted category: primary education), four dummies capturing the subjective assessment of the individual's health condition (from excellent to poor condition, omitted category: excellent), a dummy for low household income (low income equals 1 if the respondent's household income is below his/her country-specific median household income, 0 otherwise). The variables are drawn from the SHARE Corona surveys as well as from the SHARE waves 7 and 8.[3]

We report descriptive statistics of the variables of interest in Table 1. Fifteen percent of the respondents have lost their jobs. The country with the highest job loss is Spain (26.6%) and the country with the lowest job loss is Netherlands (2.1%). The mean value of the stringency index is 53.92. The country with highest stringency index is Italy (64.92) and the country with the lowest stringency index is Estonia (38.06). These differences suggest that there is a lot of variation in both labour market outcomes as well as in the containment measures to restrict Covid-19 across countries. Respondents are equally split by gender. Most of the respondents in our sample are in the age group 55 to 60, seventy-six percent live with a partner, forty-six percent are low-income households, twelve percent have tertiary education and seventy percent report a very good or good health.

[3] For waves 7 and 8 see Börsch-Supan et al. (2013), Bergmann et al. (2019), Börsch-Supan (2020), Bergmann and Börsch-Supan (2021) and Börsch-Supan (2021).

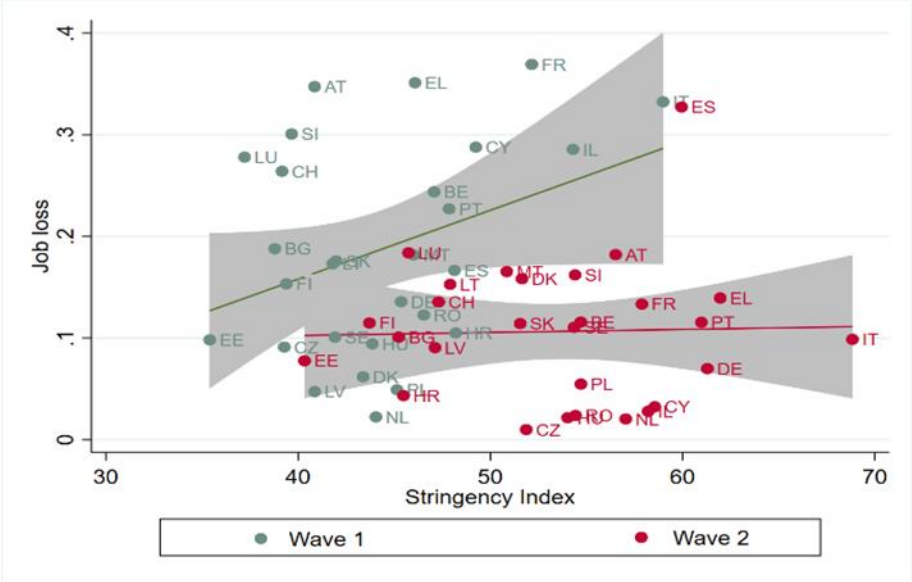
TABLE 1
Descriptive statistics

Variable	Mean	SD	Min	Max
Job loss	0.15	0.36	0	1
Stringency Index	53.92	8.07	35.37	69.07
Female	0.49	0.50	0	1
Age 55-60	0.68	0.47	0	1
Age 60-65	0.21	0.40	0	1
Partner	0.76	0.42	0	1
Low income	0.46	0.50	0	1
Secondary	0.19	0.40	0	1
Tertiary	0.12	0.33	0	1
Health (very good)	0.18	0.38	0	1
Health (good)	0.52	0.50	0	1
Health (fair)	0.22	0.41	0	1
Health (poor)	0.04	0.21	0	1

Notes: Means are weighted using individual level weights.
Source: SHARE Wave 7 (rel. 7.1.1), Wave 8 (rel. 1.0.0), Wave 8 Covid-19, Survey 1 (rel. 1.0.0), Wave 9 Covid-19 Survey 2 (rel. 0).

Figure 1 provides a scatter plot of the average rate of job loss on the vertical axis and the average stringency index on the horizontal axis by each SHARE Corona wave. As seen, there is a strong and positive correlation in the first Corona wave suggesting that stricter government policies led to higher job losses. In contrast, in the second Corona wave the relationship between job and the stringency index is almost flat. The grey bands correspond to the confidence interval at the 95% level.

FIGURE 1
Job loss and Stringency index (weighted data)



3. Main Findings

Table 2 reports the average marginal effects obtained from probit models and shows that stricter stringency measures are positively associated with job losses. For instance, in column one a one percentage point increase in the stringency index significantly increases the probability of job loss by 1.21 percentage points. However, the coefficient of the stringency index in Column 3 (pooled waves) diminishes by 51.2% when compared to its coefficient in Column 1 (first wave). This is because the coefficient of the stringency index in column 2 (second wave) is positive but insignificant suggesting only a short-run effect of the stringency index on job loss. The coefficient of the stringency index on job loss persists even when including country fixed effects (column 4) despite potential multicollinearity issues between the stringency index and some of the country dummies. Regarding the rest of the explanatory variables and by focusing on both waves, we find that older people, people with lower education and health difficulties are more likely to lose their jobs. In contrast to the rest of the literature we do not find that females are more likely to lose their jobs.

TABLE 2
Average marginal effects across waves

	(1)	(2)	(3)	(4)
Dep. Var: Job loss	Wave 1	Wave 2	Pooled	Pooled + Country dummies
Stringency Index	0.0121***	0.0008	0.0059***	0.0064*
	(0.0016)	(0.0018)	(0.0014)	(0.0033)
Age55 60	0.0461	0.0432	0.0462	0.0315
	(0.0335)	(0.0417)	(0.0305)	(0.0255)
Age61 65	0.0754**	0.0427	0.0524**	0.0361
	(0.0344)	(0.0365)	(0.0263)	(0.0237)
Female	0.0060	-0.0259	-0.0161	-0.0199
	(0.0185)	(0.0244)	(0.0182)	(0.0168)
Partner	-0.0390*	0.0170	-0.0083	-0.0096
	(0.0227)	(0.0205)	(0.0152)	(0.0145)
Low-income	0.0581***	0.0156	0.0353	0.0286
	(0.0197)	(0.0283)	(0.0217)	(0.0175)
Secondary	-0.0064	-0.0509***	-0.0258*	-0.0054
	(0.0214)	(0.0187)	(0.0144)	(0.0179)
Tertiary	-0.0717**	0.0993	0.0509	0.0387
	(0.0280)	(0.0751)	(0.0664)	(0.0535)
Health Very Good	0.0050	0.1110***	0.0408	0.0466*
	(0.0428)	(0.0405)	(0.0298)	(0.0278)
Health Good	0.0026	0.1014**	0.0360	0.0457*
	(0.0402)	(0.0465)	(0.0310)	(0.0270)
Health Fair	0.0178	0.1269***	0.0543*	0.0776***
	(0.0423)	(0.0419)	(0.0301)	(0.0285)
Health Poor	-0.0477	0.1499***	0.0497	0.0714*
	(0.0578)	(0.0537)	(0.0429)	(0.0414)
Wave 2			-0.1633***	-0.1697***
			(0.0200)	(0.0388)
Country fixed effects	No	No	No	Yes
Observations	8,683	7,778	16,461	16,461

Notes: The estimation method is a probit model. Entries in cells are average marginal effects and those in parentheses are the associated robust standard errors. Estimates are weighted using individual level weights. Omitted country in models (4) and (5) is Austria. Robust Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

4. Conclusions

In this paper, we examine the effect of the stringency measures that many countries imposed to fight the Covid-19 pandemic on job loss. We updated the literature by using two waves of the SHARE Corona surveys. We find that stricter government policies are associated with a higher probability of job loss. However, this finding has only a temporary effect as it is only evident in the first SHARE corona survey. The fact that the effect of containment measures on job loss is short lived suggests that the labour market adjusted after the first wave of the pandemic. This may have happened through government financial support to businesses, through the vaccine and through various working arrangements such as work from home.

We also find significant cross-country heterogeneity suggesting that different countries imposed different policies to fight the pandemic, and this has implications for who is most likely to be affected in the labour market. People who in general face disadvantages in the labour market such as older, lower educated and people with health difficulties are more likely to have lost their jobs during the pandemic. This is problematic as loss of employment for these groups may persist in the medium or long run and affect their future employment probabilities.

In future work we aim to model possible non-linear effects of the stringency index on job loss. We also aim to examine how containment measures have affected the intensive margin of the labour supply (working hours) as well as on how containment measures might have affected different working arrangements such as working from home.

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