

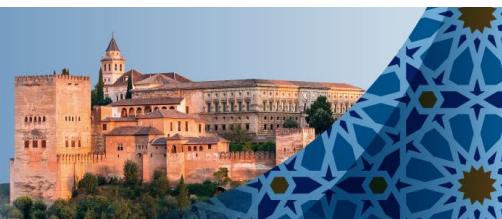
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Challenges, policies and governance of the territories in the post-covid era

Desafíos, políticas y gobernanza de los territorios en la era post-covid

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EXTENDED ABSTRACT

Title:

Estimating the effects of COVID-19 non-pharmaceutical interventions on employment and worked hours: Evidence from Spanish regions

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Abstract:

The objective of this research is to provide new evidence on the impact of COVID-19 effects of COVID-19 non-pharmaceutical interventions on employment and worked hours. With this aim, I use Labour Force Survey data to illustrate how employment and working hours have evolved differently across Spanish regions since the beginning of the pandemics and how regional differences in the adoption and intensity of non-pharmaceutical interventions explain a big part of the impact of the pandemics on the labour market. The analysis provides some relevant results that could be helpful in order to adopt better-informed policies under new waves of the pandemics, but also to design phasing-out strategies of some temporary measures still in place in some countries.

In response to the COVID-19 health crisis starting in early 2020, many European countries have implemented non-pharmaceutical interventions, such as national lockdowns and school closures. Spain has been one of the countries that has been hit hardest by COVID-19 pandemics. The magnitude of the health crisis also explains why the lockdown was stricter and longer than in other European countries. On March 14th 2020 the Spanish government adopted the state of alarm involving recentralization of regional competences and severe restrictions of mobility and the cease of activity in non-essential sectors. This situation extended until May 11th 2020 when small shops, terraces, etc could be opened in some regions according to different indicators related to COVID-19 prevalence and to the capacity of the health system. Between May and July 2020 several restrictions were relaxed in nearly all regions, but since then regional authorities have followed different paths regarding the phasing-out of non-pharmaceutical interventions.

As all countries, Spain faced a simultaneous supply and demand shock caused by the pandemic and the response to it in terms of the lockdown. Due to the higher incidence of the disease, the supply shock has been longer and more intense than in other countries. At the same time, the demand shock has also been of higher magnitude due to the productive specialization of the Spanish economy, but also the different regional strategies as previously mentioned. Taking this into account, the objective of this research is to provide new evidence on the impact of COVID-19 effects of COVID-19 non-pharmaceutical interventions on employment and worked hours. With this aim, I use Labour Force Survey data to illustrate how employment and working hours have evolved differently across Spanish regions since the beginning of the pandemics and how regional differences in the adoption and intensity of non-pharmaceutical interventions explain a big part of the impact of the pandemics on the labour market. I expect that the analysis will provide relevant results that could be helpful in order to adopt better-informed policies under new waves of the pandemics, but also to design phasing-out strategies of some temporary measures still in place in some countries.

From a methodological perspective, in a first step, the analysis uses microdata from the Spanish Labour Force Survey in order to obtain information on labour market outcomes at the Autonomous Community level (NUTS2). It is important to highlight that unemployment has not significantly increased during the COVID-19 pandemics to a higher extent due to the flexibility introduced in temporary employment adjustment schemes (ERTEs - *Expedientes de Regulación Temporal de Empleo*) and, for this reason, the analysis of unemployment remains less informative than in previous crisis. In fact, the government affirmed that all dismissals caused by the coronavirus would be considered unjustified, thus increasing their cost. This measure is new in the context of the Spanish labour market and it also implies that it is very important to distinguish between the evolution of employment and the evolution of worked hours. Using historical quarterly data, ARIMA forecasting models are specified and estimated in order to obtain a counterfactual of the evolution of regional employment and worked hours under a “no-pandemics” scenario. The comparison of actual data with the forecasted variables allow to identify the regional impact of the pandemics on these two variables.

In a second step, data from Ghirelli et al (2021)¹ is used with the aim of quantifying what part of regional differences in employment and worked hours is explained by non-pharmaceutical interventions. In particular, these authors construct a regional-scale indicator that seeks to gauge the volume of restriction measures implemented at each point in time to contain the pandemic in Spanish regions. Their regional indicator is based on the application of textual analysis techniques to the information in press news during the considered period. While in their paper, they focus on the analysis of the relationship between the intensity of the restrictive measures and mobility, here I focus on labour market outcomes. From a methodological perspective, this second part of the analysis is performed exploiting the panel dimension of the employment and worked hours data and the variability in the regional indexes for non-pharmaceutical interventions. A diff-in-diff specification is adopted in order to estimate the causal effects of the adopted policy while controlling for a wide set of variables such as the sectorial composition (essential vs non-essential activities), the occupational structure (remote work), or the temporary rate, among other relevant factors in this context.

¹ Ghirelli, C., Gil. M., Hurtado, S., Urtasun, A. (2021), The relationship between pandemic containment measures, mobility and economic activity, Bank of Spain Occasional Paper 2109.

As an extension of the analysis and in order to test the robustness of the results, additional evidence is obtained by using the synthetic control method for those regions with stricter/non-stricter measures than the national average after the national lockdown.

Preliminary results allow to conclude that: First, regional differences in the effect of the pandemics on worked hours are more much marked than the effects on employment; and, second, regional differences in the adoption and intensity of non-pharmaceutical interventions explain a big part of the impact of the pandemics on the labour market, after having controlled for other relevant regional characteristics.

I expect that a more complete analysis that will be finalised before the date of the conference will provide more detailed results that could be helpful in order to adopt better-informed policies under new waves of the pandemics, but also to design phasing-out strategies of some temporary measures still in place in some countries.

Keywords: COVID-19, non-pharmaceutical interventions, employment impacts, regional differences.

JEL codes: R23, J21, C53