Firm dynamics and survival: pre and post Covid-19 overview

Executive summary

January 2022

Research project framework: “Nuevas dinámicas del mercado laboral tras el confinamiento en Andalucía: el empleo del futuro post COVID19 y respuesta a nuevos confinamientos.” Ref.: CV20-3547.

Funding institutions: ”Junta de Andalucía, subvención en régimen de concurrencia no competitiva a Agentes Públicos del Sistema Andaluz del Conocimiento, para proyectos de investigación sobre el SARS-COV-2 y la enfermedad COVID-19, Cofinanciación FEDER - Programa Operativo FEDER 2014-2020”.

*Note: This document is a brief and non-technical executive summary of the academic working paper, where further details on the analysis and technical aspects are developed in depth.

Key findings

- Business shutdowns were relatively higher for Andalusian firms in regard to the national mean, specially in the early stages of the pandemic.
- This fact might be explained by the sectoral and size composition of the Andalusian businesses, more oriented towards leisure related services and micro-enterprises, which were the least surviving profiles during the pandemic.
- Additionally, firms whose employees were sent to ERTE schemes were significantly associated with higher survival rates.

Recommendations

- Running strategies for the reorientation and diversification of the Andalusian business network are advisable in order to be able to face these transitory shocks from a better position.
- ERTE schemes could work as a tool to brake the business exit during a shock but further implications should be revise in depth.

Principales resultados

- La destrucción de empresas fue relativamente mayor para Andalucía en comparación a la media nacional, especialmente durante la fase inicial de la pandemia.
- Este hecho podría estar explicado por la composición sectorial y tamaño de las empresas andaluzas, más orientadas a servicios de ocio y microempresas, los perfiles con menor supervivencia durante la pandemia.
- Además, las empresas cuyos empleados fueron a ERTE se asocian significativamente con mayores tasas de supervivencia.

Recomendaciones

- Se recomienda el uso de estrategias para la reorientación y diversificación del tejido productivo andaluz con el fin de poder enfrentar este tipo de shocks transitorios desde una mejor posición.
- Los ERTE podrían ser útiles como herramientas para frenar el cierre de negocios durante un shock transitorio, sin embargo, mayores implicaciones deben ser revisadas en detalle.

Pre-pandemic trends: openings and closures

In order to know about the firm dynamics before the pandemic we used annual data from the Harmonized Demography of Firms (*Demografía Armonizada de Empresas*, henceforth DAE), by the National Statistical Institute (INE). Generally speaking, a pro-cyclical behaviour can be observed for the firms dynamics, with a clear decrease in the number of firms during the recession period (2009-2013), which turns to an increasing trend from 2014 onwards. Likewise, the business cycle affected the rates of opening and closure, with high closure rates (above 9% of annual firm stock) and low openings (below 9%) until 2014, inverting this trend thereafter.

Although this behavior has proved to be quite similar for both Spanish and Andalusian data, Andalusian firms have always experienced higher opening and closure rates over the last decade (see Figures 1 and 2). This pattern might be explained by the main characteristics of the firms settled in each territory, mainly the sectoral composition of their economies and the distribution of firm sizes. As displayed in Table 1, Andalusian companies are more oriented towards service activities and micro-enterprises compared with the national mean.

On the other hand, a quick overview over Figures 3, 4, 5 and 6 is enough to note that lower opening and closure rates are associated with bigger companies (in no. of employees) and particularly industrial sectors. By contrast, higher rates over the period mainly appear in non-industrial sectors[1] and small companies.

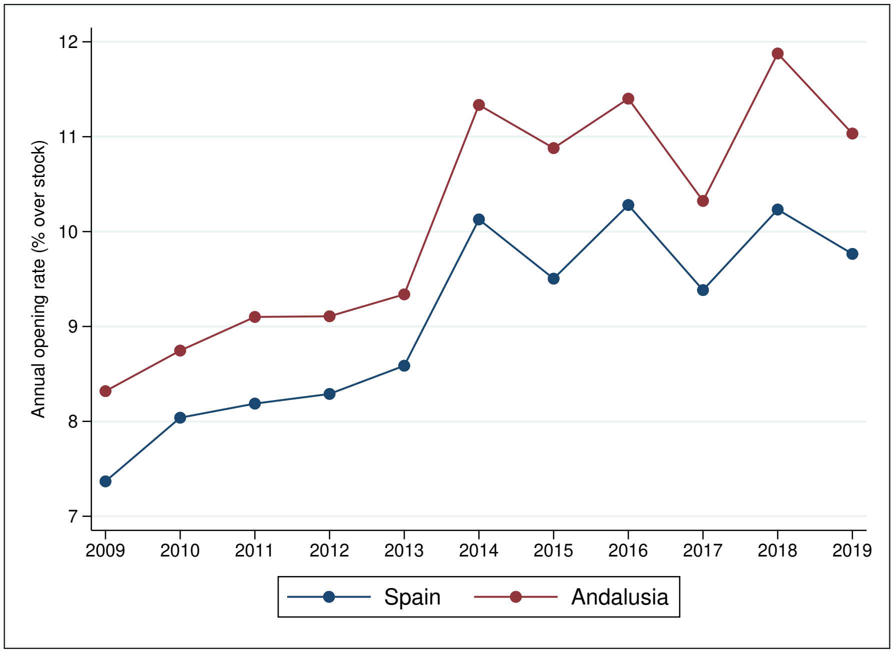

Figure 1: Annual opening rate in percentage over the annual stock of firms. By region comparison. Source: DAE.

[1]Data from missing sectors as primary activities and public administration is not provided by the source.

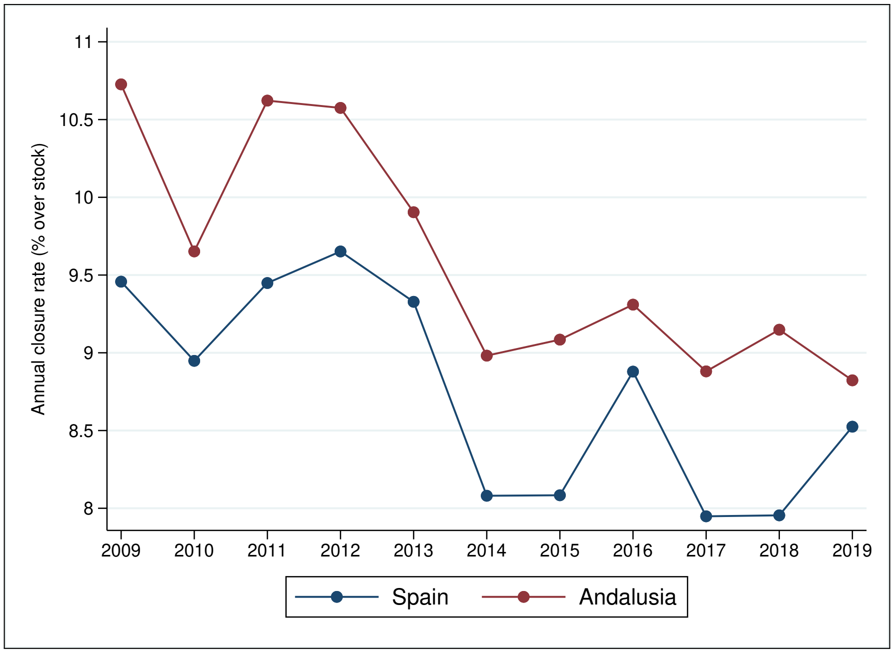

Figure 2: Annual closure rate in percentage over the annual stock of firms. By region comparison. Source: DAE.

Table 1: Sectoral and size composition shares of the Spanish and Andalusian firms. Mean shares for the period 2009-2019.

	Share (%)	
	Spain	Andalusia
Industry	6.28	5.72
Construction	13.85	11.99
Services	79.87	82.29
Total	100	100
Less than 10 empl.	96.04	96.60
10 or more empl.	3.96	3.40
Total	100	100

Source: DAE.

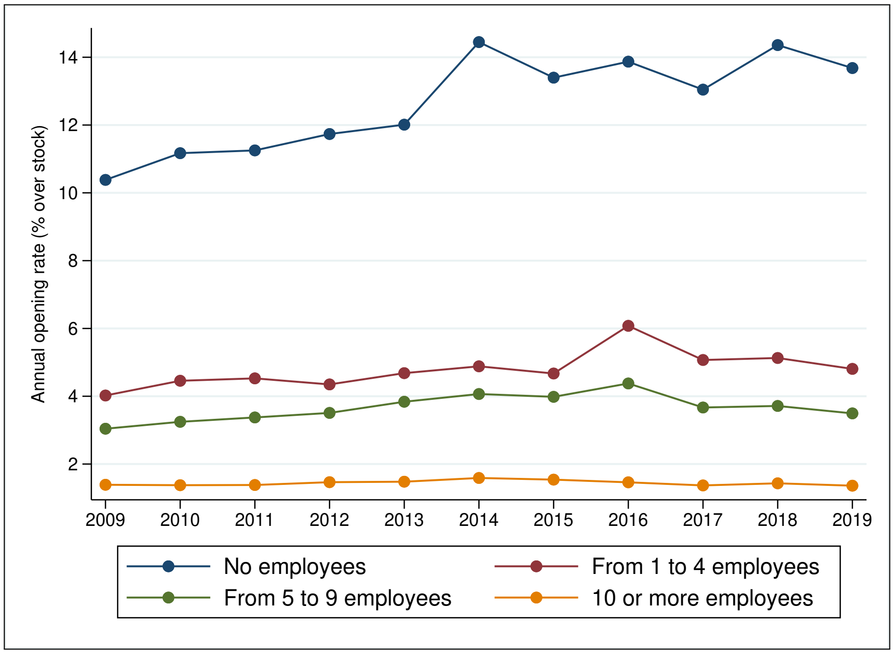

Figure 3: Annual opening rate in percentage over the annual stock of firms in Spain. By number of employees comparison. Source: DAE.

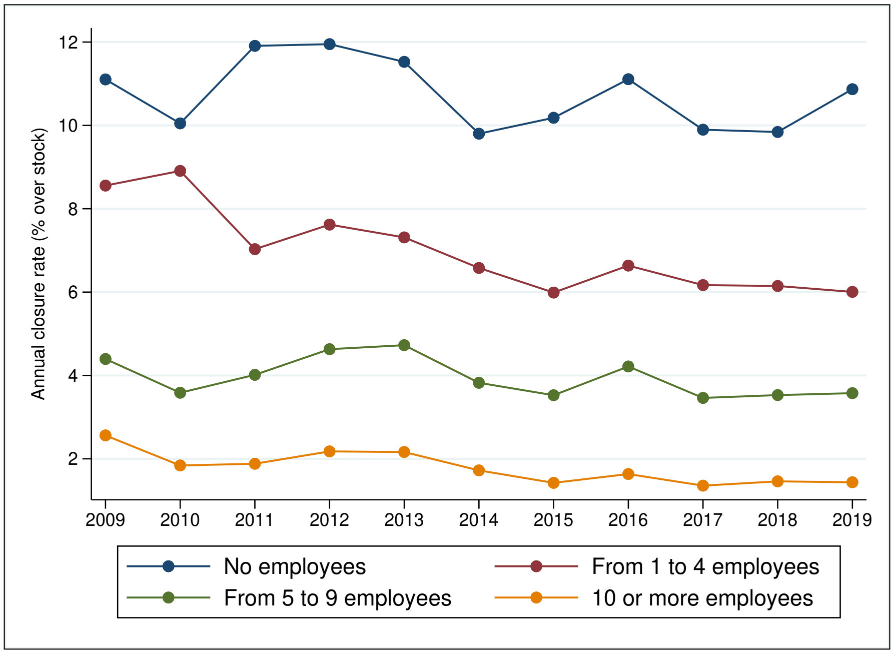

Figure 4: Annual closure rate in percentage over the annual stock of firms in Spain. By number of employees comparison. Source: DAE.

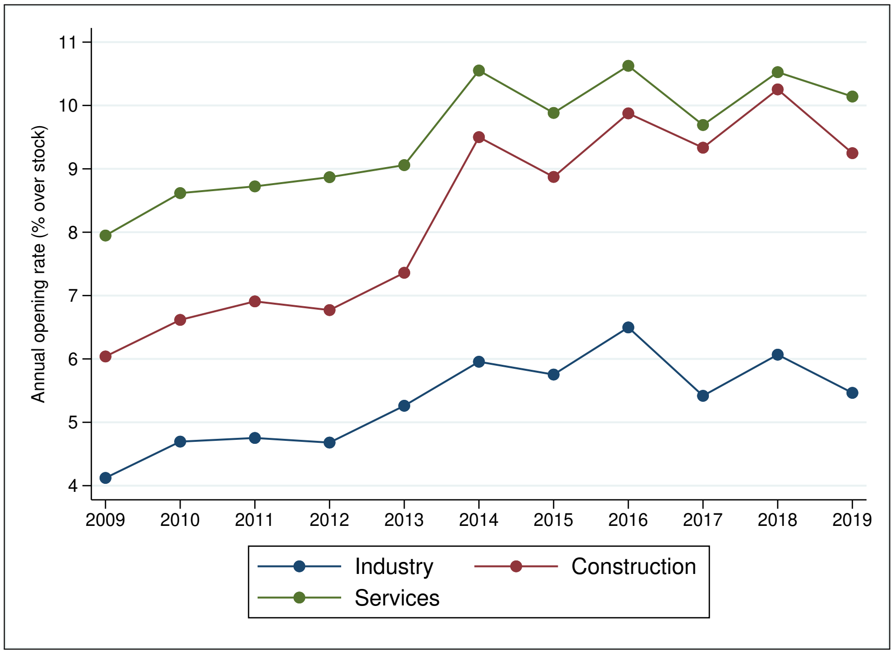

Figure 5: Annual opening rate in percentage over the annual stock of firms in Spain. By sector comparison. Source: DAE.

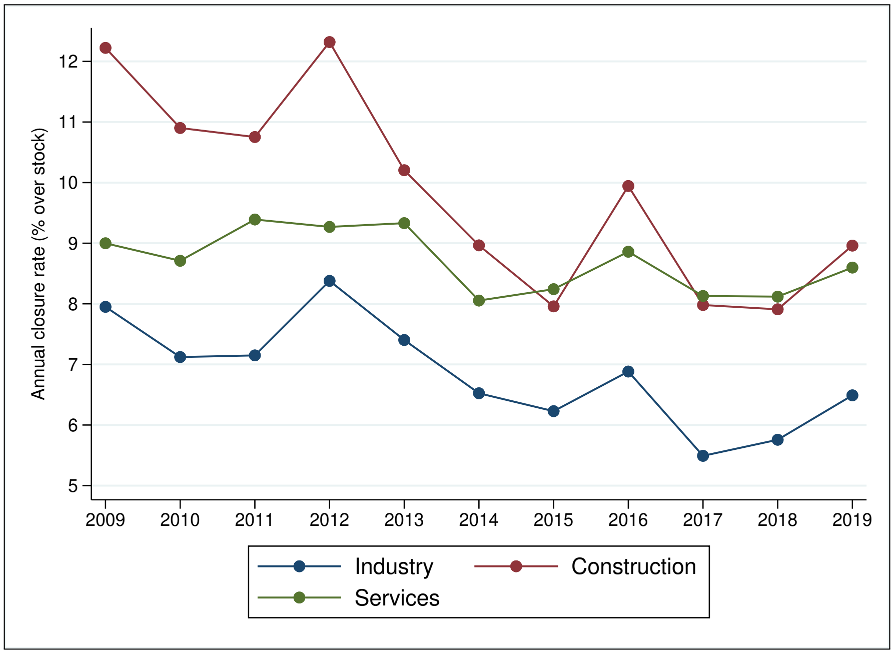

Figure 6: Annual closure rate in percentage over the annual stock of firms in Spain. By sector comparison. Source: DAE.

Firm survival during the pandemic

The survival of the companies is one of the multiple socioeconomic dimensions which have been negatively shocked by the pandemic. From an economic perspective, this is one of the most important issues which governments have dealt with, since the generalized lockdown and the social distancing measures led to the sudden closing of many firms. Nonetheless, despite being generalized throughout the whole economy, the impact of this shock may not have been equal for all companies. In this regard, the economic sector or the company size may have been crucial when talking about the survival of the companies throughout the pandemic.

Recently, the National Statistical Institute (INE) started to provide new updated data with the publication of the experimental statistics of Demographic Situation of Companies (henceforth CODEM), which includes 2020 data. Since the information is retrieved from National Directory of Companies (DIRCE) registers too, this new database resembles the previous one, however, the way information is provided substantially differs. Now, frequency has changed from annual to quarterly, size categories are differently arranged and self-employment will not be considered here. The provided information on firm survival takes an initial cohort of 1,190,870 firms settled in Spain and follows them in order to observe how many of them keep operating in the subsequent quarters. These data is available by size category (measured by number of employees), economic activity (by National Classification of Economic Activities) and situation of their employees regarding to furlough schemes (*Expedientes de Regulación Temporal de Empleo* or just *ERTE*).[2]

To sum up the main results, in the first quarter of 2020, during the first impact of the Covid outbreak, about 11.80% of the initial sample of Spanish firms which were active in January 1st were already closed by April 1st. However, this percentage was even higher for Andalusia, reaching a 17.29%. For the following quarters, the subsequent drops in firm survival are proportional for both territories and less sharp than it was for the first quarter of 2020. In any case, despite following a similar trend, the greater impact of the initial shock results in lower firm survival for Andalusian firms with regard to the national mean at any quarter. (see Table 2 and Figure 7)

By number of employees these differences are quite significant too. (see Table 3 and Figure 8). In numbers, after the first quarter of 2020, only a 85.29% of the firms which operated with less than 5 employees remain active. By contrast, this percentage grow up to 95.23% for 6-9 employees companies, and even more for larger firms. Again, largest firms are more likely to survive and are more able to adapt to shocks.

On the other hand, there are important differences when considering employees in ERTE too. As mentioned before, the initial cohort for this case starts in April 2020, when the Covid-related ERTEs were available. Then, we observe that companies which have been granted with their employees in ERTE experienced higher survival rates. This gap was about 3 percentage points in the second quarter but widening in the following ones. (see Table 4 and Figure 9)

Lastly, Figures 10, 11 and 12 display these survival differences regarding the initial cohort of January 1st by sector. For this purpose, we have considered the National Classification groups, remarking Construction, Hospitality and Food Services, Art and entertainment and Education as the most vulnerable sectors during the pandemic. By contrast, Industrial sectors, Financial and Insurance, and Health and Social Work were the most resilient profiles of firms during this period.

[2] For the latter case the initial cohort was taken in April instead of January 2020, because the widespread Covid-related ERTE did not appear until mid-March, 2020.

Preliminary results from regression analysis using these data allowed us to confirm the significant effects of all these variables (firm region, no. of employees, ERTE situation and sector) in the survival probability of firms, pointing at the same direction as the conclusions obtained from this descriptive analysis.

Table 2: Number of firms and quarterly survival regarding the initial cohort of January, 2020. By region comparison.

Region	Jan2020 Firms	Survival Apr2020 Firms	%	Survival Jul2020 Firms	%	Survival Oct2020 Firms	%	Survival Jan2021 Firms	%
Spain	1,190,870	1,050,404	88.20	1,014,398	85.18	983,011	82.55	952,502	79.98
Andalusia	194,451	160,827	82.71	154,596	79.50	149,229	76.74	143,626	73.86

Source: CODEM.

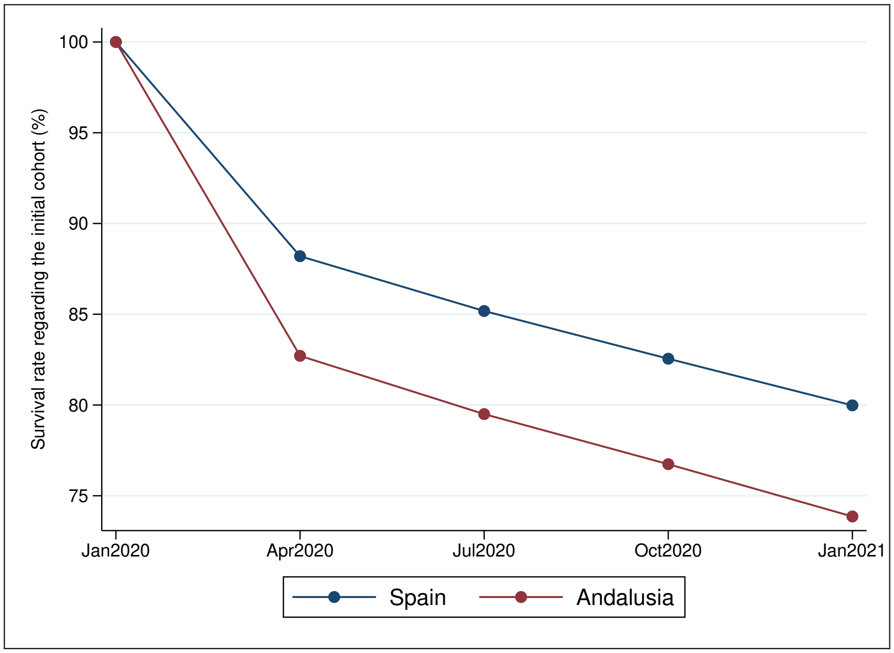

Figure 7: Percentage of surviving firms regarding a initial cohort (January 2020), Spain and Andalusia comparison. Source: CODEM.

Table 3: Number of firms and quarterly survival regarding the initial cohort of January, 2020. By number of employees comparison.

No. of employees	Jan2020 Firms	Survival Apr2020 Firms	%	Survival Jul2020 Firms	%	Survival Oct2020 Firms	%	Survival Jan2021 Firms	%
1-5	886,684	756,210	85.29	723,750	81.62	695,670	78.46	668,592	75.40
6-9	125,748	119,746	95.23	117,857	93.72	116,016	92.26	114,126	90.76
10-99	164,940	161,052	97.64	159,443	96.67	158,052	95.82	156,571	94.93
100-249	8,715	8,634	99.07	8,600	98.68	8,549	98.10	8,509	97.64
250 or more	4,783	4,762	99.56	4,748	99.27	4,724	98.77	4,704	98.35

Source: CODEM.

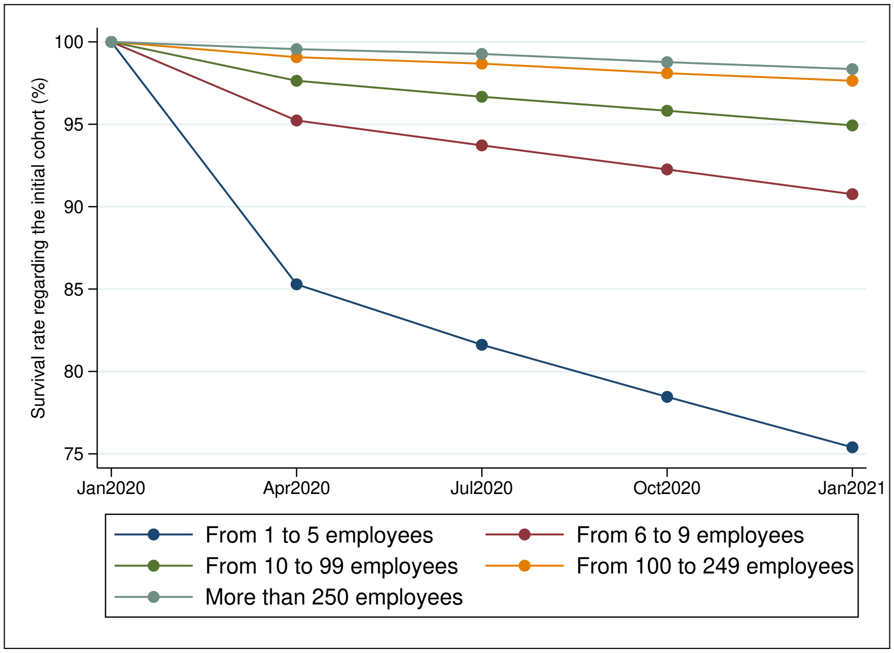

Figure 8: Percentage of surviving firms regarding a initial cohort (January 2020) for Spain, comparison by number of employees. Source: CODEM.

Table 4: Number of firms and quarterly survival regarding the initial cohort of April, 2020. By employees ERTE situation comparison.

Employees situation	Apr2020 Firms	Survival Jul2020 Firms	%	Survival Oct2020 Firms	%	Survival Jan2021 Firms	%	Survival Apr2021 Firms	%
No ERTE	852,306	812,240	95.30	781,490	91.69	753,187	88.37	724,018	84.95
ERTE	250,432	247,138	98.68	241,124	96.28	233,298	93.16	225,996	90.24

Source: CODEM.

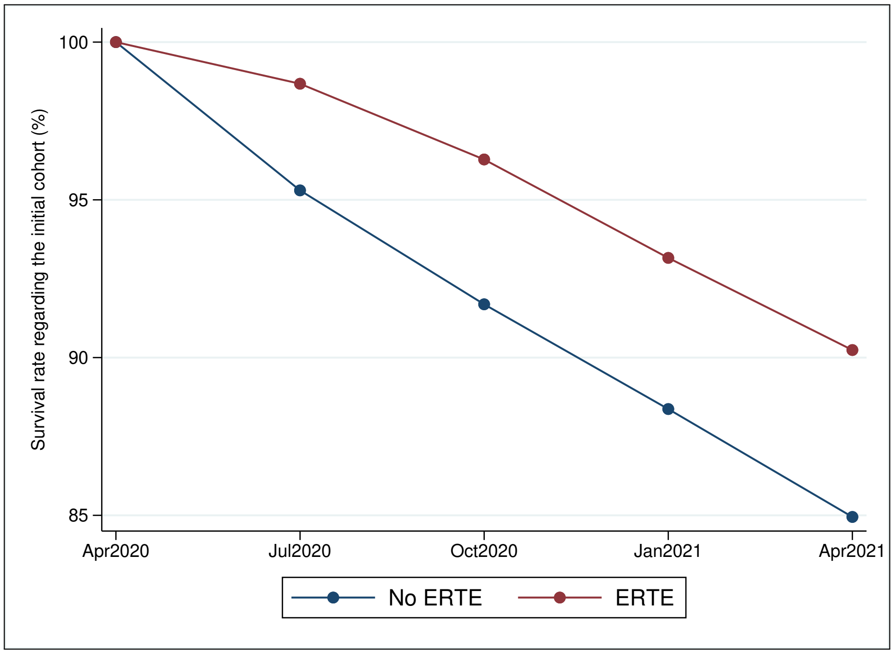

Figure 9: Percentage of surviving firms regarding a initial cohort (April 2020) for Spain, comparison by employees ERTE situation. Source: CODEM.

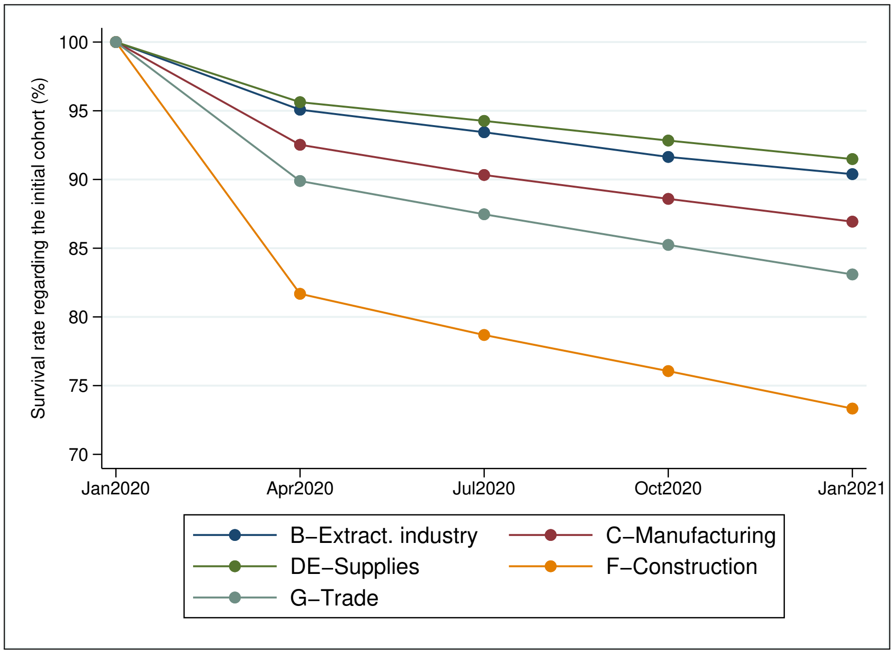

Figure 10: Percentage of surviving firms regarding a initial cohort (January 2020) for Spain, comparison by sector (I). Source: CODEM.

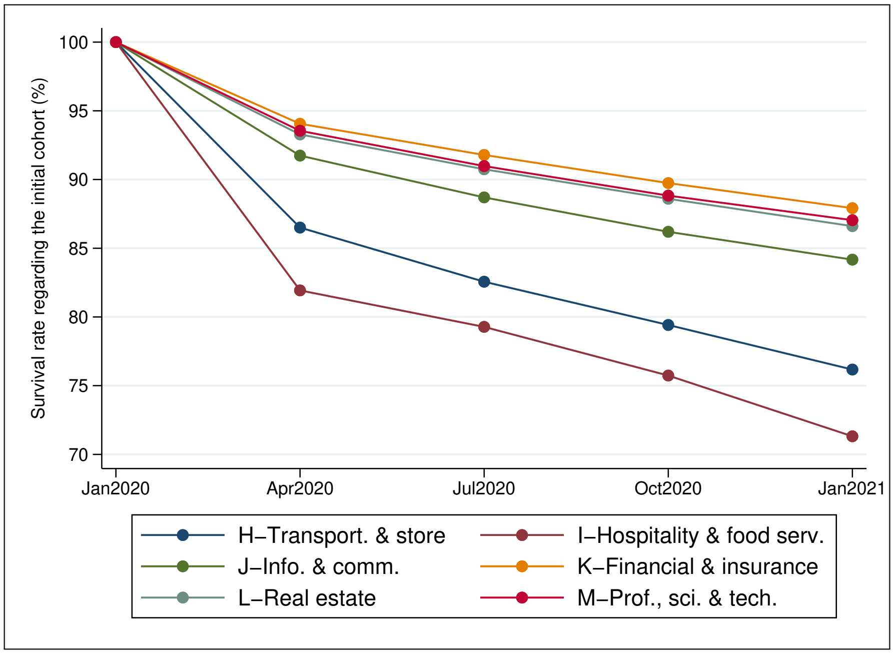

Figure 11: Percentage of surviving firms regarding a initial cohort (January 2020) for Spain, comparison by sector (II). Source: CODEM.

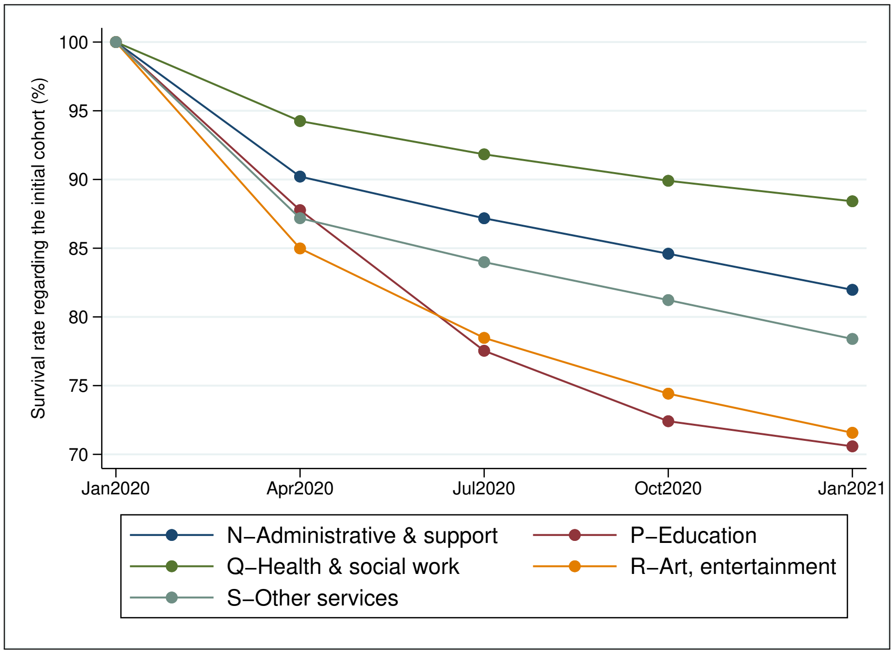

Figure 12: Percentage of surviving firms regarding a initial cohort (January 2020) for Spain, comparison by sector (III). Source: CODEM.