

HOW INNOVATIVE EU FIRMS FACED THE COVID-19 DOWNTURN

Highlights

- The Covid-19 pandemic has triggered many challenges, but also opportunities, for businesses across Europe.
- We examine how the innovation and growth of firms in the EU have been affected by the Covid-19 pandemic, and how as “European Innovation Champions”, SMEs reacted to the resultant shock.
- We find that compared to non-innovative firms, the economic performance of innovative firms in the EU has been considerably less affected by the pandemic.
- We also identify five different paradoxical behaviours of ‘European Innovation Champions’ during the peak of the Covid-19 pandemic.
- Industrial policies targeting SMEs should be flexible and allow companies to adapt their investment plans in line with the evolving conditions to preserve and succeed through the crisis.
- EU instruments, such as the Recovery and Resilience Facility and Horizon Europe, offer wide opportunities for firms to exit from the Covid-19 crisis and boost their future competitiveness.

1. Pandemic effects for business innovators... an exceptional context with little evidence in the literature

The exponential worldwide spread of the coronavirus pandemic and the unprecedented economic disruption due to infection control measures have been a massive challenge for EU countries and the entire world economy.

The first policy initiatives put in place by governments and central banks to protect economies from this crisis were explicitly targeted toward established firms in existing industries with the intent to repair the economic damage ensuing from lockdown measures.

Going forward, evidence-based choices are necessary for governments to support firms with different characteristics and develop structural policy approaches to stimulate the transformation of EU industry in the medium term.

One main issue related to “business and the pandemic” in the JRC study¹ was looking at how the Covid-19 pandemic affected the growth likelihood of EU firms (representing the EU average) in 2020 compared to the 2009 financial crisis. This study was based on the results of the Survey on the Access to Finance of Enterprises, and related analyses aimed at assessing the effect of the pandemic on the growth probabilities of innovative firms, and comparing these with those in the previous downturn.

However, little or no evidence can be found in the literature on the responses to the pandemic crisis from “young leading innovators”, typically operating in emerging sectors and more inclined to strategic resilience (i.e., the ability to dynamically

reinvent business models and strategies as circumstances change) (Hamel and Valikangas, 2003).

A recent study² zoomed in particularly on the analysis of 21 SMEs considered “European Innovation Champions” funded by the European Innovation Council (EIC) Accelerator pilot programme³. This study identified and illustrated EU SMEs’ actions and decisions during the peak of the Covid-19 pandemic in response to rising uncertainty in their external environment.

This article briefly reports on the findings of these two complementary studies.

2. The Covid-19 pandemic effect on the growth of EU firms compared to the 2009 financial crisis

Results of a study based on the Survey on the Access to Finance of Enterprises (2009 to 2020 editions) show that as for the 2009 financial crisis, the Covid-19 pandemic had a negative effect on the growth propensity of EU firms.

However, compared to non-innovative firms, the economic performance of innovative firms in 2020 was less affected by the Covid-19 crisis. Furthermore, innovation was more important than ever to mitigate the negative effects of the pandemic, especially when considering that the health crisis

¹ Marques Santos *et al.* (2021) [link](#)

² De Massis, Di Minin *et al.* (2020) [link](#)

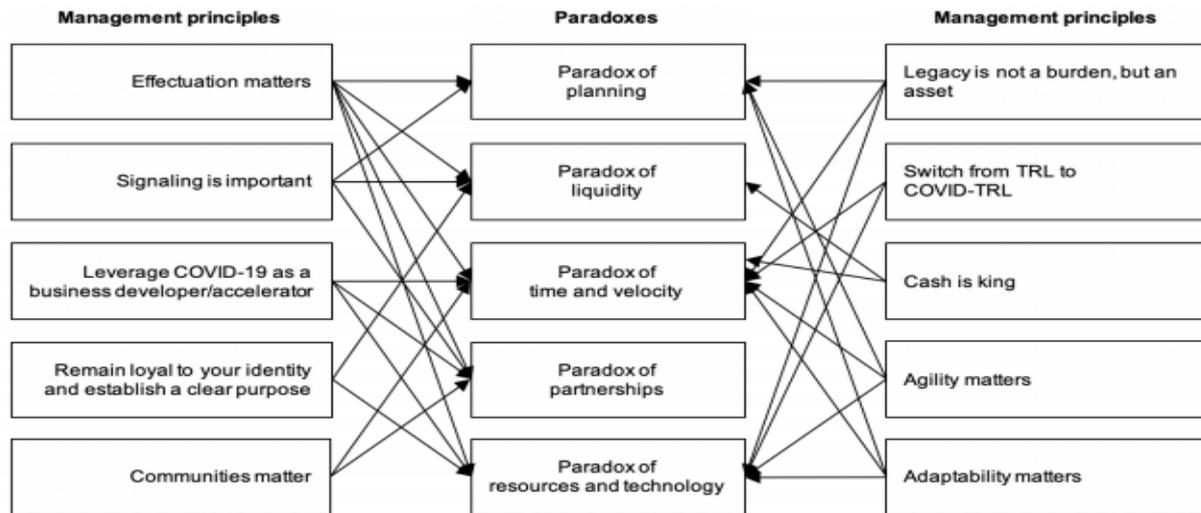
³ A policy initiative that brings together opportunities to fund the most talented innovators and help their companies scale up and expand beyond European borders.

affected the growth probability of firms more than the 2009 financial downturn. Furthermore, the analysis found that the pandemic made innovation twice as critical for potential turnover growth than before the crisis. Finally, innovating firms have focused on organisational and marketing innovation to increase demand and reduce costs in the short term. For more information, see the full paper of Marques Santos et al. (2021 - [link](#))

up their strategic plan and implemented effectuation processes leveraging their legacy and trustworthiness with stakeholders. Their quick and agile response signalled to external actors' and shareholders the management's ability to navigate the crisis by operating outside of the rigid boundaries set by the strategic plans.

The second criticality relates to liquidity. Liquidity is essential in allowing firms to survive, especially during a crisis or

Fig. 1. Overview of paradoxes and their connections with some management principles for SMEs succeeding through a crisis



Source De Massis, Di Minin et al. (2020)

3. Evidence from SMEs: 5 paradoxes to address

Another study (De Massis, Di Minin *et al.*, 2020) focused on “European Innovation Champions”, identifying SMEs’ actions and decisions during the Covid-19 pandemic in response to the rising uncertainty in their external environment. The analysis unearths five emerging paradoxical tensions as opposing forces manifesting in an uncertain environment, leading to a deviation in entrepreneurial actions and decisions in coping with the unexpected exogenous shock caused by the Covid-19 pandemic⁴. These criticalities, and the ten management principles characterizing SMEs’ responses, may provide inspiring lines of intervention for targeted policy initiatives.

The first criticality observed relates to planning. Planning is a crucial activity for firms to identify and pursue priorities and goals. However, the uncertainty created by the pandemic pushed firms to balance previous plans with the new disruptive reality. The spread of the pandemic set an uncertain and unpredictable scenario and vanished the effort firms put into organizing their activities. Accordingly, those European Innovation Champions able to face the crisis gave

turbulent times. However, during the pandemic, European Innovation Champions enacted paradoxical behaviours in their financial strategies. Instead of focusing on generating cash, they aimed at finding the right balance between purpose and actions. The actions implemented by the firms’ management emphasized, both internally and externally, the preservation and perpetuation of their values and mission rather than the deployment of new strategies in search for liquidity.

The third criticality concerns the time and speed of reaction. European Innovation Champions responded to the crisis by balancing their short- and long-term organizational aims. In times of crisis, organizations tend to react in haste, but during the pandemic, the European Innovation Champions instead adopted multi-temporal strategies to rapidly find the right speed to address the crisis. Also in this case, those firms with a stronger identity and with a more pronounced inclination toward their noneconomic resources were the most successful.

The fourth criticality refers to partnerships. Young and innovative SMEs involved in exploiting their innovations usually look for complementary resources by collaborating with large companies to enhance their financial and operational strength (Teece, 1988; Yang *et al.*, 2014). However, the observed behaviour of European Innovation

⁴ Hence, ‘paradoxical behaviour’ is intended here the result of conflicting force, not a mismatch between actions and expectations.

Champions reveals a singular path. In line with the limited time window that the spread of the pandemic imposed, European Innovation Champions reacted by partnering with other SMEs, even competitors, with similar characteristics and resources challenged in the same way by the crisis. Partnerships with similar organizations allowed these Champions to preserve their position in the market during the crisis through merging their skills and resources with suitable partners.

Finally, the last criticality concerns the exploitation of resources and technology. Usually, a crisis pushes firms toward a lack of resources, hence tending to look for adjunctive resources to compensate for this gap. Conversely, during the Covid-19 pandemic, we observed different behaviours in European Innovation Champions. Indeed, they leveraged their scarce resources and reorganized their internal processes through flexibility, agility, and adaptability.

4. Implications for policy

The results of recently published JRC studies (Marques Santos *et al.*, 2021; De Massis, Di Minin *et al.*, 2020) highlight that instruments tailored to mitigating the economic and social impact of the coronavirus disease, such as Next Generation EU that includes the “Recovery and Resilience Facility”, provide cornerstone opportunities (also) for the private sector.

Accompanying policy responses are also necessary and should include special lay-off schemes, fiscal incentives, and business credit lines, amongst others. Furthermore, targeted research and innovation efforts (including through “Horizon Europe”) are also key in addressing the EU’s RDI gap in high-tech ecosystems compared with global competitors, finding a way out of the present crisis, and equipping the EU for the next competition race. This work has also shown that young firms are more able to generate turnover growth and undertake innovative activities. This study highlights once more the remarkable contribution of innovative SMEs to the European economy. Therefore, investments and incentives for firms – notably innovative start-ups and young innovative SMEs – are essential to create the capacity to maintain their economic activities and invest in RDI during the crisis to build system-wide resilience and recovery⁵.

At the same time, this analysis brings evidence of the fundamental support from public resources invested wisely to boost entrepreneurial projects.

Looking back, in the midst of this unprecedented crisis, a flexible, bottom-up policy targeting innovative SMEs proved fundamental to supporting the resilience of highly ambitious programmes. Looking forward, recent EU policies to support

and scale-up SMEs⁶ are a good opportunity for companies to exit the crisis and grow. For example, EU policies continue to make progress in delivering a single market for capital. This is the case of policies addressing equity funding for SMEs, including expanding support for scale-up capital, strategic investments, and Initial Public Offerings (IPO).

Such policy undertakings will trigger investments in green and digital technologies across all stages of an SME’s life, from start-up to growth and expansion, and exiting public markets. The Europe’s recovery plan, NextGenerationEU, together with the Multi-Annual Financial Framework 2021-2027, will provide unprecedented financial support to EU citizens and companies that faced the contraction of the EU economy in 2020 accompanied by major losses in turnover and a decline in jobs and investments⁷.

At the same time, this analysis brings new evidence of the type of companies and business strategies that should be supported. However, the EU Champions identified in the work are outliers, and do not represent the average European SME. Indeed, their potential is a consequence of their uniqueness, presiding over the commercialization of good ideas and great technologies. Managers and entrepreneurs in these companies worked hard to realise their strategies, successfully addressing managerial challenges vis-à-vis the five paradoxes identified. Moreover, the strategic goals of business preservation as well as sheltering key assets and activities were as important as the search for new business, assets, and the experimentation of new processes.

The flexibility of policy tools supporting these companies was fundamental to weathering the Covid-19 storm and designing new strategies. This is an important lesson for policy design: when selection mechanisms work properly, programmes are able to target companies and entrepreneurs capable not only of executing their plans, but also adapting these as conditions evolve or radically shift. Programmes supporting SMEs should therefore allow the flexible adaptation of projects and business strategies as money is allocated and spent.

The analysed firms’ capacity to remain loyal to their mission and values, and stay focused on non-economic goals, has been a clear goal for managers to face these challenging months and prepare for the future. Thus, from an industrial policy perspective, it is fundamental to complement forward-looking policy initiatives with backward-looking ones aimed at preserving and promoting the values, heritage, and traditions of existing organizations across Europe, as these will become a particularly useful assets to succeed through and beyond the crisis.

⁵ Policy support for young and innovative firms could mitigate the impacts of the Covid-19 crisis on job growth in the EU, protecting more than 3.5M jobs that may not otherwise be created over the next ten years (Benedetti-Fasil, Sedláček, & Stek, 2020).

⁶ E.g. European Commission – COM(2020) 102 final, ‘The 2020 Industrial Policy package’ includes a dedicated strategy for small and medium-sized enterprises (SMEs; COM(2020) 103 final).

⁷ European Commission, – COM(2021) 350 final. ‘New Industrial Strategy: Building a stronger Single Market for Europe’s recovery’ Brussels, 5.5.2021

In conclusion, this study and the challenging times we have faced suggest we need new policies targeting SMEs that are able to identify innovation champions. Some possible selection criteria are suggested in Figure 2.

Fig. 2. Determining innovation factors for SMEs



Source: Bayarçelik et al. (2014)

The selection of beneficiaries - as in the case of support for diversified participation in Horizon Europe, EIC, and EIT - is pivotal for the success of policy programmes wherein the enterprises' economic and non-economic goals are considered. Finally, new policy initiatives aimed at pursuing innovation through tradition⁸ have to be put in place, rather than continuing to conceive tradition and innovation as opposing concepts. This can be achieved by combining forward- and backward-looking policy initiatives. A good example is the Horizon Europe 2021-2027 European Cultural Heritage and the Cultural and Creative Industries (European Commission, 2021) research and innovation initiatives.

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Read more / Selected References

Benedetti-Fasil, C., Sedláček, P., & Sterk, V. (2020). EU start-up calculator: Impact of COVID-19 on aggregate employment. Scenario analysis for Austria, Belgium, Germany, Hungary, Italy and Spain, EUR30372 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-21710-7.

Bayarçelik, E. B., Taşel, F., & Apak, S. (2014). A research on determining innovation factors for SMEs. *Procedia-Social and Behavioral Sciences*, 150, 202-211.

⁸ De Massis et al. (2016).

De Massis, A., Di Minin, A., Marullo, C., Rovelli, P., Tensen, R., Carbone, A., & Crupi, A. (2020). How the "EU Innovation Champions" successfully absorbed and reacted to the shock caused by the COVID-19 pandemic. JRC Working Papers on Corporate R&D and Innovation No 06/2020, European Commission, JRC12185

De Massis, A., Frattini, F., Kotlar, J., Messeni-Petruzzelli, A., & Wright M. (2016). Innovation through tradition: Lessons from innovative family businesses and directions for future research, *Academy of Management Perspectives*, 30(1), 93-116

European Commission (2021). Horizon Europe Work Programme 2021-2022; 5. Culture, creativity and inclusive society. European Commission Decision C(2021)4200 of 15 June.

European Commission (2016). Catalysing European Innovation. EASME's report of the first two years of implementation of the SME Instrument 2014-2015, Luxembourg: Publications Office of the European Union.

ILO (2020). ILO Monitor: COVID-19 and the world of work (third edition). ILO, ([link](#))

IMF (2020). World economic outlook update, June 2020: A crisis like no other, an uncertain recovery. IMF ([link](#))

Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C. A. M., Prochotta, A., Steinbrink, K. M., & Berger, E. S. (2020). Startups in times of crisis—A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, e00169.

Marques-Santos, A., Haegeman, K., & Moncada-Paternò-Castello, P. (2021). The impact of Covid-19 and of the earlier crisis on firms' innovation and growth: a comparative analysis. JRC Working Papers on Territorial Modelling and Analysis No. 03/2021, European Commission, Seville, JRC125490. ([link](#))

OECD (2020). Coronavirus (COVID-19): SMEs policy responses. OECD Tackling coronavirus series, 15 July 2020 ([link](#))

Sedláček, P., & Sterk, V. (2020). Startups and employment following the COVID-19 pandemic: A calculator. *COVID Economics*, 13, 178-195 ([link](#))

Teece, D. J., (1988). Capturing value from technological innovation: Integration, strategic partnering, and licensing decisions. *Interfaces*, 18(3), 46-61.

Valikangas, L., & Hamel, G. (2003). The quest for resilience. *Harvard Business Review*, 81(9), 52-63.

Veugelers, R. (2008). The role of SMEs in innovation in the EU: A case for policy intervention? *Review of Business and Economics*, LIII(3), 239-262.

Yang, H., Zheng, Y., & Zhao, X., (2014). Exploration or exploitation? Small firms' alliance strategies with large firms. *Strategic Management Journal*, 35(1), 146-157.

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