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Correlation between companies' sustainability plans and their response to the Covid-19 pandemic

The detrimental impact exerted by economic growth on the environment is appreciable on many levels, from air quality decline to biodiversity reduction (Mealy et al., 2020). In the last decade, however, there has been a progressive increase in central governments' attention towards environmental issues. This more environmentally conscious attitude led to the definition of novel climate objectives at both national and international levels. For example, in 2015 it brought 196 countries to subscribe the Paris Agreement, a commitment to reduce greenhouse gas emissions and gain a sustainable and ethical finance.
The global spread of Covid-19 had a very significant impact on sustainability. On the one hand, the pandemic confirmed the "unbreakable bond with single-use plastics" (Boons et al., 2020) that increased with the wide use of plastic-based protection devices, such as face mask and swab tests. On the other hand, the March 2020-May 2020 lockdown led to improved global environmental conditions, measurable, for instance, in the 30% reduction of nitrogen dioxide (NO_2), one of the most dangerous pollutants in car exhaust fumes (Bath et al., 2021).
On an economic level, the Covid-19 pandemic forced many companies, most of which small businesses, to a complete halt. Consequently, numerous firms faced economic crisis and bankruptcy. Many of the companies that did survive the lockdown underwent severe loss or significant decrease in revenues (Marchini, 2021).

The aim of this proposal is to evaluate the potential connection between firms' sustainability levels and their resilience after the Covid-19 pandemic. The research will focus specifically on investigating the "Ecological Resilience" in Italian companies and its effects on the entrepreneurial crisis brought by Covid-19. Different companies will be compared on their ability to achieve the main objectives set in their sustainability plans. Further analyses will be carried out on the impact of the sustainability measures on the firms' post-Covid-19 performances. To evaluate the complexity of connections between resilience and sustainability, the econometric model that will be used in this study will take inspiration from the simplified dynamic model applied by Derissen et al. in 2011. The degree of sustainability of each firm will be considered as the independent variable "X", while the final post-Covid-19 economic result (bankruptcy, loss, balanced budget, income continuity, profits) will be the dependent variable "Y". The main databases used will be: ISTAT, the Italian national institute of statistics; AIDA, a database for the computerized analysis of Italian companies; and the Ernst and Young and Deloitte reports.

The results of this research will show whether it exists a correlation between firms' resilience and their level of sustainability. These data will be of high relevance in the formulation of economic policies for production processes with reduced environmental impact. The present study will mostly focus on Italian companies. However, once the model is validated, further research may be conducted on a wider level, such as the European Union. Moreover, if a correlation between the chosen variables is demonstrated, further studies may investigate their possible causation.

In conclusion, this project has the ambition to contribute to the sustainability implementation in the everyday processes of companies and public administrations.

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