

## **G20 Countries: About Investments and Productivity Growth in the Context of the COVID-19 Pandemic**

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### **Abstract**

*This article aims to present an overview of the G20 member states in relation to the measures and policies adopted in the field of trade and investment, all in the context of the COVID-19 pandemic and its effects. As we know, the COVID-19 pandemic affected the allocation of resources (financial, human, material) during this period and led to a decrease in productivity.*

*Relating to G20 trade-facilitating and trade-restrictive measures, data presented by WTO (2020) show that during this period the G20 member states have implemented 154 new trade measures, of which 93 were related to the COVID-19 pandemic.*

*The investment policy measures of the G20 states have been divided into the following categories: - measures specific to foreign direct investments; - measures related to national security; - non-specific measures for foreign direct investment; - international investment agreements.*

**Key words:** G20 countries, the COVID-19 pandemic, investment policy measures, innovation, productivity growth

**J.E.L. classification:** H12, O33, O38

### **1. Introduction**

As we know, the Group of 20 brings together the world's largest economies in an intergovernmental forum, in order to address various issues of the global economy, such as sustainable development or financial stability. The figures for these economies reveal their importance in the international landscape: G-20 members accounts for more than three-quarters of international trade and contributes by about 80 percent of the world's gross domestic product.

The last two decades have shown a slowdown in productivity, both in developed, industrialized economies, as well as in emerging economies. As a current factor of influence, the COVID-19 pandemic (as well as possible crises generated by it) can affect productivity, given the imbalances in investment, in supply, in distribution or in the workforce.

According to the statements of G20 members, in order to overcome all these problems in terms of productivity, it is necessary an international collaboration, so through joint efforts we must act in making high quality investments in infrastructure and people, obtaining a good reallocation of resources (through interconnected markets), with higher chances of obtaining finance and liquidity.

### **2. Theoretical background**

The interpreted data studied in this article provide, first of all, information on the state of productivity growth, in the event of a crisis caused by the COVID-19 pandemic. For this part of the analysis were taken into account: D'Adamo et. al. (2021) and Di Mauro and Syverson (2020).

D'Adamo et al. (2021) approaches in their work "*Digitalization & Beyond: The COVID-19 Pandemic & Productivity Growth in G20 Countries*" the issue of the channels through which the COVID-19 crisis can influence productivity growth.

They started from the analysis undertaken by Di Mauro and Syverson (2020), in which it was used an accounting decomposition of Aggregate productivity growth into three components:

- within-firm productivity growth
- reallocation of resources between firms
- reallocation of resources between sectors

Italian G20 Presidency (2021) and D'Adamo et al. (2021) presents the principles of the policy pursued by the Italian Presidency of the G20, to restore productivity growth. The policies agreed by G20 leaders during this period, in the context of the current pandemic, refers to encouraging public and private investment, encouraging investment in human capital, achieving a harmony between access to information and data protection, promoting a friendly business environment and encouraging international cooperation.

Roth and Sen (2021) demonstrates through an econometric analysis of growth accounting that intangible capital (research and development, software, economic skills -market research, branding, training-) has an extremely important role in increasing productivity, both at the aggregate level and at the sectoral level.

### 3. Research methodology

In this paper, we want to address some issues in connection with the following points:

- ✓ The influence of the COVID-19 pandemic on the deceleration of productivity
- ✓ The risk of occurrence of major regressions in terms of resource allocation (including investment) due to the COVID-19 crisis
- ✓ Investment policy measures considered towards G20 leaders to overcome the possible crisis caused by the COVID-19 pandemic
- ✓ The correlation between the measures targeted by G20 leaders and current research on the influence of the COVID-19 pandemic on productivity and investment
- ✓ The correlation between digitalization-investment-productivity growth

Qualitative research is based on studies of literature specific to this field; we used the fundamental and theoretical research methods by studying the specialized literature, revising articles, reports and books found in the electronic databases. Moreover, for the research and knowledge of the present subject, the method of economic analysis, synthesis, comparison, but also hypotheses and conclusions were used.

### 4. Findings

National borders have been closed, companies' production has fallen, so the world economy has also been partially closed (out of a desire to reduce the spread of the virus). At the moment, it is difficult to measure the real impact of the COVID-19 pandemic on productivity, investment, resource allocation, and therefore on the world economy as a whole, because: 1. the pandemic is not over (there are still closed borders or travel restrictions, some activities are partially or totally affected in their operation, they are suspended people, etc.); 2. official statistical data are not available (are presented in an estimated, partial manner).

As mentioned earlier, the issue of channels through which the COVID-19 crisis can influence productivity growth has been approached starting with the accounting breakdown of aggregate productivity growth into three components.

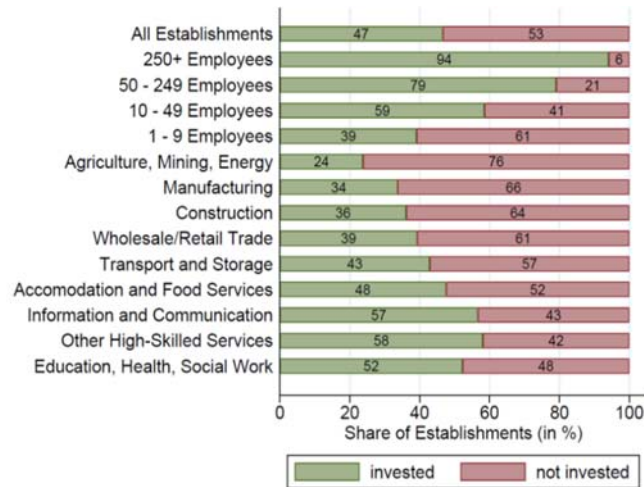
#### 1. The issue of increasing productivity within the company

In this first component of aggregate productivity growth, as argued by D'Adamo et al. (2021) and Di Mauro and Syverson (2020) we meet many factors of influence: human capital, investment, innovation, digitalization, miscellaneous intangible assets, fragility of global value chains, administrative and fiscal burden, barriers between countries.

People were suspended, sent into technical unemployment or fired due to the COVID-19 pandemic. If their reallocation on the labor market is not done quickly, then they can no longer have access to professional training, specialization courses, and even begin to be demotivated to increase their various professional skills. Of course, in this case, productivity will also be affected.

We find a close relationship between investment-innovation-digitalization. Given that the pandemic is not over, people have generally feared investing. But in order to continue the activity, some had to create conditions for the current context, in which the movement of people was limited and employees worked from home. For large companies, this adaptation could be easily done; those with smaller businesses, faced financial or logistical barriers to investment. In this case, labor productivity has fallen considerably.

Figure no. 1. Investments in IT or digital technologies since the start of the COVID-19 pandemic



**Note:** The figure shows weighted percentages based on 1.941 establishments in Germany, February 2021

**Source:** Bellmann et al., 2021. The pandemic has boosted firm investments in digital technologies (online) (Available at <https://voxeu.org/article/pandemic-has-boosted-firm-investments-digital-technologies>)

Also, the productivity of a company depends on the relationships it has developed over time with its partners, with its employees, with final consumers etc. What happens when the company closes due to the COVID-19 crisis? Things are obvious: trust in that company is affected, relationships can be lost. Therefore, it is preferable for employers to keep their employees (possibly in a limited form of activity) rather than to fire them (to avoid the additional costs of finding other people, training them, rebuilding relationships with partners, etc.).

## 2. The issue of reallocation of resources between companies

The issue of reallocation of resources between companies is developed by Di Mauro and Syverson (2020) by presenting variables related to company size (closing small businesses can lead to a reorganization within the industry; at the same time, it is possible (not wanted / preferred) like closing small businesses to make room in the industry also for small and inefficient firms), financial constraints and the creation of zombie firms (defined as firms that are unable to cover debt servicing costs from current profits over an extended period according to Banerjee and Hofmann (2018)).

## 3. The issue of reallocation of resources between sectors

As we observed during the pandemic, some activities were reduced (for example, flights, accommodation in hotels), and others increased (such as online medical consultations, various online services of central and local government, various IT services). This change in the sectors will certainly lead to a change in aggregate productivity, because the productivity of the various activities mentioned is different.

For an economy to be successful, investment is needed to increase productivity. Investments can take the form of money, various financial securities; we can also invest in tangible assets (buildings, fixed/mobile assets, furniture, etc.) or investments in intangible assets (software, copyrights, trademarks, R&D).

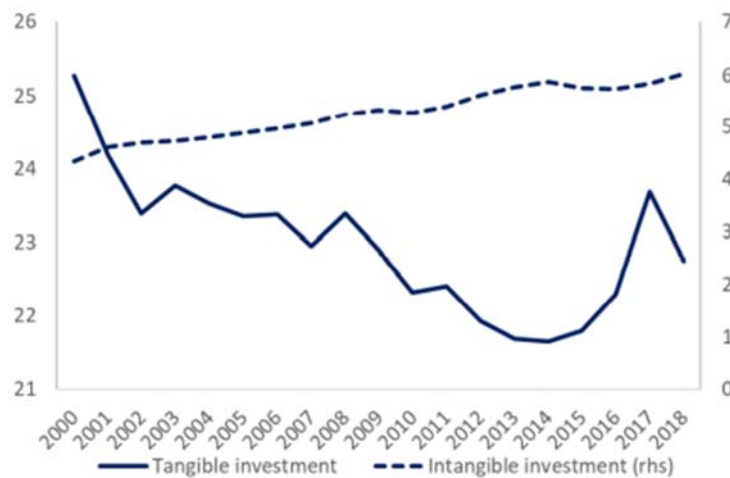
G-20 leaders believe that attention should be paid in this period (and not only) to digital technologies, which should be transformed from challenges into opportunities, if we want to increase production and the productivity of factors of production. We mentioned that during the COVID-19

pandemic, the measures of the decision makers were specific to each economy, situation, each context. The same will happen in the case of innovation and digital economies: it will take into account the economic structure of the nation in question, its policies, participants, etc. (D'Adamo et al., 2021)

G-20 leaders noted that there must be a mix of policy options that provides a maximum of digitalization on productivity. Thus, the G20 Menu of Policy Options on Digital Transformation and Productivity Recovery (2021) states that, on the one hand, we have productivity factors, such as infrastructure, human capital, innovation, and, on the other hand, we have productivity-enhancing policy options in connection with stimulating investment or reallocating resources.

The growing importance of intangible investments is also noted in the case of the G20 economies, in the chart below. We can observe that in the analyzed period, 2000-2018, the tangible investments decreased as a share in the gross domestic product, and their place was taken by the intangibles, which register an increasing trend.

Graph no. 1. Intangible vs. tangible investments (selected G20 countries)



**Note:** % of GDP. The G20 aggregate includes: AU, CA, FR, DE, IT, US, UK, BR, JP, KR, MX

Source: D'Adamo et al., 2021. Digitalisation & Beyond: The COVID-19 Pandemic & Productivity Growth in G20 Countries, ISSN 2443-8030 (online), p.7  
(available at [https://ec.europa.eu/info/sites/default/files/economy-finance/eb067\\_en.pdf](https://ec.europa.eu/info/sites/default/files/economy-finance/eb067_en.pdf))

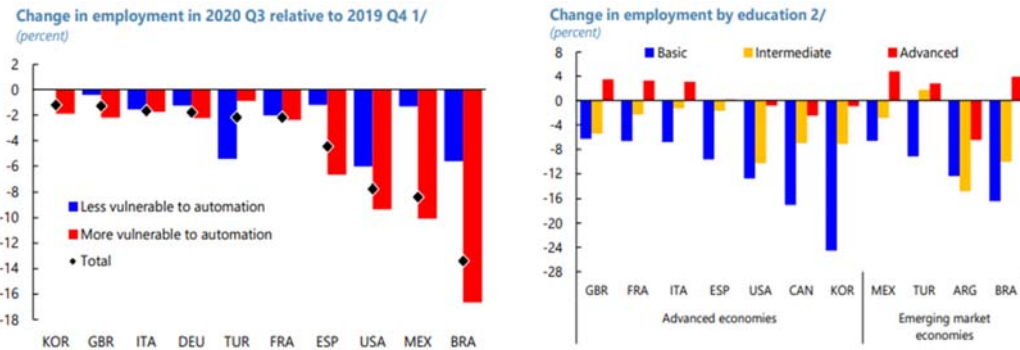
This paper sought to address issues related to investment policy measures considered by G20 leaders to overcome the potential crisis caused by the COVID-19 pandemic, but also a correlation between measures targeted by G20 leaders and current research on the influence of the COVID-19 pandemic on productivity and investment. As we specified in the abstract, recently, the investment policy measures of the G20 states have been divided into the following categories: - measures specific to foreign direct investments; - measures related to national security; - non-specific measures for foreign direct investment and - international investment agreements (UNCTAD-OECD Report on G20 Investment Measures, 2019).

We further summarize the principles of the policy pursued by the Italian Presidency of the G20, to restore productivity growth (D'Adamo et al., 2021, Italian G20 Presidency, 2021):

- encouraging public and private investment, by establishing public-private partnerships, by developing infrastructure, by digitalization of the economies, by guaranteeing the quality of public finances (adjusting government revenues and expenditures of public authorities, in order to obtain an optimal result of their composition), by supporting intangible investments (continuous training, research-development, network training academic environment-industry-decision makers);

- encouraging investment in human capital, through education and training programs (especially for adapting to technological innovations, for the transition to an increasingly digital world), by addressing the management of SMEs (thus ensuring the adaptation of production processes, the skills of those involved);

Figure no. 2. Employment Loss by Vulnerability to Automation and Skill Level



**Note:** 1/Classification based on ISIC rev.4. Industries more vulnerable to automation: agriculture, forestry, and fishing; mining and quarrying; manufacturing; utilities; construction; wholesale and retail trade; transportation; accommodation and food services; arts, entertainment, recreation; other services; activities of households as employers and extraterritorial organizations. Industries less vulnerable to automation: information and communication; financial; real estate; professional and administrative services; public administration and defense; education; human health and social work. 2/Ages 15–64. Basic: primary and lower secondary education; intermediate: upper-secondary and post-secondary non-tertiary education; advanced: above post-secondary non-tertiary education. CAN, FRA, ITA, KOR, ESP, GBR, and USA (BRA, MEX, TUR, and ZAF) are aggregated for G-20 advanced (emerging market) economies; CAN, KOR, USA: latest is 2020Q4 (2020Q3 for others)

Source: IMF, 2021. Group of Twenty: Boosting productivity in the aftermath of COVID-19, p.15 (online) (available at <https://www.imf.org/external/np/g20/pdf/2021/061021.pdf>)

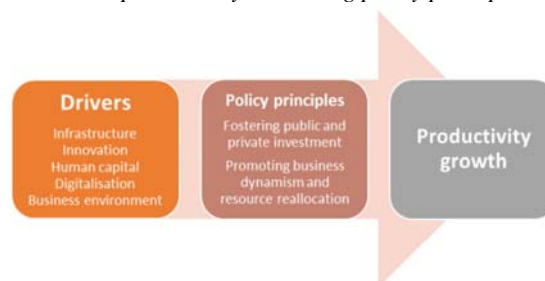
As can be seen in the figure above, the COVID-19 pandemic has affected to a much greater extent the sectors vulnerable to automation, those who were fired the most were unskilled (basic) employees or with an average qualification.

- achieving a harmony between access to information and data / information protection, by facilitating access to data and information, both for the private and for the public environment (in terms of central and local government services, tax and fee services, etc.), while ensuring confidentiality, ensuring fairness and non-discrimination of participants (including on the payment of taxes or the use of digital platforms of large companies versus SMEs, by avoiding abuses of domination);

- promoting a friendly, dynamic business environment through policies that reduce bureaucracy, promote foreign direct investment, ensure the protection of intellectual property rights, reduce barriers to entry and exit of companies, provide e-government services, facilitate access to finance and liquidity;

- encouraging international cooperation, through the exchange of knowledge and through joint investment initiatives in research and development;

Graph no.2. Productivity drivers and productivity-enhancing policy principles



Source: D'Adamo et al., 2021. Digitalisation & Beyond: The COVID-19 Pandemic & Productivity Growth in G20 Countries, ISSN 2443-8030 (online), p.13 (available at [https://ec.europa.eu/info/sites/default/files/economy-finance/eb067\\_en.pdf](https://ec.europa.eu/info/sites/default/files/economy-finance/eb067_en.pdf))

## 5. Conclusions

As can be seen, during this period of the COVID-19 pandemic, the measures adopted by the state authorities were staged, depending on the local context and the particular situations that arise. Any decision taken covered short periods of time, without insisting on possible long-term effects or irreversible consequences. All the problems that have arisen should be lessons for the participants in the economic life and not only.

Information technology, digitalization, innovation are aspects that should not be undervalued; in fact, they can secure a future for many of the present and future businesses, especially after various flaws have been observed during the time when the world was slowed down, blocked by this virus. Thus, the European Commission (2021a) considers that, in the long term, the effects of the COVID-19 pandemic may be some positive ones, which dictate trends: the green transition, changes in the global value chains, but also digitalization. New forms of work will be outlined, taking into account teleworking and automatization, which will require highly qualified work with higher salaries.

Regarding digitalization and artificial intelligence, of course there are opinions that they will be related to job loss. We believe that we should consider the opportunities offered by digitalization, such as improving employee skills, streamlining working time, less redundant work, easy access to information and data, improving the relationship with customers (through shorter response time, various channels of information transmission, etc.). In fact, according to the studies consulted (D'Adamo et al., 2021; Cappelli, 2020; Author, 2015), only certain tasks of employees only certain employee tasks can be automated (especially the unskilled or medium-skilled). In addition, the contribution of digitalization in productivity will lead to the creation of new jobs in other sectors; it is therefore a question of a redistribution of jobs, not about a loss.

G20 leaders noted the importance of digital platforms on productivity, whether we mention online stores, social media, general services of central and local government, payment services, app stores, digital work platforms etc. Digital platforms are closely linked to innovation and increased productivity. They allow the rapid distribution and sharing of information, ideas; they are the fast meeting place for business partners, suppliers with potential buyers, employees to work together; contributes to learning and provides new sources of information to develop innovative businesses.

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