THE NUMEROUS CHALLENGES OF THE POST-COVID ECONOMY

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Abstract The COVID-19 pandemic has caused unprecedented health and economic crises around the world. It has amplified preexisting inequalities and exclusions, both within and between countries and communities. Moreover, the global pandemic has added to the challenges of the digital era, such as emerging and declining jobs, remote working, necessary reskilling and upskilling. Consequently, the number of interrelated problems has doubled. As countries continue to grapple with COVID-19 and navigate the economic fallout, well-designed green stimulus packages can support near-term recovery and enable longer-term power system resilience against future threats. Such a 'green' recovery is often defined in opposition to 'grey' and 'colourless' recovery policies. As over one third of the world's population lives within 100 kilometres of an ocean, the notion of a 'blue' recovery is equally important. In a world driven by uncertainty and change, it is essential to find tools that can mitigate potential challenges and help apply new opportunities. The author of this paper discusses these issues alongside the modern challenges of the education system. Therefore, this paper also covers the role of universities, which need to respond quickly to both current and future challenges.

Keywords: COVID-19, fourth industrial revolution, green recovery, blue recovery, education

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1 Introduction

The modern economy is facing two major challenges: the Fourth Industrial Revolution and the global pandemic. Many international organisations and researchers have published forecasts and assumptions relating to the post-COVID recovery of the economy. In scientific literature, several key features also reveal the greater picture of future economic recovery, with 'green', 'blue', 'grey' and 'colourless' recovery policies all being actively discussed. Notably, these significant changes cannot be achieved without digitalisation. Moreover, this process will lead to substantial adaptations in the labour market, where numerous jobs will disappear and many new opportunities will emerge. Thus, it will be necessary to update skills and provide extensive training for various jobs. which, within existing scientific literature, is referred to as the 'reskilling and upskilling revolution'.

During research on this topic, the author of this paper reviewed the relevant literature and studied reports and reviews from international organisations and established research centres, such as the UN, the World Economic Forum, McKinsey Global Institute, D2L, Partnership for Action on Green Economy (PAGE), World Resources Institute, Cambridge Econometrics, and the World Conservation Monitoring Centre, among others. In addition, synthesis and analogy, as well as descriptive and correlative methods were employed.

Within this study, the author discusses the main directions of the post-COVID economic recovery, the challenges for Higher Education Institutions (HEIs), as well as certain issues relating to the future of jobs. The paper ends will a number of brief conclusions.

2 The main direction of the post-COVID economic recovery

International research organisations and scientists have been actively discussing the main direction of economic recovery in the post-COVID era. As Vesperi and Gagnidze (2021) highlight, the global pandemic has added to the challenges of the digital era, namely: remote working and fluctuations on the labour market; the creation of new jobs and a decline in other forms of employment; reskilling and upskilling requirements; changes in transportation; and urbanisation. As a result, the number of interconnected problems has doubled. In terms of the post-COVID recovery and the digitalisation process, researchers argue that 'data mining

techniques show enormous potential when it comes to decision support in context of post-COVID-19.' (Petrovich et al., 2021, p.32).

One significant concept is the notion of an Inclusive Green Economy (IGE) – a thriving economy that delivers interlinked economic, social and environmental outcomes, those sought by the Sustainable Development Goals (SDGs) and the Paris Agreement. In 2020, the partners for an IGE discussed 'COVID-19: 10 priority options for a Just, Green & Transformative Recovery'. In this document, they argue that 'the green economy principles of wellbeing, justice, sufficiency and efficiency, planetary boundaries and good governance should guide recovery plans and actions.' (Jung & Murphy, 2020, p.1) Importantly, Jung and Murphy (2020) also suggest that 'governments are presented with a choice: use this moment to build a stronger economy that is cleaner, fairer and more resilient, or further entrench an old-fashioned economy driven by fossil-fuels and debt-laden consumption.' (WEF & JLL, 2021, p.3).

The World Economic Forum has introduced its 10 Green Building Principles, which outline the key steps a company requires for the delivery of a net zero carbon commitment (Jung & Murphy, 2020). As one McKinsey and Company report indicates, 'achieving net zero would mean a fundamental transformation of the world economy, as it would require significant changes to the seven energy and land-use systems that produce the world's emissions: power, industry, mobility, buildings, agriculture, forestry and other land use, and waste.' (McKinsey Global Institute, 2022, p.2). From a geographic perspective, the report thoroughly analyses effects from 69 countries, those which comprise around 95% of global GDP. Furthermore, six characteristics have been formulated for the net zero transition that have emerged from a scenario-based analysis.

In general, 'the green policies that meet a range of positive social, economic, and environmental benefits include:

- support for investment in renewable electricity generation, and in grid flexibility measures needed to improve energy security as a larger share of generation capacity is made up of intermittent, non-dispatchable renewable sources

- support for investment to improve the energy efficiency of buildings and appliances
- car scrappage schemes and public transport investment to promote uptake of zero emission vehicles
- support for nature-based solutions, such as climate-friendly agriculture or ecosystem restoration and reforestation.' (Lewney et al., 2021, p.3).

Such a 'green' recovery is at times defined in opposition to 'grey' and 'colourless' policies. Dafnomilis et al. (2020) and Hepburn et al. (2020) define 'colourless' policies as having a neutral effect on the status quo, whereas 'grey' measures are defined as those that directly contribute to further environmental harm (Dafnomilis et al., 2020). Over one third of the world's population lives within 100 kilometres of an ocean, therefore the notion of a 'blue' recovery is equally important. The ocean economy may subsequently also become a notable victim of the impacts of COVID-19. Investment in a 'blue' recovery and stimulus packages, along with policy reform, can immediately create jobs. 'This policy includes proposes a set of five priorities:

- ✓ Investing in coastal and marine ecosystem restoration and protection
- ✓ Investing in sewerage and wastewater infrastructure for coastal communities
- ✓ Investing in sustainable community-led non-fed marine aquaculture (mariculture), e.g., shellfish and seaweed
- ✓ Incentivising zero-emission marine transport
- ✓ Incentivising sustainable ocean-based renewable energy.' (Northrop et al., 2020, p.1).

Thus, it can be concluded that the directions for the post-COVID-19 economic recovery are marked by the need to protect the environment.

3 The future of jobs and the role of education

Based on the factors previously identified, it can be outlined that both the 'green' and 'blue' recovery, and their respective changes, can act as a leapfrog development. Accordingly, alongside other spheres, they will have a notable impact on the labour market.

Many organisations anticipate these changes on the labour market, alongside the need to upgrade certain skills – the scale of which is quite impressive. For example, one 'study by McKinsey & Company suggest that by 2030, up to 375 million workers will need to switch occupational categories due to automation and all workers will need to adapt to co-exist alongside increasingly capable machines. A 2017 McKinsey Global Institute survey reported that 62% of business executives believe that more than a quarter of their staff will need to be retrained in part because of automation and digital technologies.' (D2L, 2019, p.2). According to another study, '14% of existing jobs could disappear as a result of automation in the next 15-20 years, and another 32% are likely to change radically as individual tasks are automated.' (OECD, 2019, p.3). 'While the majority of the workforce cannot work remotely, up to one quarter in advanced economies can do so three to five days a week.' At present, over 'half the workforce, however, has little or no opportunity for remote work. Some of their jobs require collaborating with others or using specialised machinery.' (Lund et al., 2020, p.2, 4-9). Others believe that the future of work is not solely influenced by digitalisation. Their model 'includes an analysis of the following key trends to determine the bigger picture of work: environmental sustainability, urbanisation, increasing inequality, political uncertainty, technological change, globalisation and demographic change.' (Bakhshi et al., 2017, p.12).

When comparing the forecasts made before and after the pandemic, it is possible to conclude that the initial stage largely focused on the upskilling and reskilling of the workforce. Concurrently, certain jobs will disappear due to automation and other career paths will emerge, for instance, in technological fields. Therefore, these challenges on the labour market require appropriate changes in the education system, with alterations needed in both secondary schools and higher education systems. These formats have different missions, thereby secondary education has more time, relatively, to respond. However, the higher education system must correspondingly deal with both the short- and long-term challenges.

In 2016, a World Economic Forum (WEF) report mentioned that present primary school pupils are expected to enter a labour market that has been modified by 65% of its current activity (WEF, 2016). The same organisation selected the best 16 schools on a global scale that met the requirements for the Fourth Industrial Revolution. It has additionally established eight key skills necessary for Education 4.0 (WEF, 2020).

The challenges that HEIs face can be divided into two parts: 1) those due to the almost complete transition to distance teaching as a result of the pandemic; and 2) an adequate response to upskilling and reskilling by increasing the scale of remote work. Prior to the pandemic, many researchers noted the significant role of universities, particularly entrepreneurial universities, in the development of local economies – as with the case of Cambridge University and its spin-offs (Gagnidze 2018a; Lekashvili & Bitsadze, 2021; Seturidze & Topuria, 2021; Subic, 2021). Within entrepreneurial universities, there is space for an effective dialogue between various educational, scientific, business and public authorities. Moreover, these authorities can quickly commercialise research, introduce the results to the market, and retrain fully qualified specialists. Due to their relevance, below a few key factors have been identified that contribute to the efficient functioning of entrepreneurial universities, namely: the creation of an 'entrepreneurial environment, entrepreneurial staff as well as entrepreneurial teaching and learning; a strong entrepreneurial vision and the presence of leaders; the need for an aware environment to support spin-off creation; identifying factors that determine continuous organisational success.' (Dominici & Gagnidze, 2021, p.24).

It can thus be concluded that the labour market and the education system will each face notable challenges in the post-COVID period. A transformation in education is therefore required in order to deliver Fourth Industrial Revolution professionals onto the labour market. With a requirement for quick results, governments should pay particular attention to their educational policies.

4 Conclusion

The paper concentrates on several post-COVID challenges, namely: the approaches of the 'green' and 'blue' recovery, the future of jobs, and complexities within the education system. Due to climate change, the present focus should be on the 'green' and 'blue' recovery, digitalisation, and the intensity of scientific research (Črešnar et al., 2020; Gogorishvili, 2018; Jamagidze, 2020; Sepashvili, 2019; Sobolieva et al., 2021; Sobolieva & Harashchenko, 2020; Petrović et al., 2021). The transition towards remote work will also increase the scale of the impact of the pandemic on the economy and affected urban economies, transportation and consumer spending. Such post-pandemic influences will thus have a large-scale impact on the labour market, and upskilling and reskilling for a large part of the workforce will become necessary. Special importance should equally be placed on the education system,

particularly on higher education and the formation of entrepreneurial universities, as such universities notably introduce scientific research to the market at minimal cost and high-quality. Similarly, the existing lifelong learning system in universities should provide the necessary upskilling and reskilling for a transformed labour market.

Given the scope of this paper, which represents limited desk research, it proves difficult to analyse the multifaceted picture of the post-COVID economy. However, it can confidently be stated that the economy will be categorically different in the wake of the Fourth Industrial Revolution. It has become clear that the simultaneous development of the aforementioned directions ('green' and 'blue' recovery, digitalisation, reskilling and upskilling, appropriate education, among others) will place a more systemic approach on the agenda (Mulej et al., 2017; Gagnidze, 2018b). The author of this paper is of the belief that swiftly rebuilding the post-COVID economy is possible in the clusters, since they are better-organised networks and systems. This particular theme will be further developed in our future studies.

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