UNIVERSITY OF CAMBRIDGE
INSTITUTE FOR SUSTAINABILITY LEADERSHIP

CLG Europe

Technical Report Section 3

Maximising the benefits:

Economic, employment and emissions impacts of a Green Recovery Plan in Poland

In partnership with

WE MEAN BUSINESS COALITION

Authors

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Introduction

In its January 2020 World Economic Outlook report,[1] the IMF projected the global economy to grow by 3.3 per cent in 2020. By April, the rapid spread of Covid-19 had resulted in this projection being revised downwards, to -3 per cent. Towards the end of June, the figure was down to -4.9 per cent, and the IMF was describing the situation as "a crisis like no other", with uncertain recovery.[2]

These figures highlight the unexpected and unprecedented severity of the impact of Covid-19 on economies and labour markets, in addition to health and wellbeing. While some countries are emerging out of the pandemic with few casualties, the detrimental effect on economic growth and employment has been largely unavoidable, and the scale and nature of the impacts has meant that no sector has been left unaffected.

Measures to stop the spread of the virus – such as the closure of schools, factories and services – have forced businesses across all sectors of the economy to close down or downsize, leaving hundreds of thousands of people without work, and many others in precarious employment situations.[3] The negative effects were initially heavily concentrated in sectors that serve consumers, especially 'social' sectors such as hospitality, but they have since spread wider as a result of declining investment. Around the world, millions of people have come to rely on government support mechanisms.

As we enter the last quarter of 2020, the focus has shifted from assessing and estimating the full extent of the damage to developing plans to support the economic recovery. The desired nature, structure and priorities of these plans are subject to debate at national, European and global levels. Widespread calls – whether by business and economists or from the public – for 'Building back better' and 'Building back greener' express the increasing awareness among the general public of the inequalities that the pandemic has highlighted,[4,5] as well as a growing concern over the full extent of damage that natural degradation can inflict.

At the same time, millions of workers are simply worried about losing their jobs and feeding their families when emergency support schemes are wound down. Getting things 'right' in the economic recovery planning and policy implementation is important, as the impacts of the recovery spending will shape the scale of our economy, its competitiveness, sustainability and its effectiveness in providing inclusive prosperity in the years to come. The impacts will likely last well beyond the current short-term timeframe that policymakers are currently focusing on.

The pressure is mounting on policymakers to implement socially and environmentally responsible recovery packages that avoid repeating the mistakes made in the aftermath of the 2008 financial crisis. This is a pressure that many politicians and policymakers understand and support. In Europe, national governments and the EU administration are increasingly recognising the need to ensure that decisions taken now will support both on the economic recovery and progress towards a prosperous and climate neutral economy by 2050, with strong backing also for raising intermediate emissions reduction targets to better support this long-term target. As we have previously set out in ***The Green Deal and Europe's recovery: Building a prosperous, resilient and climate neutral EU through business and political action,***[6] the European Green Deal provides a template for how Europe's economic recovery can be achieved and green investments can create

jobs and kick-start economic activity in the short term, while leading to a more productive, resilient and climate-friendly European economy.

In this report, we draw on Cambridge Econometrics' E3ME modelling[i,ii] results to analyse the potential benefits of a Green Recovery Plan. The modelling assesses the economic, employment and environmental impacts of three different scenarios, including two recovery plans that could both boost GDP and protect jobs:

- A **Covid-19 baseline scenario**, which shows the impacts of Covid-19, and how these impacts are likely to play out in 2020–30 if no recovery plans are put in place. This scenario was developed by Cambridge Econometrics in mid-2020, but has since been updated to take in more recent information, with the macro-level outcomes for each country remaining similar to those predicted by the IMF.
- A **VAT recovery scenario**, which follows a 'return to normal' approach by reducing VAT rates by 5 percentage points to encourage households to resume spending.
- A **Green Recovery Plan**, which aims to boost economic activity while simultaneously reducing CO_2 emissions.

The modelling results show the impacts of these three scenarios in graphical format compared to a no-Covid baseline, illustrating the impact of each recovery scenario in relation to what the situation would have been if Covid-19 had not happened (no-Covid baseline).

The Green Recovery Plan consists of the following policies, which are all implemented for a two-year period (2021–23) and the cost of which is covered by the governments. These measures are combined with a lower VAT reduction rate so they come out at the same cost to government as a VAT reduction alone. The policies in the Green Recovery package are described below, with more detailed information available from the full report Assessment of Green Recovery Plans after Covid-19 and our assessment of different markets in Europe here. .

- **Energy efficiency** in buildings is improved to reduce energy consumption in this sector by 8 per cent, primarily through the implementation of energy efficiency measures in 2021–23. This is ambitious but achievable, and would put the EU, for example, on a path that would be consistent with achieving the current 2030 target for building energy efficiency.
- Boosting the uptake of **renewable energy** technologies by offering a capital subsidy of 50 per cent on new wind and solar equipment to incentivise investment during the immediate recovery period.
- Accelerated **electricity grid improvements** through additional government investment.
- Subsidy to cover 20 per cent of the cost of new **electric vehicles** (EVs) for households that scrap their old internal combustion engine vehicles.

[i] For a more detailed overview of E3ME, see Mercure et al. (2018) or the E3ME model manual.
Mercure, J-F., Pollitt, H., Edwards, N. P., Holden, P. B., Chewpreecha, U., Salas, P., et al. (2018). Environmental impact assessment for climate change policy with the simulation-based integrated assessment model E3ME-FTT-GENIE. *Energy Strategy Reviews*, *20*, 195–208. doi: https://doi.org/10.1016/j.esr.2018.03.003
[ii] Cambridge Econometrics. (2020). *What is E3ME? Our Global Macro-econometric Model*. Retrieved from: https://www.e3me.com/what/e3me/

- A tree-planting initiative to plant 10 billion trees worldwide over 2021–23, allocated to countries based on a combination of land mass and the size of the current forestry sector.

The Green Recovery Plan is a stylised version of what a financially, economically and politically feasible recovery package with a green focus might look like, rather than a true reflection of an existing or proposed recovery spending plan. It includes a selection of policy measures that have been either already implemented or proposed in various countries, and that could realistically be implemented.

The results presented in this report provide much needed evidence of the multiple benefits of green recovery spending. They clearly show that spending on sectors that support decarbonisation and the transition to a climate neutral economy can have additional benefits, including positive impacts on economic growth and employment. Moreover, they illustrate how these policies work to generate mutually reinforcing positive outcomes, and how the impacts of specific types of green recovery spending may vary between countries depending on contextual factors.

The policy package is a hypothetical construct but the modelling results can help governments to make informed decisions regarding the nature and structure of recovery spending by demonstrating the multiple benefits that can be derived from a mixture of several different green policy measures. By showing the contribution that each green policy measure can have on GDP, employment and CO_2 emissions in various types of national contexts, the results will also allow policymakers to identify specific green recovery spending options that might be most appropriate in their specific national context or build on extending existing programmes.

Impacts of the Green Recovery Plan for Poland

Unlike most other EU countries, Poland has experienced steady economic growth for the past 30 years, including throughout the 2008 global financial crisis and the post-crisis period. The country was therefore better placed to face the Covid-19 pandemic than most of its European neighbours and has not suffered as severe economic damage.

Since March 2020, the Polish government has provided support to employees and companies across all sectors of the economy through the EUR 69 billion "Anti-crisis Shield". However, the scale and structure of the Shield's financial flows supporting low carbon transformation remain unclear, and some estimates suggest that only 10 per cent of the Shield's budget will be allocated to support the energy transition and environmental protection, while around 80 per cent of the Shield's budget has not been subject to climate or sustainability conditionalities.[7]

Poland is also due to receive EUR 23.1 billion in grants (in addition to a possible EUR 34.2 billion in loans) from the EU Recovery and Resilience Facility to be allocated to various projects through a competitive process under the National Recovery and Resilience Plan. So far, the Polish government has announced its intention to allocate a substantial proportion of the European Recovery Fund to the buildings sector, with the primary objectives of generating jobs and improving air quality rather than to reduce emissions. In addition to this, the Green Investment Package introduced by the Ministry of Climate is expected to allocate around EUR 186 million to support development of e-mobility and low-emission transport.[15]

This takes place in a context where Poland has traditionally opposed EU climate goals and where coal currently provides 80 per cent of the country's power needs – but is the only key sector severely hit by the Covid-19 crisis. On 25 September, Poland announced a landmark agreement to phase out coal mines by 2049. This will not be an easy task but it strengthens Poland's claim to some of the €750 billion economic stimulus funds that the European Commission has proposed linking to the bloc's climate goals, potentially leading to better outcomes for the EU's long-term climate objectives as well as the Polish economy.[8] The stimulus is therefore a chance for Poland to begin the transition away from coal, while offering support to local communities. As Poland's Prime Minister Mateusz Morawiecki was quoted saying, "once, we could not afford to develop renewable sources of energy […] but now we cannot afford not to develop them".[9]

In our overview below, we highlight how modelling the potential impacts of economic recovery plans on the economic, employment and emissions outcomes in Poland provides unambiguous evidence of the potential benefits of a Green Recovery Plan compared to other options.

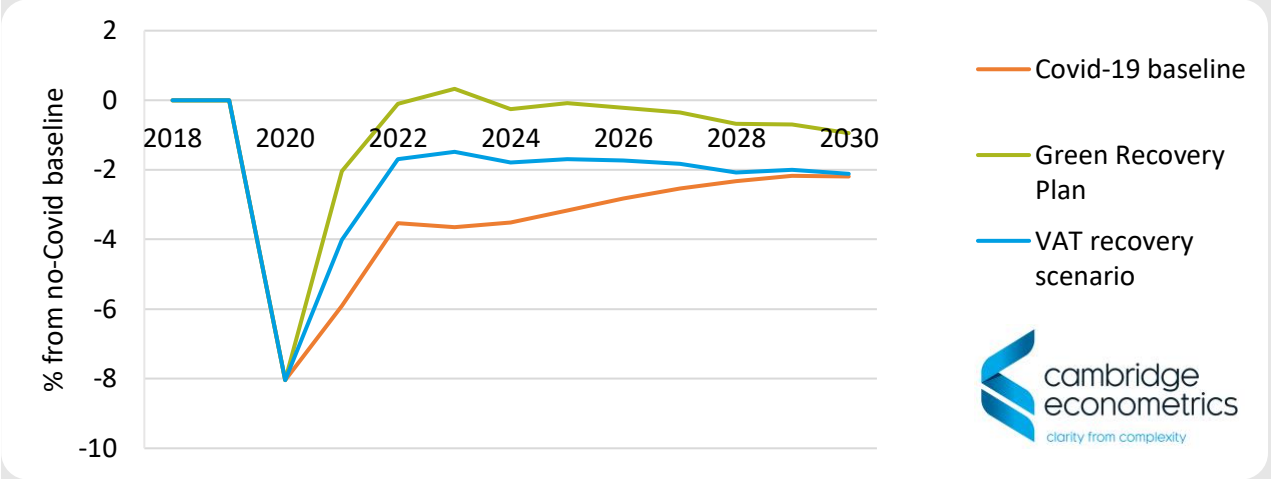
Socio-economic impacts

Compared to many other EU countries, the Polish economy has been less severely affected by Covid-19 and is expected to rebound back to strong growth in 2021 (illustrated by the recovery scenario lines in Figure 1 running parallel to the no-Covid baseline scenario).

Figure 1 shows the impacts of the three scenarios on GDP. The VAT recovery scenario could get the Polish economy almost back to baseline, nearly neutralising the effects of Covid-19. However,

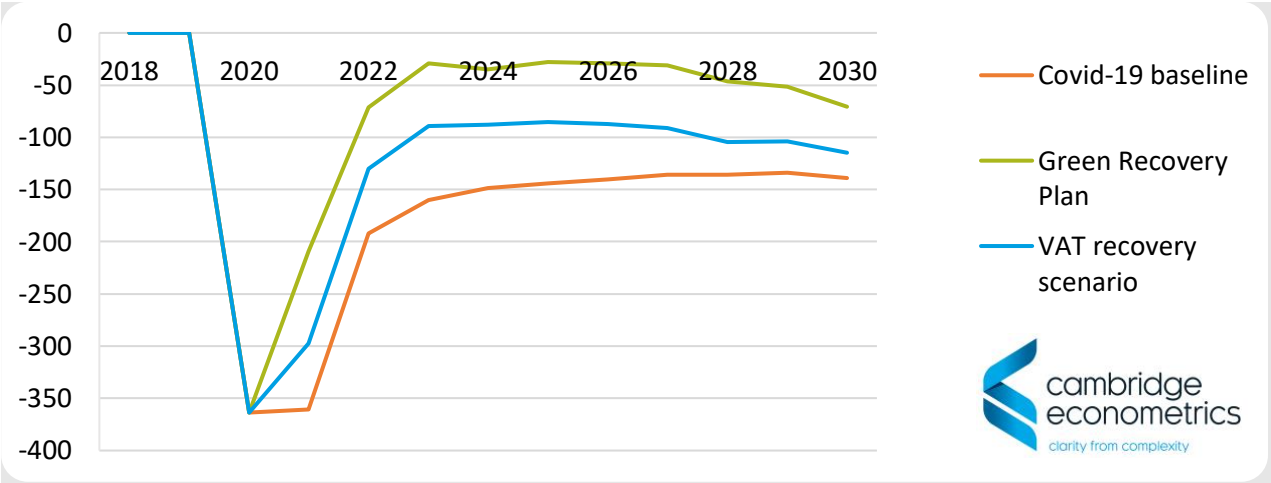
the Green Recovery Plan could lead to even better outcomes, offsetting all the negative effects of Covid-19 on GDP.

Figure 1: GDP impacts in Poland (% difference from no-Covid baseline)



The results for employment (Figure 2) follow a similar pattern to GDP, although with a slightly longer time lag. Although the results for both recovery plans are better for Poland than most other economies, the Green Recovery Plan still results in more favourable outcomes than the VAT recovery scenario, creating enough jobs to erase the Covid-19 overall net change in employment close to zero.

Figure 2: Employment impacts in Poland (thousands, compared to a no-Covid baseline)



Sectoral impacts

Table 1 shows the impacts of the pandemic and recovery plans on different sectors of the economy in 2024. As the numbers clearly indicate, the negative impacts of Covid-19 on most sectors are much smaller than in the other countries presented in this report (e.g. Germany). Even in the Covid-19 baseline scenario, Poland is in recovery by 2024. However, the Green Recovery Plan provides an additional boost to all sectors. A Green Recovery Plan could effectively result in several of the sectors ending up with output above no-Covid baseline levels – even consumer services, which has been severely affected by Covid-19.

Table 1: Sectoral output impacts in Poland (2024), % difference from no-Covid baseline

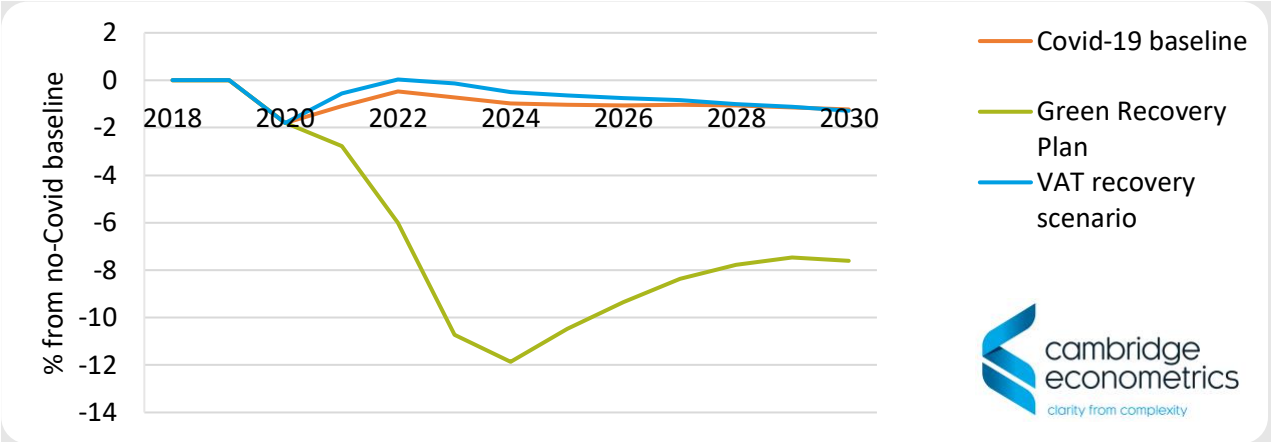
	Covid-19 baseline	VAT recovery scenario	Green Recovery Plan
Agriculture	-1.2	0.0	1.3
Energy and Utilities	-0.7	-0.3	-4.4
Basic Manufacturing	-2.6	-1.4	0.6
Advanced Manufacturing	-3.6	-2.9	-1.9
Construction	-6.6	-5.9	-5.0
Consumer Services	-4.6	-2.5	1.4
Transport and Comms.	-1.2	-0.7	-0.3
Business Services	-3.7	-1.9	-0.5
Public Services	-0.8	-0.2	0.6

The energy and utilities sector includes a range of different types of companies, some of which focus more heavily on renewable energy than others. Our view is some power generators with a strong presence in renewables would significantly benefit from a Green Recovery Plan. The emissions reductions figures presented in Figure 3 would support an assumption that reduced demand for energy (for example as a result of improved energy efficiency) would result in fossil fuels are replaced by renewables.

Emissions impacts

The impact of the pandemic on emissions in Poland has been much lower than in the other countries included in this report, and will remain close to zero throughout the period up to 2030 (see Figure 3) in the Covid-19 baseline scenario as well as the VAT recovery scenario. However, the Green Recovery Plan has the potential to reduce Poland's emissions by up to 10 per cent by (compared to a no-Covid baseline) 2024, bringing emissions reductions significantly forward. While emissions from vehicles keep decreasing after 2024, the ending of renewables subsidies is too soon for renewables to displace conventional power sources in Poland, so some of the initial reductions in emissions are offset. More sustained support for renewables would be needed to maintain the emissions reduction benefits arising from the Green Recovery Plan in 2021–23 over a longer time period.

Figure 3: Emissions impacts in Poland



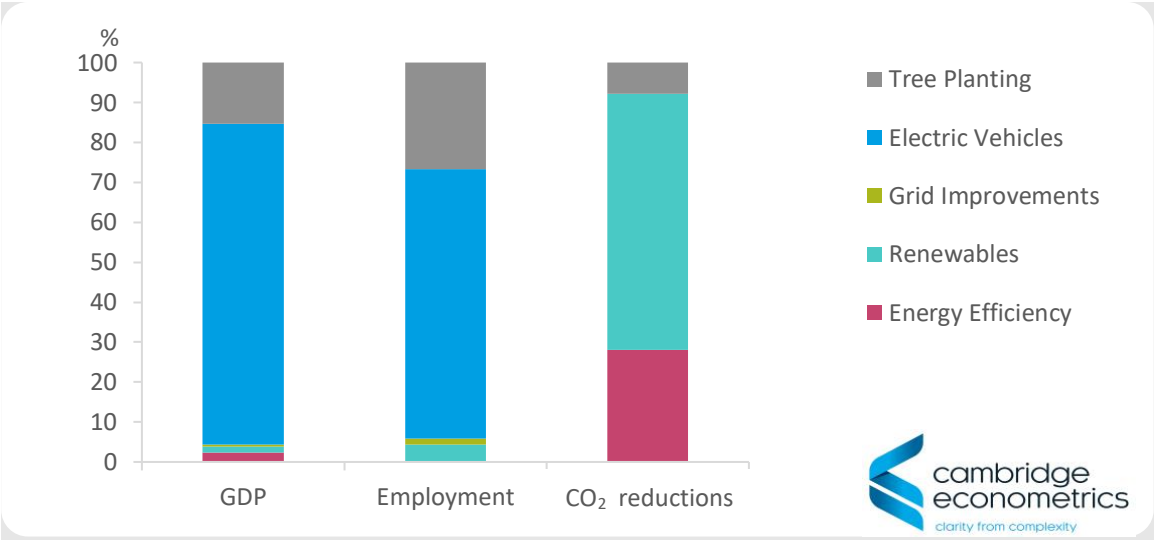
Contributions of each policy

Figure 4 shows the percentage contribution of each environmental policy to the aggregate outcomes in the Green Recovery Plan, aggregated across 2021–30. For GDP and employment, the results are similar to those for Germany, with 70–80 per cent of the benefits accruing through the car scrappage scheme that promotes EVs. As in Germany, this result reflects a combination of domestic uptake of EVs and exports of cars or components.

The tree-planting programme also makes a notable contribution, including around a quarter of the jobs that are created.

In contrast, the reductions in emissions can be attributed largely to the renewables subsidies and the energy efficiency measures. This outcome reflects the carbon-intensive nature of Poland's power sector, which limits the positive impact of increasing EV uptake on CO_2 emissions. On the other hand, it allows for large potential emission reductions from renewables and energy efficiency measures that reduce household energy consumption.

Figure 4: Contribution of each Green Recovery policy in Poland (2021–30)



"I think we all know the saying 'never to waste a good crisis'. This has never been truer in our lifetime than it is today when we are confronted with the triple corona – economic – and climate crisis. Yet, this also offers us the opportunity to make a decisive turn towards a better and brighter future, a future in which this and the next generations can prosper in a more inclusive manner in a carbon neutral world. At Signify, we have become carbon-neutral across our global operations last month, and our Polish facilities, which are responsible for more than 25% of our global electricity footprint, are now 100% powered by clean electricity through a 10-year deal with Green Investment Group's (GIGs) Kisielice onshore wind farm. Taking bold climate action has unlocked employee engagement, creativity and innovation, as well as new green and digital jobs. Most of all it embedded a passion to collaborate for a better future. Let's now do this at scale for Europe and by doing so inspire the world at large to follow suit."

Harry Verhaar
Head of Global Public & Government Affairs, Signify, and Chair of CLG Europe

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