Dutch infrastructure during and after the corona crisis

Quick rebound or green recovery?

An overview of the debate

Ema Gusheva, Vincent de Gooyert, November 2020

Key takeaways:

- Infrapartners' integration of societal impact metrics is key to the sustainability transition and improves resilience: society's capability to deal with future shocks
- Infrapartners have an opportunity to address widening socioeconomic inequality created by COVID-19
- Joint re-training programs would accelerate economic recovery for infrapartners
- Multipurpose assets, designed through collaboration between infrapartners, foster resilience in infrastructure

COVID-19 has shaken up Dutch society like no other event in the recent past. The pandemic had, and will continue to have, far-reaching consequences. Besides being a health crisis, the impact on the economy and society more broadly are beyond what anyone foresaw. All Dutch infrastructure operators are affected and will need to tap into their responsiveness to adapt to 'the new normal'.

Motivation

Soon after the start of the recovery from the first corona wave, the idea emerged that the crisis, besides being a personal tragedy for many individuals, also provides a window of opportunity for structural change. A myriad of position papers was launched, including one by the Dutch Sustainable Growth Coalition, under labels as 'green recovery', 'resilient recovery', and 'build back better'. Others warned that priority should be given to a quick rebound, to avoid worsening the pressure already experienced. **The aim of this memo is to provide a review of the position papers in this 'quick rebound versus green recovery' debate, in order to help infrastructure partners make decisions when it comes to infrastructure investments during and after the corona crisis.**

Although in practice infrastructure partners of course do not have to make a binary choice between quick rebound or green recovery, a review of the argumentation used in the position papers in this debate will help strike the right balance between repairing the old and building the new. Below we summarize our main findings.

Consensus on the need for public investments, diversity in terms of topics addressed

Generally, there is much common ground in the debate between 'green recovery' and 'quick rebound'. There is wide consensus that investments must continue as the main tool for economic recovery, with few organizations criticizing existing government policies for their shortcomings in promoting sustainability and inclusivity. The largest differences between position papers occur because most sources cover only an aspect of the debate.

The biggest disagreement among position papers was on whether reshoring policies have a positive impact on economic resilience in the Netherlands. Such supply chain changes can have major implications for existing infrastructures. Next, some disagreements were due to the fact that the papers had access to different data as in the case of behavior shifts. Sources with early data on economic developments after the first wave interpreted that consumer behavior will rebound post-COVID while others claim that it is uncertain. Most sources discussing GDP development agreed that post-crisis GDP development will remain the same or worse than pre-crisis GDP. On the other hand, some optimistic sources predict that post-crisis GDP can be significantly larger if there are structural shifts in the economy, which would help address public debt. Similarly, some optimistic sources posit that productivity can be a driver of this growth if there are investments in innovation, disagreeing with the pessimistic view that productivity will be crippled in the medium term.

Method
For this research we reviewed 16 position papers from Dutch and global think tanks or individual experts. The papers are selected from a list of 106 papers according to their relevance to Dutch infrastructure operators, with an attempt to capture as many diverse perspectives in the debate as possible. Each paper is first analyzed by converting the main causal mechanisms into word and arrow diagrams and then compared to the rest of the papers in order to surface emerging insights about issues of consensus and dissensus. This report provides a summary of our findings. Detailed information can be found in the appendix which is available from the authors.

Expected consequences from maintaining, pausing, and intensifying the sustainability transition
There is wide agreement that public and private investment is a key tool for speeding up economic recovery and that both reinforce one another. As such, austerity, or pausing the sustainability transition, seems to be the worst investment strategy for economic recovery. However, investors can maintain the status quo by prioritizing short-term efficiency to meet urging demands such as decreasing energy demand, increasing water needs, increasing train demand, less road usage and lower cargo throughput in the shipping industry. Alternatively, investors can give up short-term efficiency for long-term systemic resilience to future shocks (see Table 1).

	STATUS QUO	PAUSE SUSTAINABILITY TRANSITION	INTENSIFY SUSTAINABILITY TRANSITION
JOBS	Many jobs are maintained. Few are created and few are lost.	Many jobs are lost. None are created.	Many jobs are lost. Even more are created.
CLIMATE GOALS	Little progress toward climate goals	No progress toward climate goals	Much progress toward climate goals
GROSS DOMESTIC PRODUCT	Medium term GDP recovery. Long term GDP likely prone to future crises.	Medium term GDP decline	Focus is shifted from GDP to well-being metrics. Long term GDP is resilient to future crises.
ACCESS TO ECONOMIC OPPORTUNITY	Social inequality deeper than pre-COVID-19	Fast growing social inequality as the non-privileged are left behind	Some social inequality recovery

Table 1. Expected consequences from three investment scenarios

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A closer look at the main topics addressed in the position papers

Resilience

Economic resilience to future crises can be fostered through investments in inclusivity and digitalization. There is disagreement on whether shorter supply chains or more diverse supply chains are better for economic resilience. In addition to economic resilience, the documents suggest investing in biological resilience by conserving biodiversity and sustainable land use, which is important for mitigating upcoming extreme weather events. All in all, resilience is fostered through shifting attention from financial to ESG metrics (environmental, social, and governance) for decision-making. Such a shift might be detrimental to economic performance in the short run, but it would benefit performance reinforcing itself in the long run (see Figure 1).

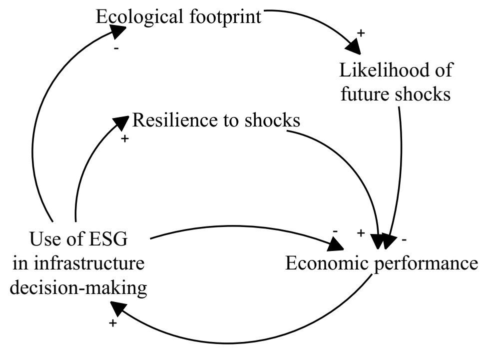

Figure 1. Resilience leveraging short-term and long-term economic performance

Reading the figures: causal loop diagrams and feedback mechanisms

The figures presented in this report are a visual representation of the arguments that are also provided in the text. The figures show *causal loop diagrams*, or *influence diagrams*. The arrows have a specific meaning: an arrow from A to B means that A is considered the cause, and B is considered the consequence. If the arrow has a plus sign (+) this means that the variables move in the same direction: if A goes up, B also goes up and if A goes down, B also goes down. If the arrow has a minus sign (-) this means that the variables move in opposite directions: if A goes up, B goes down and if A goes down, B goes up. Closed circles are known as *feedback mechanisms*: a variable affects itself through the change in other variables. These closed circles can have a major impact on the development of the variables. Some feedback mechanisms have a *reinforcing* nature: they amplify a development quickly leading to escalation (vicious or virtuous cycles). Other feedback mechanisms have a *balancing* nature: they oppose a development leading to stability or inertia.

Digitalization

Digitalization, which has been greatly boosted during the pandemic, is argued to increase productivity, thus helping out economic growth in the long run. 'InfraTech' is becoming ever more important especially as some sectors such as construction in the Netherlands are facing environmental limits. In addition to this, there is consensus that digitalization aids economic resilience by enabling stakeholder collaboration and ensuring self-reliance by lowering dependence on foreign technology companies. Some also argue that digitalization can aid global economic convergence as companies now feel more comfortable offshoring their work to developing countries because of the rise in popularity of remote work.

<u>*Behavior shift*</u>

The largest unknown regarding the consequences of this crisis are post-COVID-19 behavior shifts. Other than goods consumption, there have been changes in global trade, mobility, and energy demand. Because of their detriment to the economy some argue that it is time to pause investments in them, while others argue that investments must continue because a rebound will happen post-COVID which will spike up demand. Governmental support packages are only said to increase the uncertainty of this, since they maintain the status quo, decreasing consumer confidence. In fact, Dutch households have significantly decreased expenditures because of lockdown measures and fear of future income despite generous government support. Thus, the effectiveness of the support packages decreases with the increase in their duration, which is a prominent driver of debt (see Figure 2).

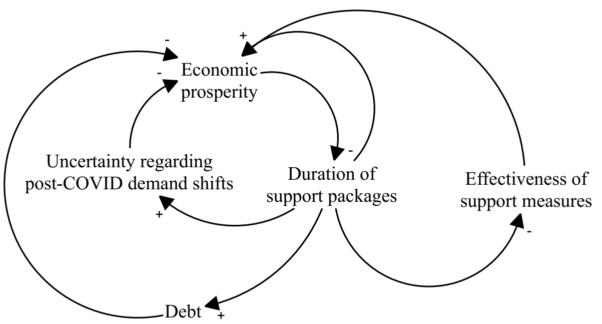

Figure 2. Support packages can be detrimental because of increased uncertainty regarding post-COVID demand shifts

<u>*Human capital*</u>

The crisis has been detrimental to business profitability, thus increasing unemployment, which is in danger of growing because of loss of skills and access to networks. Three types of policies for jobs have emerged: furlough packages, long-term investments and re-training policies. Out of these, re-training policies are seen as essential when pursuing green recovery since job loss will be accelerated. In the background there is an overall shift from firm-specific training and re-training to general continuous education people-centric policies, which support human capital for all labor force both during employment and nonemployment. Thus, policies focused on human capital are key to economic recovery for infrapartners (see Figure 3).

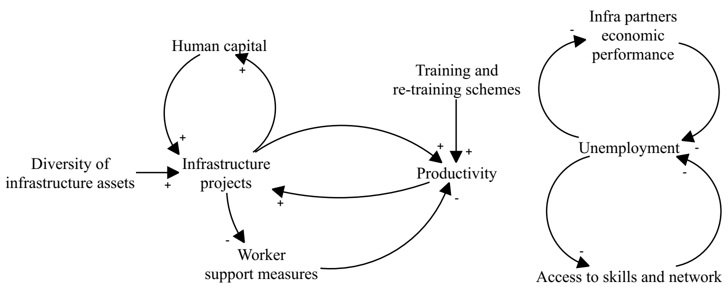

Figure 3. Human capital can drive economic recovery through training and re-training

Models of growth

There is consensus that natural capital and economic capital are in a symbiotic relationship. While it is clear that environmentally destructive activities also benefit the economy, many papers point toward the benefits of environmentally conservative activities for the economy. Specifically, long-term investments in sustainability generate more jobs than they destroy. Proponents of sustainability investments mention the need to decouple economic growth from climate change and change the model of growth to one based on digital innovation and human capital. Last, growth can be exacerbated through coordination between public and private investment (see Figure 4).

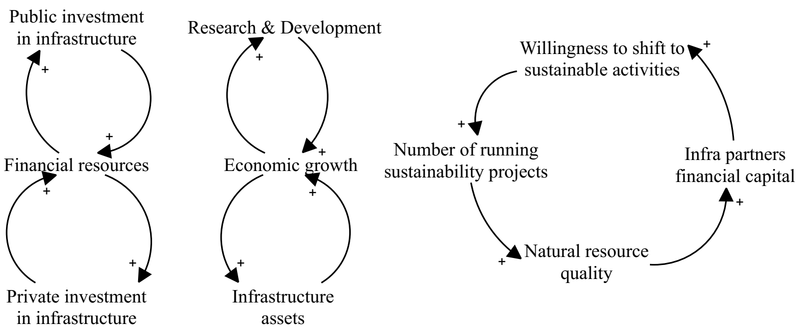

Figure 4. Models of growth based on social, human and natural capital.

Inclusivity

The pandemic has widened the gap between social groups as the poor and vulnerable have been more adversely affected. Not all sources discuss inclusivity policies, but those that do are in strong favor of it. Infrastructure companies have a key role to play here as they can increase access to economic opportunity by focusing on less developed regions or infrastructure for non-privileged groups. This has the potential to offset the damage from the crisis. The main argument for this kind of investment is that inclusive policies will increase public support for the sustainability transition and increase economic resilience by boosting public confidence in the economic future. The alternative would be to face increased segregation and environmentally destructive activities stuck in a vicious reinforcing loop (figure 5).

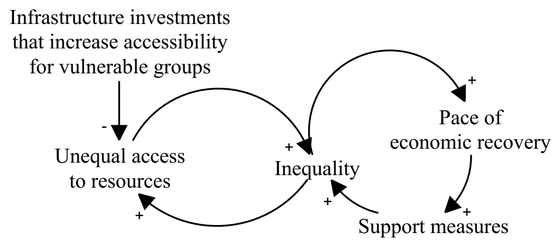

Figure 5: infrastructure can break the vicious inequality cycle

Conclusion

The debate between quick rebound and green recovery is essentially a debate between a short-term or a long-term recovery plan. Green recovery, or the long-term recovery plan, is advised by almost all the documents we reviewed. According to the position papers, the urgency of the climate crisis is best addressed with a global shift to a wellbeing economy, one focused on resilience rather than efficiency. However, it is still unclear whether such an economy would boost financial performance by decoupling economic activity from its ecological footprint or necessitate a shift to ESG (environmental, social, and governance) metrics in light of reduced financial performance.

The corona crisis is a disaster for many individuals, but also provides an opportunity for fundamental change towards new models of improving wellbeing, with infrastructures playing a key role in addressing economic fragility, climate change, and social inequalities.

First responses

Several infrapartners responded to a draft version of this report:
- The idea that we need a shift in focus from efficiency to resilience is recognized.
- The findings confirm the need for a shift in focus from economic growth to broader measures of wellbeing.
- Infrapartners have been investing in the sustainability transition, and it depends on the circumstances of a project whether the current crisis allows for accelerating change or not.
- Infrastructural investments sometimes take years of preparation which is an important limiting factor for innovation.

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