

Shaping public investments for the net zero world

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PANELLISTS



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Shaping public investments in a net zero world: the EU perspective

Global Government Forum Seminar

25 January 2022

Cristiana Belu Manescu

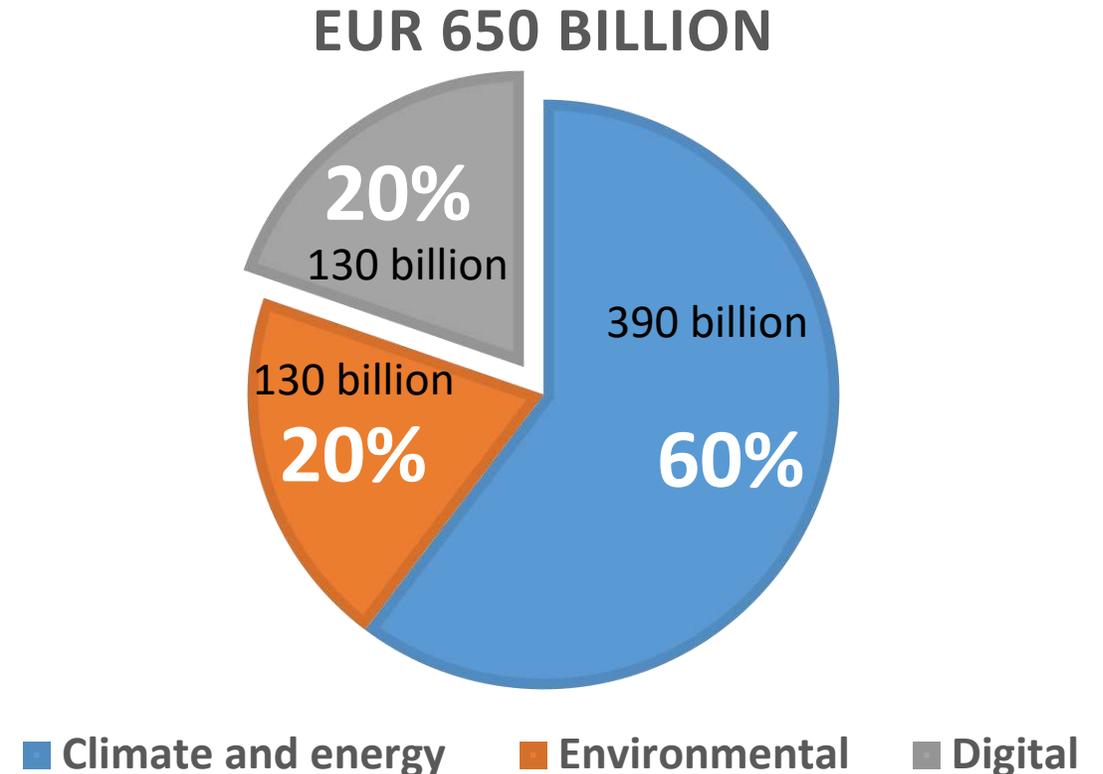
Economist – National Fiscal Frameworks and Institutions

European Commission

2 Disclaimer: Any views expressed on the slides and during the discussion are my own and may not in any circumstances be regarded as stating an official position of the Commission.

EU committed to the twin green- digital transition

- ❖ **Key European Commission priorities:** European Green Deal and EU digital strategy
- ❖ Requiring an **additional EUR 650 billion** annually up to 2030 in the EU, mostly privately funded
- ❖ **Still, public investment to play a key role**

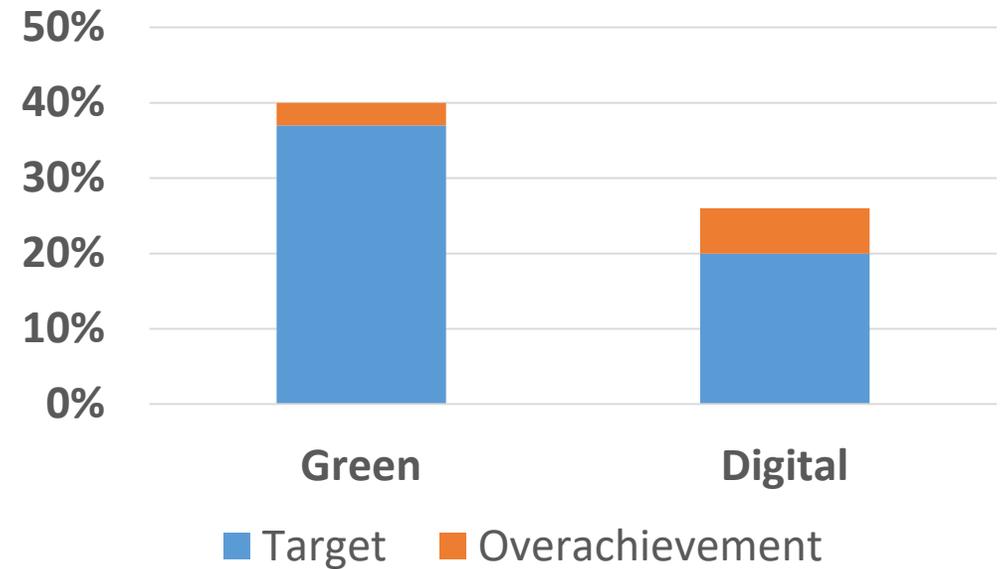


Source: SWD(2020)98 final

The Recovery and Resilience Facility: strong green and digital focus

- ❖ EU's (temporary) policy response to the Covid crisis, worth EUR 723 billion
- ❖ Includes 37% green and 20% digital targets

Achievement of the Green and Digital targets



Source: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html

Key work streams at the COM Services level

- ❖ Green Taxonomy/ Sustainable Finance Strategy
- ❖ InvestEU
- ❖ Efficiency of Public Investment Management
- ❖ Disaster Risk Management and an EU Climate adaptation strategy
- ❖ Green budgeting



Global Government Forum

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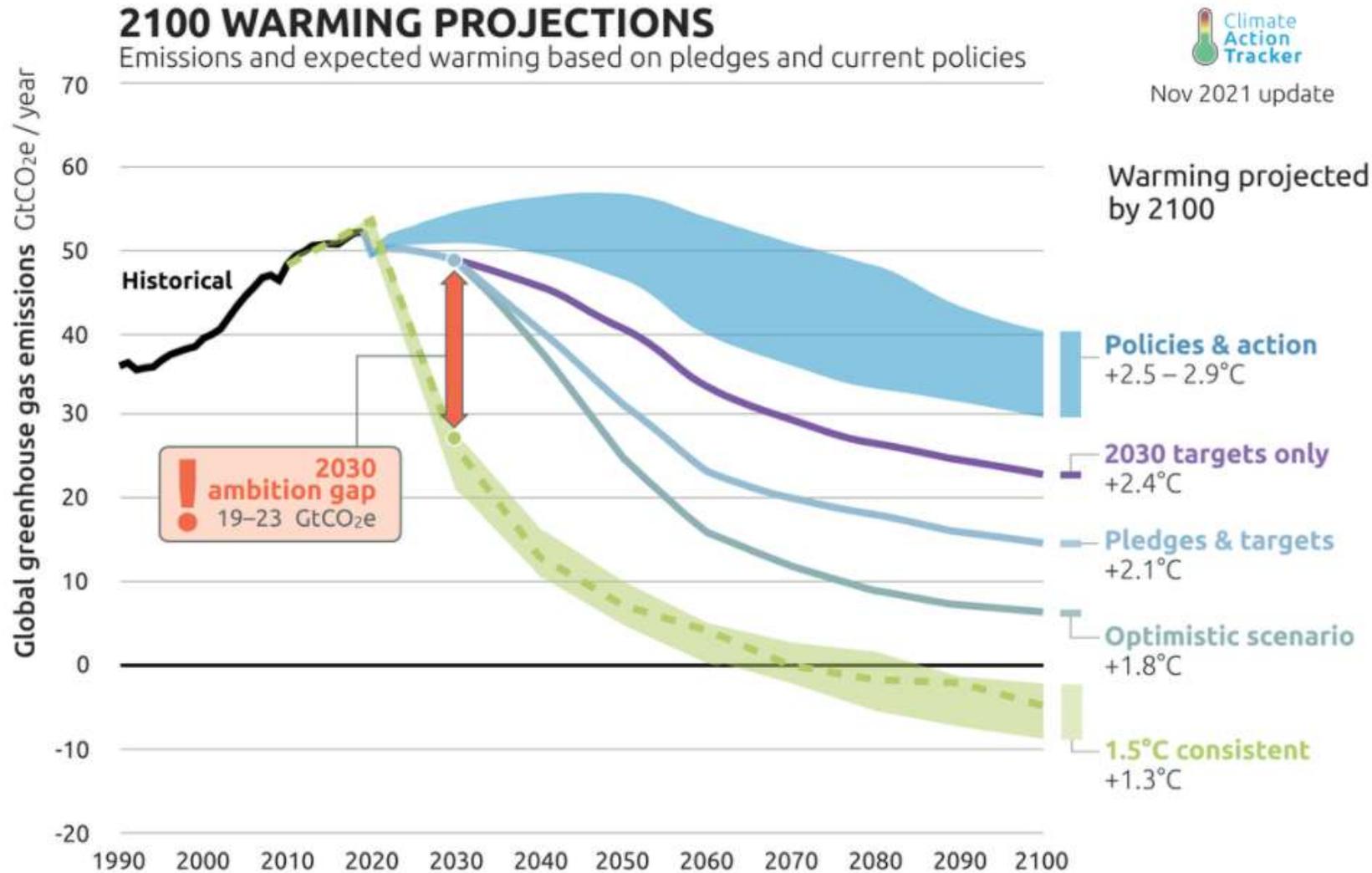
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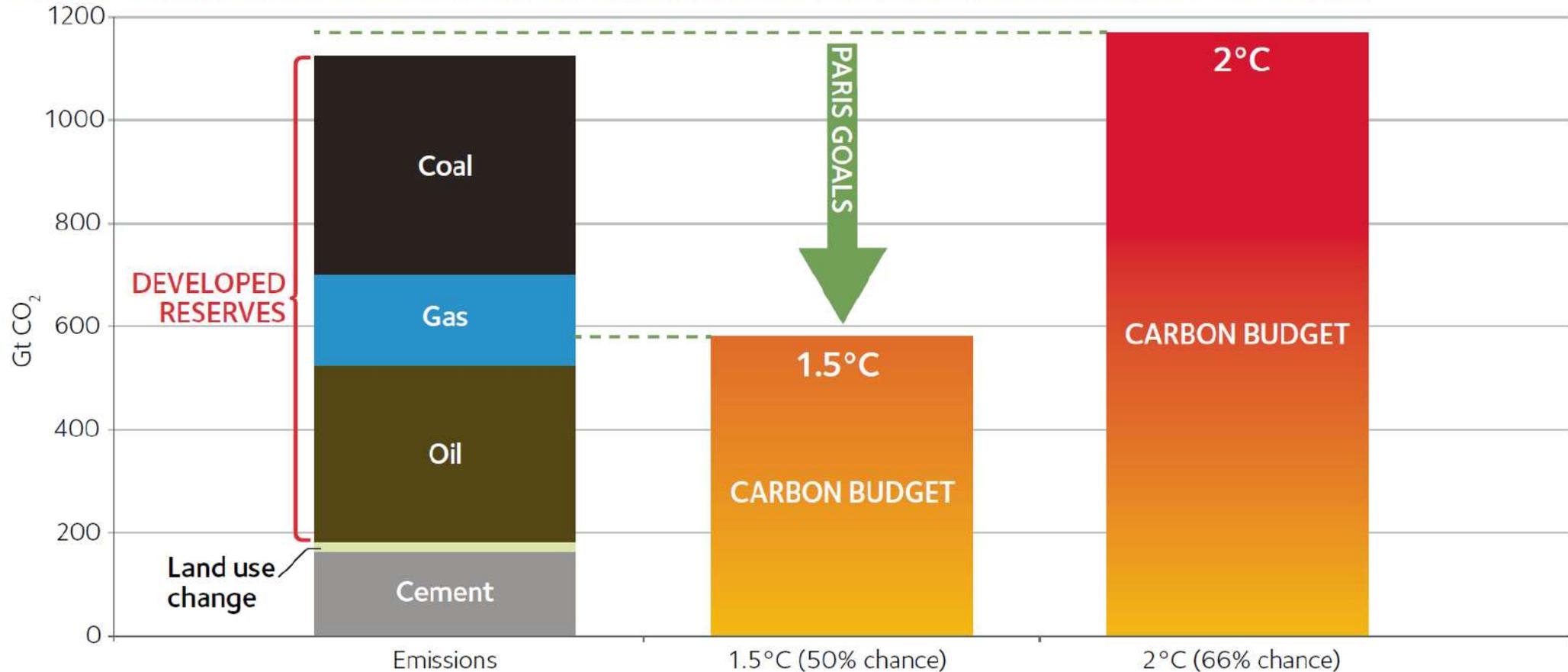
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Climate Action Tracker: warming projections based on targets & policies



Carbon dioxide emissions from developed fossil fuel reserves, vs climate budget(s)

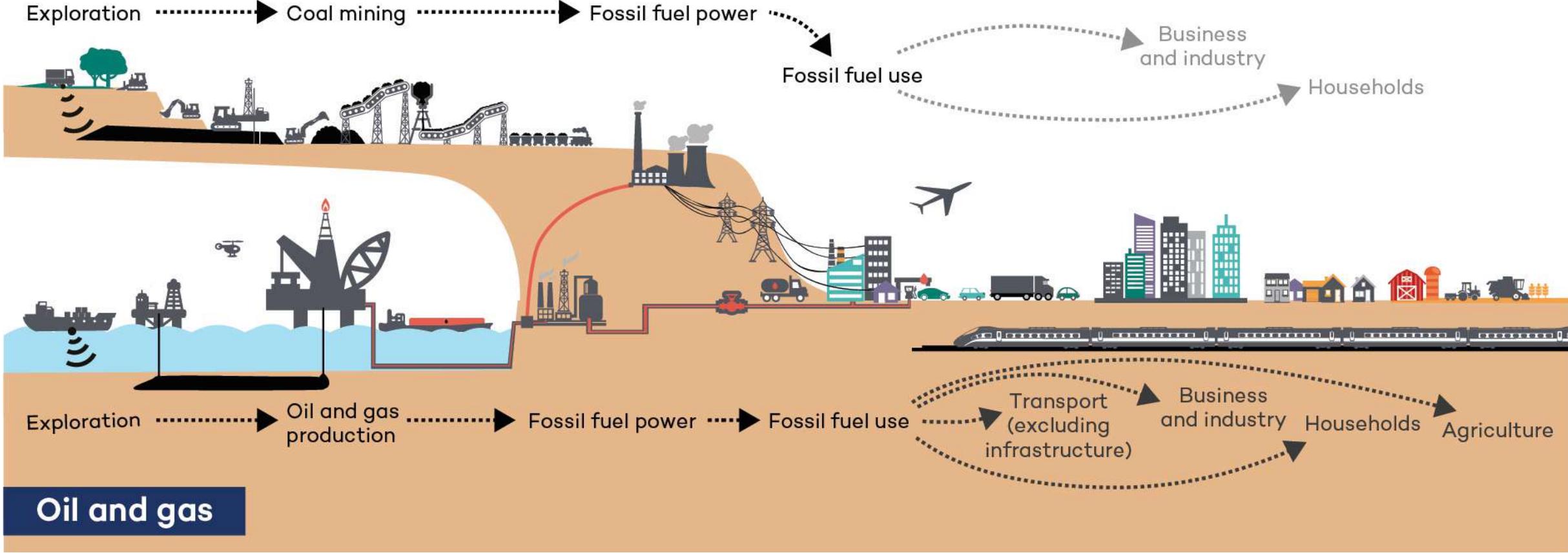
Figure ES-1: Carbon dioxide emissions from developed global fossil fuel reserves, compared to Paris goals carbon budgets



Sources: Rystad UCube, International Energy Agency (IEA), World Energy Council, Intergovernmental Panel on Climate Change (IPCC), OCI analysis²

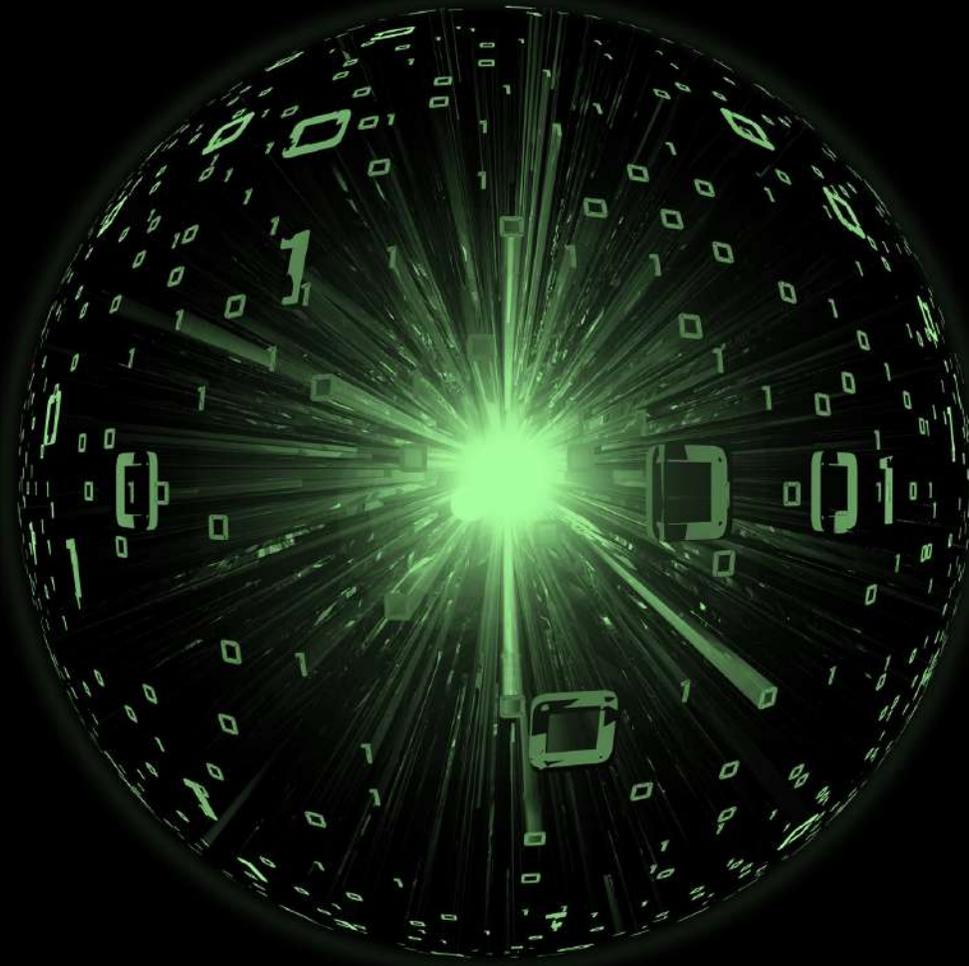
Tracking government support across all stages of fossil fuel production and use

Coal



Source: Doubling Back and Doubling Down: G20 Scorecard on Fossil Fuel Funding (2020)

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Global Government Forum
Shaping Public Investments for the Net Zero World

January 25, 2022 | Michael Flynn, Global Sector Leader, Deloitte



MAKING AN
IMPACT THAT
MATTERS
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Infrastructure as a Stimulus

Governments need to boost the economy through infrastructure investments with an environmentally friendly focus and adequate workforce training



Infrastructure spend is a medium-term fiscal stimulus – good infrastructure required to underpin any economy



Infrastructure can create significant employment



Infrastructure is an excellent platform for Private Sector Participation – Finance, Expertise and Efficiency



Project Prioritization required to deliver shovel ready projects – create an immediate economic impact



Deliver infrastructure for new post-COVID economy – new definition for ‘Essential Assets’



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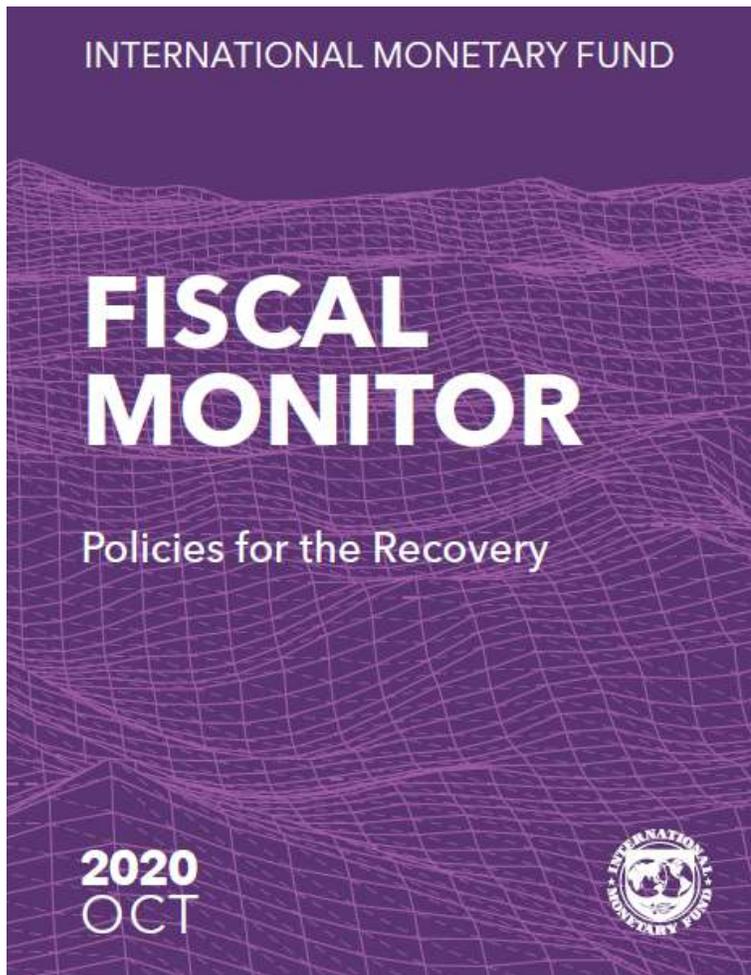


The Direct Employment Impact of Public Investment

JANUARY 25, 2022

Mariano Moszoro
Fiscal Affairs Department





CHAPTER 2 PUBLIC INVESTMENT FOR THE RECOVERY

Introduction

The immediate focus of governments during the COVID-19 crisis has been to provide liquidity to households and businesses. Governments are also using to promote recovery for safe and successful reopening, faster recovery to employment and economic activity, and facilitate transformation to a post-pandemic economy that, with the right policies, can be more resilient, more inclusive, and greener. Public investment can make a crucial contribution toward these goals (see a discussion of the fiscal strategy for the recovery in Chapter 1 and Table 2.1).¹ This chapter outlines how governments can undertake public investment in a timely manner while safeguarding quality, estimates the potential for public investment to create jobs and boost growth, and sets out priorities for the types of investment that will strengthen resilience and sustainability. From a macroeconomic standpoint, the case for public investment is strongest in advanced economies and many emerging market economies that—with sustained interest rates and inflation expected to remain at historic lows—can readily finance an ambitious strategy. In many cases, financing to finance high-quality investments will be desirable, since strong financing lowers the tax burden on workers and other taxpayers. In addition, the return remains positive health returns and are valued by workers when they price savings risk (October 2018 Fiscal Monitor). However, policymakers should ensure that the amount and quality of public investment are such as not to pose risks by overly increasing debt dynamics, especially the countries that do not have reserve currencies. Major changes in global market conditions can result

Public investment usually refers to gross fixed capital formation (excluding of acquisition) less change of fixed assets by the non-resident through central or local government or through publicly owned entities in cooperation for the April 2020 April Update. As an example of the role of state-owned enterprises, public investment measures physical or tangible investments in infrastructure (such as transport, telecommunications, and buildings), but in a broader sense, public investment can include human capital investments in education, skills, and knowledge.

to sudden increases in financing costs (Carmes, Claess, and Spengler 2018; Lianwu 2015), and emerging markets need to increase only slowly before debt crises (Mauro and Zhou 2018). With ample untapped resources, public investment can also have a more powerful impact than in normal times. Public investment can be essential to offset the private investment shock, which provides the major source of private investment could mitigate similar stagnation and the savings gap, which provides the major source of COVID-19 (Rafiq and Sorensen 2018; Eggenstein, Makarov, and Robinson 2018) has been less exacerbated by the crisis, since uncertainty about the course of the pandemic has further dampened private investment and opened higher levels of precautionary saving. Moreover, the recovery of private sector activity is being constrained by reduced private sector balance sheets, losses in human capital because of unemployment, and skill mismatches as demand shifts from high-consumption to those that prevent social distancing. Public investment can encourage investment from businesses that might otherwise postpone debt listing and investment plans.

The low-income developing countries and some advanced and emerging market economies, however, encountering debt dynamics and, in many cases, tight financing conditions have and will likely continue to encounter investment, especially in those economies with high levels of external debt (discussed in Foreign currency: Stable market financing could increase risk premium for both the public and the private sectors, undermining the short-term growth benefits of investment spending (Robinson and others 2018). Based on preliminary information, financing, accumulation and competing spending priorities in new lines and households have caused many middle- and especially—low-income countries to put chronically financial institutions program on hold (Chapter 1). Even so, a gradual realignment of public investment financed by borrowing could pay off with positive short- and long-term multipliers, as long as returns are not too low (see, for example, Rafiq and others 2017; Ochoa-Ruiz 2.1) and governments choose well-targeted investment projects to stimulate economic

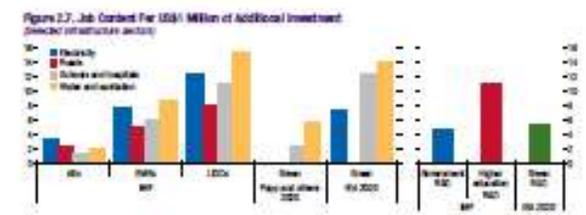


Figure 2.7. Job Content Per \$100 Million of Additional Investment (Selected Infrastructure Sectors)
The figure shows the number of jobs created per \$100 million of investment, by country, type of investment, and by country group. The number of jobs created per \$100 million of investment is based on regression of employment on investment over 1990–2017, covering 47,362 observations for 3,478 publicly owned and state-owned enterprises. The estimates for low-income countries are extrapolated from the data available for 150 developing countries in the same country and region based on OECD data. Some estimates are available in the literature only for a few sectors (see Table 2.1 for details). All advanced economies (AEs) are emerging market economies (EMs) or low-income developing countries (LICs) or Organisation for Economic Co-operation and Development (OECD) or research and development.

growth investment can also create jobs (Chapter 2 of the October 2020 World Economic Outlook). Claess, Föllmi 2017; Qualitative of Investor Metrics for Climate Action 2020). In advanced economies, job intensity appears to be greater for green investments than for traditional investments. The example, job intensity—net of job losses in traditional industries—is estimated at 8 jobs per \$1 million invested in green electricity, 2–15 jobs in offices, new buildings, such as schools and hospitals, and 6–14 jobs in green water and sanitation through efficient agricultural practice and recycling (Figure 2.7). See also ILO 2020 and Popp and others 2020). In addition, many jobs in construction do not require high educational attainment and have low barriers to entry. In the United States, less than 20 percent of workers in clean energy production and energy efficiency occupations have college degrees (Mauro and others 2018). Clean energy infrastructure has been found to be labor intensive in the short term (Claess, Föllmi 2017), although not all green investments create jobs quickly (Popp and others 2020). Some forms of green investments are also not job rich in the long term and require specific skills. For example, windfalls are capital intensive and produced in only a few locations. Whereas green investments offer clear global welfare gains, they do not have straightforward distributional effects, especially in low-income countries. Green and environmental investments can be combined with public employment

programs to maximize investment job impact (as with the Green Recovery program in Rwanda or the Green New Deal in the United States), create the labor force, and promote people in the informal sector (for example, tree-planting programs in Ethiopia and Pakistan). Although creating jobs is a critical objective in this crisis, there may be trade-offs between job quality and job quantity. Supporting the creation of long-term, low-productivity jobs using public work programs or investments in labor-intensive sectors could bring down unemployment through reduced agricultural poverty and high productivity jobs in capital-intensive sectors. Generating high-quality formal jobs will be more difficult if changes in the pandemic environment pressures workers to accept the informal allocation of the workforce, as such changes would erode their skill mismatch between the unemployed and the jobs available (ILO 2020). Governments will need to allocate resources, including resources for digital investment, to train displaced workers and allow them to move to jobs that satisfy preferences and post-pandemic needs.

Fiscal Multipliers in the COVID-19 Crisis and Recovery

In addition to the direct effect on jobs, public investment has the potential to boost growth and increase employment through the usual macroeconomic mechanisms. A more analysis of existing studies

- Contribution to Chapter 2: “Public Investment for the Recovery” and Online Appendix 2.4
- Special thanks to David Amaglobeli, Raphael Espinoza, Paolo Mauro, and Cathy Pattillo for comments and suggestions, to Mouhamadou Sy for sharing his dataset, and to Juliana Gamboa and Riki Matsumoto for priceless research assistance

FINANCIAL TIMES

TUESDAY 4 OCTOBER 2020

NEWS PROVIDER OF THE YEAR

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Westminster Spring

Downing Street is facing its own revolution — ROBERT SHRIMSLEY, PAGE 23

A new cold war

Gideon Rachman explores rising US-China tensions — FT SERIES, PAGE 23



Masked crusader

Will Trump's illness shift perception of Covid deniers? — NOTEBOOK, PAGE 24

Overdue Bond Cineworld hit by film delay

A decision by Hollywood studio MGM to pull the latest James Bond film has brought down the curtain on all of Cineworld's British and American cinemas. Shares in the chain, which also operates the Royal brand in the US and Picturehouse in the UK, fell 26 per cent yesterday as investors took fright amid fears that 45,000 jobs could be lost with the cinema group closed indefinitely. The delayed release of *No Time to Die* — Daniel Craig's final outing as James Bond, right, which was due to begin showing on November 12 — was the final straw for the company after other expected blockbusters such as the Marvel film *Black Widow* were also delayed. Report page 9 Lombard page 14



Johnson heralds green investment as IMF urges global spending spree

Plans include 'floating windmills' • Fund relaxes debt focus • Emphasis put on growth

Mr Johnson's pledge to "build back better" chimes with the IMF's call for advanced economies to worry less about public debt and instead take advantage of historically low borrowing costs to increase spending on infrastructure. The prime minister's rhetoric — "it was offshore wind that puffed the sails of Drake and Raleigh" — perhaps outshone the reality of Mr Johnson's financial commitment: £1.6bn of investment in ports and factories to build the next generation of turbines. Nevertheless his claim that the new investment would create 2,000 construction jobs was in line with the IMF's call for rich countries to plan for new capital spending on green technology. Mr Johnson's offshore wind deal is part of a package of green energy poli-

cies to help the UK meet its ambitious climate targets — including hydrogen fuel and accelerating the ban on the sale of new petrol cars. The prime minister is expected to reveal the multibillion pound initiatives at the end of October, just as the furlough scheme finishes, in an effort to show the government has a long-term economic plan beyond the pandemic. The IMF report marked a shift away from its normal concerns about public finances in rich countries, although it added: "Policymakers should ensure that the amount and quality of public investment are such as not to pose risks by overly worsening debt dynamics." Paolo Mauro, deputy director of fiscal affairs at the IMF, told the Financial Times the high level of uncertainty in

the global economy strengthened the case for higher public investment. "You get a bigger bang for your buck from public investment as investment by private firms is extremely low." The IMF estimated that increasing public investment by 1 per cent of GDP was likely to raise economic growth by more than 2 per cent after two years — a larger return than it had previously projected. This suggests there is the scope to generate between 2m and 3m jobs in the EU, another 2m in the US and more elsewhere, the fund said. "The place to start is maintenance, which is very labour intensive and can address crumbling infrastructure," Mr Mauro said. Report pages 2 & 3 Editorial Comment page 24 Angus Deaton page 25



IMF's Paolo Mauro says: "You get a bigger bang for your buck from public investment as investment by private firms is extremely low"

Briefing

► **Ministers face heat on vaccines target**
Ministers are under pressure from Labour over whether plans to vaccinate the entire country have been downgraded to a new target of vaccinating less than half the population. — REPORTS, PAGE 2

► **Venezuela's president closer to UK gold**
Nicolas Maduro inched closer to gaining control of \$1bn of gold in the Bank of England's reserves after winning a court ruling over the issue of who the UK recognised as Venezuela's legitimate leader. — PAGE 13

► **Nvidia to build British supercomputer**
The US chipmaker is to pump £40m into building Britain's most powerful supercomputer in Cambridge, supporting AI research for drug discovery and other healthcare uses. — PAGE 14



► **Alibaba to take 10% stake in Dufry**
China's Alibaba plans to take a stake of up to 10 per cent in Switzerland's Dufry, the largest operator of duty-free shops, as part of an emergency \$8770m (\$764m) capital raising. — PAGE 8, LEF, PAGE 24

► **Trump receives cocktail of medications**
Doctors have administered Donald Trump a mix of drugs to battle his Covid-19 infection that might not have been given together before to an individual patient. — REPORTS, PAGE 8, NOTEBOOK, PAGE 24

► **New-car market hits reverse**
The new-car market suffered its worst September in two decades — only 329,041 cars were registered — as economic uncertainty hampered trading in what is usually the second busiest month. — PAGE 2

► **BMS to acquire MyoKardia for \$13bn**
Bristol-Myers Squibb is buying the drugmaker MyoKardia for \$13.1bn, at a more than 60 per cent premium to Friday's closing price, as it seeks to grow its cardiovascular portfolio. — PAGE 10, LEF, PAGE 24

Datavatch

Response to Covid



Perceptions differ widely about each country's handling of the virus. While 68 per cent of Germans say their government's response has made them feel prouder of their country, only 29 per cent of people in the US said the same.

- IMF Working Paper and "Chart of the Week" blog
- Ample press coverage
- Disclaimer: No relation between the frontpage news ;)

Background and key question

- COVID-19: record-high unemployment, ~495 million FTE jobs lost in 2Q2020 (ILO 2020, September)
- Public works programs: Great Depression, ARRA...
- **How many jobs can be created by increasing public investment?**
 - ▶ By sector
 - ▶ By income group
 - ▶ Parametrized with labor intensity and labor mobility

Overview

■ Scope

- ▶ Education/health, electricity, roads, and water & sanitation
- ▶ AEs and EMEs; extrapolation to LIDCs

4 sectors,
3 groups

■ Methodology

- ▶ Public works contracted to construction companies (rarely government payroll)
- ▶ Large micro panel of *construction companies*: 1999-2017, +48k observations
- ▶ Estimate employment impact per US\$1 million invested

micro

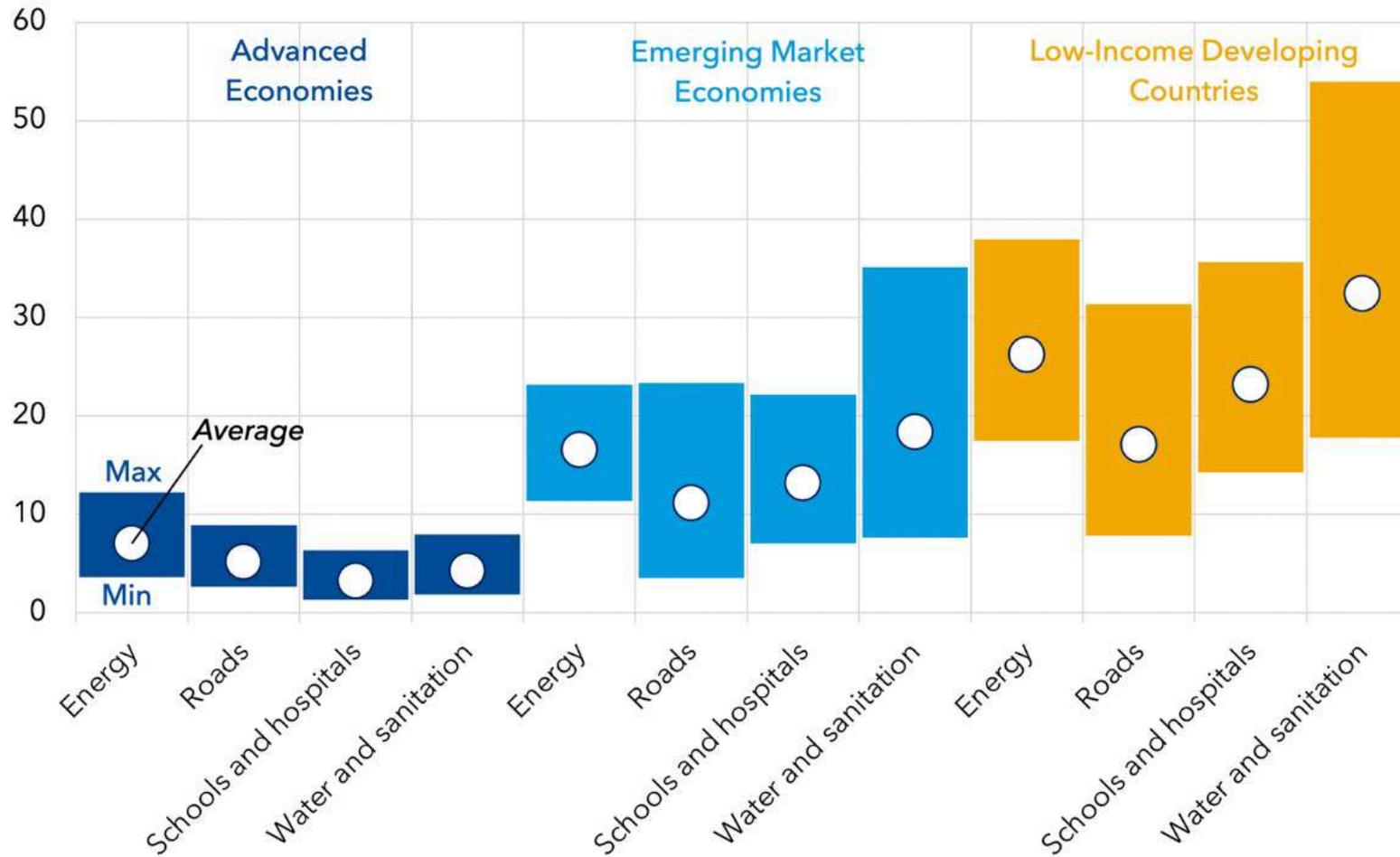
■ Results

- ▶ Δ US\$1 million \rightarrow 3–7 jobs in AE, 10–17 jobs in EME, and 16–30 jobs in LIDC
- ▶ Green investment and R&D component \rightarrow higher employment effect
- ▶ **1% of GDP in public investment \rightarrow +7 million jobs worldwide**

macro



Summary—Job content per US\$1 million



Sources: Compustat, Orbis and IMF staff calculations.

Welfare and political economy considerations

- **State-Owned Enterprises (SOEs)**
 - ▶ 3% of labor force, on average 30% higher job intensity than private firms
- **PPPs not panacea for limited fiscal space**
 - ▶ ≠ “free” money: pecking order driven by profitability and enforcement of property rights
 - ▶ Fiscal space ↔ state capacity necessary for effective regulation
 - ▶ ... but if no fiscal space, state capacity likely weak too → private sector unlikely to fill void
- **Policies on greening the recovery ought to be carefully designed to avoid backlash**
 - ▶ Short-term labor intensive (Garrett-Peltier 2017); but not all (Popp et al. 2020)
 - ▶ Some green investment also not job rich in the long term and require specific skills
 - ▶ Green investment = global welfare gains (Hicks-Kaldor); debatable Pareto efficiency for LIDCs



Thank you!