

IN GOD WE TRUST



AND IN THE DATA?

Post-pandemic economics: 'targeted' economic policy needs robust institutions, reliable data support and persistent questioning.

By Bart Le Blanc

- *Post pandemic economic recovery may be stronger than earlier thought. But how many orphans will the 'Mother of All Recoveries' leave behind?*
- *Broad brush macro-economic policy may not contribute to less divergence and inequality. Targeted policy action is urgently required.*
- *Such targeted response cannot be top down. It demands localised management and micro data support to avoid missing targets and waste.*
- *During lockdown and work from home we have all become more exposed to and reliant on data. We have added ourselves to the ever-growing avalanche of data flows across the internet. But can we really trust them?*
- *The combined insights from institutional economics, data science, ethics and - not to forget - common sense can deliver trustful post pandemic economic policies. But it takes transparency, integrity and a questioning mind.*
- *And finally, the data originator/consumer (i.e., you and me) needs to grow up! Stop moaning and say NO when the next consent for data is asked.*

1. The 'Mother of all Recoveries' may leave many orphans behind.

In the IMF's first full World Economic Outlook of 2021, a cautiously positive assessment of the post-pandemic global economic recovery is presented.

The way out of the public health and economic crisis caused by COVID 19 seems to have become more visible over the last months, particularly following the aggressive public health and economic stimulus approach of the new Biden administration in the US (see the remarkable positive uptick

in the US growth forecast). As a result, the IMF feels that the global economic rebound could be stronger than earlier anticipated, but not for everyone as its forecast illustrate: This recovery dubbed ‘the Mother of all Recoveries’ is expected to be very uneven.

Many countries – most of them Less economically Developed Countries (LDCs) – are struggling and experience a rapidly growing distance between them and the frontrunners (China and the US). They struggle, as the pandemic has caused national and personal grief for a great number of people, significant economic loss and social disruption has caused irreparable damage. In many of these emerging economies, unemployment has soared, particularly for younger workers, education has been decimated/destroyed and new inequalities have emerged and may further grow with limited and hesitant public health and vaccination capabilities.

Unprecedented new public spending programmes across the world (e.g., the Biden COVID Relief plan and the Biden Infrastructure plan plus the EU’s Next Generation recovery plan and China’s ongoing stimulus) and resulting higher inflation expectations may well trigger further increases in interest rates. This may well be manageable for advanced economies, but could substantially hurt the developing world even further.

Table 1.1. Overview of the World Economic Outlook Projections
(Percent change, unless noted otherwise)

	2020	Projections		Difference from January 2021 WEO Update ¹		Difference from October 2020 WEO ¹	
		2021	2022	2021	2022	2021	2022
World Output	-3.3	6.0	4.4	0.5	0.2	0.8	0.2
Advanced Economies	-4.7	5.1	3.6	0.8	0.5	1.2	0.7
United States	-3.5	6.4	3.5	1.3	1.0	3.3	0.6
Euro Area	-6.6	4.4	3.8	0.2	0.2	-0.8	0.7
Germany	-4.9	3.6	3.4	0.1	0.3	-0.6	0.3
France	-8.2	5.8	4.2	0.3	0.1	-0.2	1.3
Italy	-8.9	4.2	3.6	1.2	0.0	-1.0	1.0
Spain	-11.0	6.4	4.7	0.5	0.0	-0.8	0.2
Japan	-4.8	3.3	2.5	0.2	0.1	1.0	0.8
United Kingdom	-9.9	5.3	5.1	0.8	0.1	-0.6	1.9
Canada	-5.4	5.0	4.7	1.4	0.6	-0.2	1.3
Other Advanced Economies ²	-2.1	4.4	3.4	0.8	0.3	0.8	0.3
Emerging Market and Developing Economies	-2.2	6.7	5.0	0.4	0.0	0.7	-0.1
Emerging and Developing Asia	-1.0	8.6	6.0	0.3	0.1	0.6	-0.3
China	2.3	8.4	5.6	0.3	0.0	0.2	-0.2
India ³	-8.0	12.5	6.9	1.0	0.1	3.7	-1.1
ASEAN-5 ⁴	-3.4	4.9	6.1	-0.3	0.1	-1.3	0.4
Emerging and Developing Europe	-2.0	4.4	3.9	0.4	0.0	0.5	0.5
Russia	-3.1	3.8	3.8	0.8	-0.1	1.0	1.5
Latin America and the Caribbean	-7.0	4.6	3.1	0.5	0.2	1.0	0.4
Brazil	-4.1	3.7	2.6	0.1	0.0	0.9	0.3
Mexico	-8.2	5.0	3.0	0.7	0.5	1.5	0.7
Middle East and Central Asia	-2.9	3.7	3.8	0.7	-0.4	0.7	-0.2
Saudi Arabia	-4.1	2.9	4.0	0.3	0.0	-0.2	0.6
Sub-Saharan Africa	-1.9	3.4	4.0	0.2	0.1	0.3	0.0
Nigeria	-1.8	2.5	2.3	1.0	-0.2	0.8	-0.2
South Africa	-7.0	3.1	2.0	0.3	0.6	0.1	0.5
Memorandum							
World Growth Based on Market Exchange Rates	-3.6	5.8	4.1	0.7	0.3	1.0	0.3
European Union	-6.1	4.4	3.9	0.3	0.2	-0.6	0.6
Middle East and North Africa	-3.4	4.0	3.7	0.9	-0.5	0.8	-0.2
Emerging Market and Middle-Income Economies	-2.4	6.9	5.0	0.5	0.0	0.8	0.0
Low-Income Developing Countries	0.0	4.3	5.2	-0.8	-0.3	-0.6	-0.3

To create a more even recovery the IMF calls for **targeted policy action** on the national and international front.

In the post-Trump (*who that?*) area, such an economic policy approach may well be possible.

These 'targeted' policy actions need to go beyond general public health measures and macro-economic policy and should include many areas of government policy and require international cooperation.

As the IMF's Economic Counsellor, Gita Gopinath specifies in her Foreword to the new World Economic Outlook: *"More emphasis should at that point be placed on retraining and reskilling workers, together with income support as needed to help them through the transition, while in parallel expanding hiring subsidies to incentivize job creation. Expedited and streamlined bankruptcy procedures can further facilitate reallocation. Resources will need to be devoted to reverse learning losses among children who lost instructional time during the pandemic, for instance, through increased spending on education."*

Unfortunately, the historical track record of this type of micro-economic policies shows limited success rates. There is thus work to be done to achieve greater efficacy and efficiency of 'targeted' policy making.

2. How to reach fast moving targets and keeping the morale: lessons from institutional economics, data science and ethics

As a 'mature' student of political economy, I instinctively turn to the well-trodden fields of welfare economics and the public choice theory.

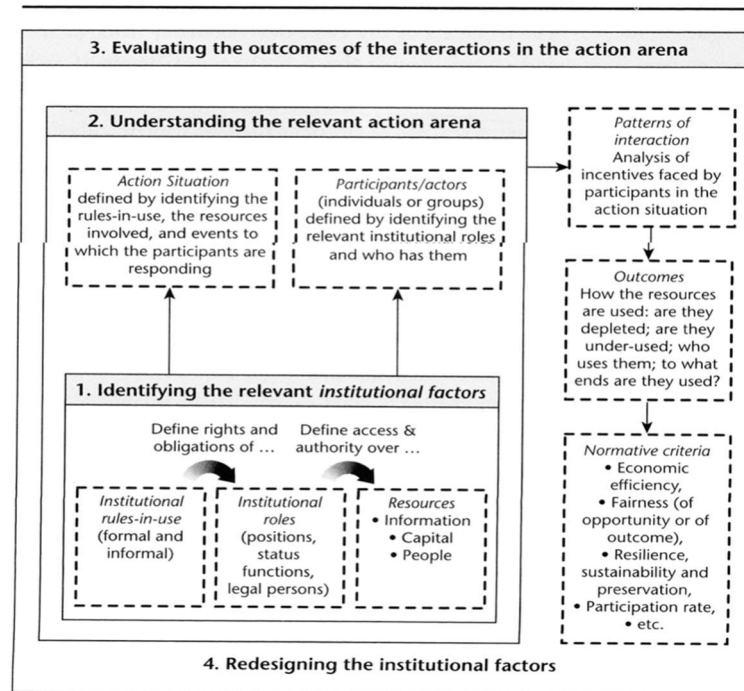
More recently, the newish school of institutional economics has further elaborated on these concepts particularly with contributions of Nobel Laureate Elinor Ostrom and her outstanding work on the Economics of the Common Good.

Ostrom and her colleagues of the Workshop in Political Theory and Policy Analysis or the 'Bloomington School' (University of Indiana USA) devoted much of their institutional economic research to study the failures of top-down government policy making.

The management of 'common-pool resources' is in their views far more complex than simple recipes relying on traditional economic concepts such as the economies of scale. As Ostrom ironically commented: "For patrolling, if you don't know the neighbourhood, you can't spot the early signs of problems, and if you have five or six layers of supervision, the police chief doesn't know what's occurring on the street"

Ostrom's Institutional Analysis and Development Framework (see below) tries to capture interconnected 'action areas' with different levels of governance and regulation and information feedback from local levels.

Figure 1 The Institutional Analysis and Development (IAD) framework



Source: Elinor Ostrom e.a. *The Future of the Commons, beyond market failure and government regulation* IEA 2012

The constant feedback-loop in the above schedule from different institutional levels down and back up from local levels is important. In addition, moral acceptability (the 'meta- constitutional') impacts the trust in and thus effectiveness of policy actions. It necessitates much bottom-up information and data input and local management involvement.

These lessons of Ostrom's institutional economics may offer a great deal of help in developing the 'targeted' policies through proper institutional frameworks and moral guidance, efficacy and efficiency and 'closeness' in execution (no top-down policies). But how to organise recognisable trustworthy micro data feedback which is vital for such targeted policy action?

Waves of data

The pandemic did force us to work, shop and entertain ourselves from behind our own computer screens.

More than ever, we relied on data transmitted to our homes or remote workplaces. In doing so, we all contributed significantly to the creation and the transmission of more data.

As a still active participant in the investment strategy debate, I have in recent years become quite obsessed by the use of (alternative) data as an essential element in economic policy development. In a commentary I wrote last year titled '*Facemask Economics*', I noted that the COVID 19 pandemic and ensuing social economic restrictions and lockdown measures propelled the use of data into the centre of the popular debate and created headlines on (social) media. I cannot not remember a time when the use of statistics, charts and graphs was as popular and sexy as in recent news story lines.

In the slipstream of this new wave of widely available data, I expressed surprise that there was little debate on the use of a strong data-driven approach in the areas of public health and socio-

economic policy development and pleaded for an *"agile government which tries, and -if it does not work- changes its policy approach. The data will guide them!"* (Facemask Economics April 2020). Today I would like to elaborate this topic and also question it.

What do we mean with data-driven approach and what is 'alternative data' (alt data)?

Let me start by explaining what 'primary' data is. When speaking about people we would in the first instance describe a person on the basis of primary data: age, sex, height, place of residence, etc. or for a shop: sector, location, brands, pricing, opening hours, etc. This information can usually be found in public records or open registers.

A new breed of data providers (mainly commercial firms) complement these primary information with so called 'alternative' data. These are data taken from other sources such as satellites, traffic data, mobile devices, social media hits, transactional data from loyalty and/or credit cards, sensor inputs, phone data, etc.

To elaborate this point, let me quote from *'The Real Economy Blog'* of the US audit, tax and consultancy firm RSM in reviewing the use of alternative data in the context of pandemic:

"Instead of reviewing medical record data from the World Health Organization – which confirms illness after it has happened – would it have been better to use predictive data that measures atypical illness by zip code? And would this have been a better indicator for the next infection hotspot? Or would satellite imagery from China showing fields of recently dug graves, disturbing as they would be, have been the signal of the danger that the United States would face without a proper plan?" (RSM April 2020).

The schedule below provides a snapshot overview of alt data and where they can be sourced.

	Website scraping	Satellite imagery	Geolocation	Credit card tracking
Data sources	Websites, apps, user reviews	Satellite images of mall parking lots, farmlands, mines, and ports	Geolocation data from mobile phones	Information from credit card and debit card companies
Data types	Social media feeds, product pricing, job news, company news, etc	Growth patterns of crop yield, shipping data, etc	Foot traffic in various stores, restaurants, or hospitals	Real-time aggregate transaction details
Potential analysis	Consumer views and trends Sentiment analysis	Clues on economic activities in sectors and countries Investment decision-making	Real-time evaluation of companies' performance, behavior, market trends, and more	Trends in consumer behavior

Source: Antonio Decandido: *Alternative data can show the way*, RSM April 2020

All these sources deliver a humongous number of structured and unstructured data outputs. Data coming from all these alternative sources including social media, parking sensors, CCTV and satellite images can be of great value, but they also require significant computing capabilities to collect, clean and analyse them – otherwise known in computing terms as Extract, Transform, Load (ETL).

Major machine learning capabilities, data warehouses and Artificial Intelligence (AI) are an essential factor to make these vast continuous, daily (hourly?) avalanches of data useful and useable.

With their help, social sentiment can be measured, physical location trends can be identified, patterns in financial transactions measured through credit card use or point of sales data, mobility and activity concentration through satellite images showing traffic flows and parking peaks which may highlight how/when/where to chase purchasing power for commercial action.

This input of data science could well enrich the theoretical framework of institutional economics for the benefit of post-pandemic economics. But can psychographic profiling techniques be of help in the development of targeted policy action?

The answer might not be as simple and straightforward as hoped, as the growing ethical debate on data use and protection proves.

The unbridled use of (personal) data for many commercial and political purposes and the capture in psychographic profiles stored in algorithmic formulae raises many (ethical) questions.

3. The Good, the Bad and the Ugly

The use of data to influence consumer or political choice is nothing new.

Influencing in an indirect and hidden way was critically reviewed by the US journalist and main critic of consumerism, *Vance Packard in the 1950s* (see *The Hidden Persuaders*).

The proliferation of available data and the technological advance of BIG data analysis and storage in recent times has made the question of responsible treatment of data sources by third parties an extremely vital element in our civic society.

In order to illustrate this, I am going to briefly mention a few current real-life examples.

Alternative data and investing: CULTIVO's investment data support

In a recent academic paper by Ashley Monk, Marcel Prins and Dane Rook from Stanford and APG Asset Management (*Rethinking Data in Institutional Investment, The Journal of Financial Data Science, Winter 2019*), the authors analyse on the use of alternative data by the institutional investors. They note an exponential growth of the use of alternative data in the investment industry. Some data providers sell their use in the investment process as opportunistic tools to generate excess investment returns ("Alternative data is untapped alpha").

Monk c.s. argue that institutional investors with their long-term investment horizon should be more interested in defensive (and defensible) applications of alternative data analysis. In this context the alternative data could contribute significantly to the identification and mitigation of investment risks and thus create substantially better risk/return investment outcomes (smart beta).

To make this point a bit less theoretical and more concrete, I have attempted to find a suitable real-life example to illustrate alt data use for investment purposes.

In this random search, I came across a company called CULTIVO, which - after some review - I have found to be an inspirational example.

CULTIVO is a young company formed by a group of scientists, data experts and finance professionals, which aims at identifying investable opportunities in nature projects across the world. They use remote sensor technology and proprietary algorithms to collect and analyse data on land coverage and vegetation changes, soil moisture, carbon capture opportunities, biodiversity, etc.

With the use of these data, CULTIVO selects investment opportunities for the use of the land, which is - where possible - enhanced by contributions from carbon capture schemes. A brief video introduction is to be found via the following link:

<https://www.cultivo.land/overview>

To my amateur eye, it seems that this initiative responds well to the requirements defined in the Stanford/APG study (*'defensive and defensible'*) mentioned above.

Alt data and political campaigning: the Cambridge Analytica case

Data-driven marketing techniques made their first serious entry into electoral politics in the early 2000s. The Obama campaigns of 2008 and 2012 showed the first structured attempt of digital voters profiling and related activities.

The US Presidential campaign in 2016 transformed this into a playing field for digital advertising and data use by candidates. Facebook and Google became important actors in the US political arena with techniques ranging from omni-channel/cross-device targeting to programmatic advertising and many other psychographic and neuro marketing techniques. The objectives were multiple: sometimes aimed at persuading voters to support a candidate or to trash the competition or bring fear and fake news to discourage certain groups (liberal minds, female voters, ethnic minorities, etc.) to vote. An interesting overview is presented in *Jeff Chester and Kathryn Montgomery, The role of digital marketing in political campaigns: Internet Policy Review December 2017*.

The story of the 2018 collapse of the UK consultancy firm *Cambridge Analytica* has been well covered. The company abused the Facebook platform to access and use many tens of millions of unauthorised data points of Facebook users for its political profiling for election campaigns in the US (Trump, Cruz) and the UK (Brexit referendum).

Regardless of what one thinks about the political ambitions of their data support, the unauthorised use of personal data for campaign targeted advice was a major breach of trust social media users and a criminal offense.

The backlash of this scandal has brought fierce criticism on the way the digital social media deal with privacy issues of their clients/members/friends.

It helped to unmask the concept of 'free of charge' use of social media by Facebook and others through the realisation that the clients pay for their service via the release of their most private assets: the facts of their life in for them sellable data form ('data as currency').

Data Protection regulation has since become an important part of international regulation with the European Union regulatory framework (EU GDPR rules of 2018) as global trendsetting legislation. The use of individual data for commercial or political purposes without consent is a crime. The request for consent needs to be clear, transparent and mandatory, but still more ethical questions remain.

4. 'Wanting to be known accurately, but not wanting to be known at all'

One of my most inspiring (and challenging) recent reads is a book called "*Friction, ethics in times of data-ism*" by the Dutch philosopher *Miriam Rasch* (at the moment only available in Dutch, summary in English in '*Friction and the aesthetics of the smooth*', *Eurozine 11 May 2020*).

In very personal, beautifully written prose, she questions the belief that everything can be captured in data and that data present the truth and consequently smoothly predict our future: My data and the internet of my things create a psychographic profile/algorithm of me, which can make my journey through life easier and smoother. My house is light and warm when I arrive from work; my shopping becomes less of a chore as the app 'knows' what I need to order; and individualised messages clarify for me (with maybe 'fake news') how to vote in an upcoming election.

"If everything is datafied, all friction has been eliminated and every moment follows familiar patterns not a future but a continues present", and that is the nightmare that Rasch rightly fears.

In questioning the rising use of data predicting our lives and our choices (as consumers, as voters, as individuals) *Miriam Rasch* quotes '*Crawford's Paradox*' used in the title of this section (ref. *Kate Crawford of the AI Now Institute at NYU*).

However, our right to anonymity must not be offered on the altar of data-hunger.

She also challenges the one-dimensionality of most data analyst's interpretation in an undisputable result/algorithm. The multi-interpretability of facts on human choice and behaviour is pointedly illustrated by her reference to a fascinating booklet by the American essayist *Eliot Weinberger* titled: '*19 ways of looking at Wang Wei*'. It deals with an 8th century Chinese poem of 4 lines of each 5 characters and explains the many possible interpretation of the poem.

The philosopher will have nothing of the smoothness and one-dimensionality of algorithms predicting human behaviour.

She prefers *friction* over smooth passages to preserve one's own authentic life in the best traditions of the French existentialists and her hero *Simone de Beauvoir*.

Can we trust the data?

'Data is everything, but it's nothing unless you, your partners and your consumers can trust that data' says a recent study by PwC in the US. It shows that trust in data use by commercial entities did not increase over the last years. It also worryingly reveals a significant gap between consumer confidence in corporate data use and the business assessment of such use (see PwC, '*In data we trust*', [pwc.com/us/trust](https://www.pwc.com/us/trust)).

The graphs below illustrate this: while the majority in the business thinks that the company's ability to protect customer information has improved, only one-fifth of consumers agrees with this positive assessment!



The PwC study concludes with 4 important sets of recommendations for corporate data use to improve customers' trust in data use: (1) structure of corporate data governance, (2) identification of gaps in own data (and not filling them with crap), (3) protect data and their ownership, and (4) narrowly define which data to use for what and eliminate unnecessary data.

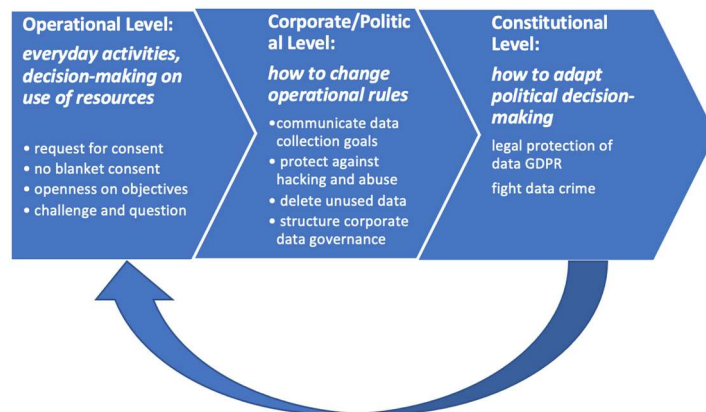
The PwC study clearly highlights that there is work to be done by corporates and data providers. But it forgets to point at the main culprit: the happy originator of all these data (the consumer) who is in my view too easily painted as the victim.

5. So, what now?

My wanderings past the moral pitfalls have not changed my views. They have however made me more aware of the need for a robust institutional and management (and moral?) framework for data use.

Merging lessons from institutional economics, data science, ethics and – not to forget - common sense could guide the development of such framework.

Using Ostrom's institutional interconnected action areas, I have drafted the following schedule to highlight the issues surrounding the use of data. And constant and consistent feedback keeps everyone in this data game on her/his toes!



My overall conclusion remains very simple: the pandemic has brought major grief for many around the world, destroyed public health, disrupted social networks, economies and livelihoods, and it created new inequalities.

To address these many issues, governments need to develop policies simultaneously covering many areas.

For this to be done in a sustainable and affordable way, here are my 4 take-aways:

- Such *targeted* socio-economic policies demand well-structured micro data support and bottom-up management, which determine their success or failure.
- The institutional framework à la Ostrom would significantly benefit from insights of data science and from ethical considerations to provide guidance for the handling and the protection of data.
- Political institutions and corporations need to be open on their information goals, protect the data and structure their data governance.
- The data originator/consumer needs to grow up: they need to question the relevance of data consent and demand the right to understand the algorithms and their purpose as the mean to copy them, their lives and their future....

May the Crawford paradox (*'Wanting to be known accurately, but not wanting to be known at all'*) guide us to a future with friction and passion.

Bart Le Blanc, April 2021.

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