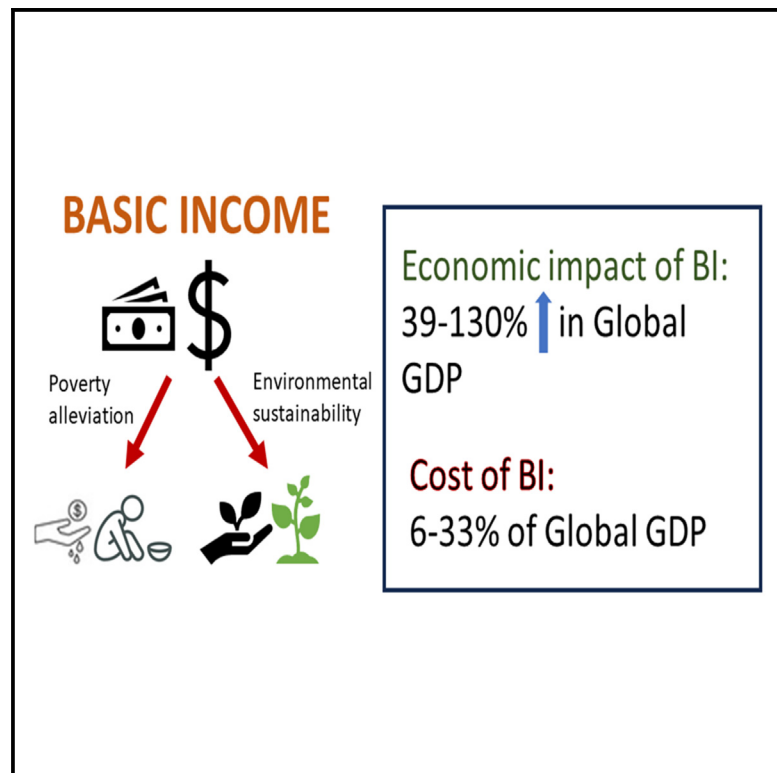


Utilizing basic income to create a sustainable, poverty-free tomorrow

Graphical abstract



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In brief

Basic income (BI) can contribute to bolstering economies and improving environmental conditions. We conduct a global analysis examining the economic impacts and costs of BI. We find that BI implementation is feasible and could be a potential solution for addressing the dual challenges of decreasing worldwide poverty while reducing environmental degradation.

Highlights

- The COVID-19 pandemic underscored society's vulnerabilities to shocks
- Human activities have contributed to climate change and environmental degradation
- Highlights the potential of basic income to tackle sustainability and poverty
- With appropriate strategies, basic income can bolster economies during times of crisis

Article

Utilizing basic income to create a sustainable, poverty-free tomorrow

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SCIENCE FOR SOCIETY Basic income (BI) involves unconditional, regular cash disbursements to either a segment or to the total population. In this study, the authors conduct a global analysis examining the potential impact of BI as a two-pronged solution to both environmental sustainability and social resilience. The authors show that BI can potentially bolster economies. To lower BI implementation costs, the authors suggest a range of strategies aimed at financing BI, strategically designed to concurrently alleviate economic insecurity while fostering nature conservation. The authors argue that BI implementation is feasible and could be a potent tool in addressing the twin challenges of decreasing worldwide poverty while reducing environmental degradation.

SUMMARY

The coronavirus disease 2019 (COVID-19) pandemic of 2020 was a reminder of society's vulnerability in the face of natural upheavals, leading to widespread unemployment and increased poverty. Simultaneously, human activities have precipitated large-scale environmental degradation and catastrophic climate change. Here, we conduct a global-scale, 186-country analysis examining the potential impact of basic income (BI) as a two-pronged solution to both sustainability and social resilience. We reveal BI's potential to bolster economies, particularly in times of crisis. To lower the huge barrier imposed by implementation costs, we suggest a diverse array of strategies aimed at financing BI, strategically designed to concurrently alleviate economic insecurity while fostering nature conservation. We suggest that BI implementation is feasible and could be a potent tool in addressing the twin challenges of decreasing worldwide poverty while reducing environmental degradation—a nexus that arguably constitutes the paramount global challenge of our times.

INTRODUCTION

In the wake of the unforeseen upheaval caused by the coronavirus disease 2019 (COVID-19) pandemic in 2020, the vulnerabilities inherent in societal structures were starkly laid bare.^{1–4} This global crisis not only rendered millions jobless but also plunged numerous households into poverty (Table S1).^{2,5,6} At

the same time, humanity's impact on the environment has resulted in widespread ecological degradation and declines in biological diversity, the very foundation for human well-being.^{7,8} These events forcefully revealed the need for simultaneous action: to alleviate poverty while staunching the relentless tide of environmental degradation and decay.^{3,4} Preceding the disruptions of COVID-19, environmental stressors—ranging from

rampant overexploitation and pollution⁹ to the devastating impacts of climate change¹⁰—had already cast a long shadow, disproportionately affecting the most economically marginalized segments of society.¹¹ The pandemic, marked by its staggering toll on human life, global health, and socio-economic infrastructures, prompted governments worldwide to institute ad hoc measures to shield populations and economies from collapse (Note S1). Yet, these reactive responses risk being insufficient, exacerbating existing disparities, and jeopardizing hard-earned developmental strides.⁶ In this landscape of adversity and urgent need for resilience, the concept of basic income (BI) may emerge as a potential beacon of hope. Advocating for unconditional, regular cash disbursements to either a segment or the total population, BI offers the promise of sustained financial security¹²—a foundational buffer against the tragic impacts of crises such as COVID-19.^{5,13} Moreover, by addressing poverty due to the lack of income, BI fosters more robust, healthier societies.¹⁴

The positive impact of BI extends beyond economic upliftment—it also helps with the concern for societal welfare and sustainability.¹⁵ Empirical evidence underscores its transformative potential in enhancing social welfare, reducing inequality, and fortifying sustainability.¹⁶ Further, BI initiatives have correlated with improved sanitation, nutrition, expanded educational access, diminished hospitalizations, and reduced poverty-related crimes as well as substance abuse among beneficiaries.^{16–18} Moreover, the transformative potential of BI in environmental conservation has become evident in instances such as the “family of hope” program in Indonesia, contributing to a substantial decline in deforestation rates,¹⁹ or the BI grant in Namibia, markedly reducing illegal hunting and trespassing.²⁰ What is more, recent studies hint at a correlation between a nation’s gross domestic product (GDP) and its environmental performance index scores,²¹ signifying BI’s potential to systematically lower poverty levels, thereby advancing established environment-development policy targets, including the United Nations’ Sustainable Development Goals (SDGs).^{22,23} These potential benefits of BI are probably the reason that universal BI has received so much support by a cross section of people over time (Note S2).

Within the context outlined above, this paper initiates a more comprehensive, multi-country assessment to demonstrate the potential role of BI in addressing these pressing challenges. We undertake an analysis of possible economic impacts and associated costs across 186 nations, examining diverse levels of BI coverage. Our findings reveal the potential economic stimulus that can be provided by BI, particularly in times of recession, juxtaposed against the significant hurdles posed by implementation costs. In addition, we chart a course toward a viable portfolio of strategies for funding BI. These approaches are engineered to yield dual benefits: mitigating economic vulnerability while at the same time bolstering initiatives for nature conservation and sustainable resource utilization. As we stand on the threshold of the decade for action dedicated to realizing global targets associated with the SDGs, the Kunming-Montreal Global Biodiversity Framework,²⁴ and the Paris Agreement,²⁵ our study highlights the plausibility of global BI implementation and its potential to decisively confront what may be the paramount global challenge, i.e., addressing escalating poverty (and inequality) alongside the relentless degradation of our environment. We posit that

BI can be a pivotal instrument in the global pursuit of poverty alleviation and “nature-positive” sustainable development. Crucially, its execution must be designed to yield a dual triumph: assuaging economic insecurity, especially among the world’s low-income populations, while also ensuring intergenerational equity by safeguarding the environment for posterity.^{26,27}

We computed the likely economic impacts (defined as a measure of the extent to which fiscal expenditures boost GDP, i.e., it is a measure of the efficacy of expansionary fiscal policy²⁸) to be generated by providing a BI (= the national poverty line income at purchasing power parity) to a segment or all of a nation’s population. We relied on the macroeconomic insight that a country’s implementation of a discretionary fiscal measure through spending normally results in a boost to that country’s GDP,²⁸ which we captured through fiscal multipliers (a measure of the impact of fiscal spending on a country’s GDP; [experimental procedures](#)).

BI cost is defined as the total spending needed to implement it. This includes the direct cost plus the marginal cost of raising the necessary funds ([experimental procedures](#)). We calculate cost ranges, with lower and upper limits depicting how funds are raised (Table 1). If funds are raised through countries’ standard portfolio of distorting income and consumption taxes, then the upper-cost limit applies. If, on the other hand, funds are raised through a carbon dioxide (CO₂) emissions tax, as in our illustrated example below, the lower end of our cost estimates is more relevant. It is worth noting that the cost of implementing BI has been calculated at national or regional levels. For instance, in the past decade, different BI proposals for India have been estimated to cost from USD 42 to USD 217 (i.e., Rs 3,500 to Rs 18,000) per person per year.²⁹ An annual cost of USD 356 to USD 361 (i.e., GBP 280 to GBP 284) billion was estimated for BI for the UK,³⁰ while the estimated cost for providing USD 10,000 a year to each American was calculated to be about USD 3 trillion a year,³¹ and the cost of a guaranteed BI program for Canada was estimated at USD 68.4 (i.e., CAD 93) billion for 2025–2026.³² Also, the IMF calculated the cost of BI in eight developed and emerging markets and found that it would cost around 6.5% and 3.75% of GDP on average for advanced and emerging market economies, respectively.³³

The contribution of the current paper lies in the fact that it is one of the few studies that attempts to provide a comprehensive global analysis of the benefits, costs, and financing of BI. A recent example of a global study is De Lange et al.³⁴; however, although global in geographical coverage, the population receiving BI was limited to those living close to biodiversity conservation areas. Gray Molina and Ortiz-Juarez³⁵ is another global study, which estimated the cost of temporary BI (TBI) provided to poor and vulnerable people in 132 developing countries in response to COVID-19. Although this study is global in geographical scope, it was not universal in terms of the number of people covered. On the other hand, Ortiz et al.³⁶ is a study that provided BI to the global population in 130 countries worldwide. Our study differentiates itself from Ortiz et al. in at least two ways: our cost estimates include both direct cost and the marginal cost of raising the required funds, and it covers 186, not 130, countries.

The policy world is looking for measures that can build resilience against shocks, systemic risks, and pandemics while simultaneously transforming development toward combining

Table 1. Economic impact and cost of basic income

Country groupings	Economic impact in discounted USD billions (% of global GDP)				Cost in USD billions (% of global GDP)				Economic-impact-to-cost ratio			
	BPL		Entire population		BPL		Entire population		BPL		Entire population	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
LHDI	1,043 (0.83)	74	1,455 (1.2)	103	216 (0.17)	26	442 (0.35)	57	4.8	0.2	3.3	0.2
MHDI	9,813 (7.8)	694	33,196 (26.3)	2,347	1,598 (1.3)	318	9,427 (7.5)	2,923	6.1	0.8	3.5	0.9
HHDI	37,750 (30.0)	2,669	128,732 (102.3)	9,103	5,256 (4.2)	1,364	31,698 (25.2)	8,230	7.2	1.4	4.1	0.8
Africa	2,946 (2.3)	208	5,181 (4.1)	366	641 (0.51)	77	1,583(1.3)	206	4.6	0.2	3.3	0.2
Asia	11,175 (8.9)	790	47,970 (38.1)	3,392	2,157 (1.7)	568	14,961 (11.9)	4,717	5.2	1	3.2	0.8
Europe	19,056 (15.1)	1,347	58,732 (46.7)	4,153	2,373 (1.9)	621	13,414 (10.7)	3,512	8.0	1.6	4.4	0.9
North America	12,497 (9.9)	884	39,519 (31.4)	2,794	1,550 (1.2)	382	9,001 (7.2)	2,334	8.1	1.5	4.4	0.9
Oceania	1,520 (1.2)	107	5,209 (4.1)	368	177 (0.14)	30	1,101 (0.87)	185	8.6	0.8	4.7	0.5
South America	1,412 (1.1)	100	6,773 (5.4)	479	173 (0.14)	31	1,507 (1.2)	257	8.2	0.9	4.5	0.5
Global	48,606 (38.6)	3,437	163,383 (129.8)	11,553	7,070 (5.6)	1,708	41,567 (33.0)	11,211	6.9	1.2	3.9	0.8

Economic impact of basic income (BI), cost of BI (both in USD billions and % of global gross domestic product [GDP] in brackets), economic-impact-to-cost ratio for each country grouping, and UBI coverage inclusive of individuals below the poverty line (BPL) only and the entire population. SD, standard deviation. LHDI includes countries with low human development index (HDI) (HDI \leq 0.5); MHDI countries with medium HDI (0.5 < HDI < 0.8); and HHDI countries with high HDI (HDI \geq 0.8). Regions defined following the UN definition.

Table 2. Potential sources of funding to finance basic income, as well as a brief description of purposes and examples

Funding source	Purpose	Examples
Environmental pollution tax	they seek to increase the price of activities and products that generate pollutants that are harmful to the environment	e.g., CO ₂ emission taxes, plastic pollution tax, discharges into water bodies, and soil contamination
Environmental and natural resource overexploitation tax	designed to increase the price of activities and products that over-exploit natural resources such as fish, forests, top soils, etc.	taxes on fishing or hunting, forestry, and water abstraction; revenue from auctioning of individual transferable quotas for fisheries
Environmentally damaging subsidies	repurposing of current fossil fuel, agricultural, and fisheries subsidies that harm the environment	e.g., harmful subsidies to agriculture, fisheries, and fossil fuel

just (inclusive) and sustainable futures. Within this framing, we argue that BI financing has to be designed to ensure that the interests of both current (intra-) and future (inter-) generations are adequately balanced and considered. The greater income and economic stability provided by BI could lead to increased consumption and associated rising greenhouse gas emissions and environmental degradation generally,³⁷ thereby reducing the ability of future generations to also meet their own needs. Thus, we frame the funding of BI around the concepts of positive and negative externalities. Basic economic theory argues for society to tax or subsidize economic activities that generate negative or positive externalities, respectively. Table 2 provides an overview of a portfolio of financing options that meet the “double dividend” hypothesis in environmental economics (i.e., implementing taxes that both reduce environmental degradation, the first dividend, and reduce poverty by using the revenue generated, the second dividend),³⁸ including, for example, taxes on CO₂ emissions (Table 3, experimental procedures).

The ultimate contribution of this article is to make the case for BI as a policy to solve the dual issues of poverty and environmental damage. We do this by estimating the positive impact that BI could have on GDP using fiscal multipliers on government spending. We then estimate revenue from a flat tax on global carbon emissions to demonstrate that it is possible to raise the funds needed to implement BI while reducing environmental degradation.

RESULTS AND DISCUSSION

Economic impacts

Our findings indicate that implementing BI programs could potentially increase global GDP by a significant amount. Specifically, our analysis suggests that BI initiatives could lead to an increase in GDP ranging from USD 1,043 billion to USD 48,606 billion, equivalent to 0.82% and 38.6% of global GDP, respectively, when considering only individuals living below poverty lines in low human development index (HDI) countries (949 million people) and the entire global population (7.7 billion people) (Table 1), respectively.

Moreover, the economic impact is amplified, with projections showing a potential boost to GDP ranging from USD 1,445 billion to USD 163,383 billion, equivalent to 1.16% and 129.8% of the current global GDP, respectively, when BI coverage extends to encompass all individuals residing in low HDI countries and the entire global population (Table 1), respectively.

Costs and affordability of BI

We have determined that the costs associated with implementing BI programs vary, ranging from USD 216 billion (0.17% of global GDP) to USD 7,070 billion (5.6%), depending on whether BI coverage is limited to individuals living below the poverty line in low HDI countries or extended to encompass the entire global population, respectively (Table 1). When considering BI coverage for all individuals in low HDI countries and the entire world, the estimated costs amount to USD 442 billion (0.35% of global GDP) and USD 41,567 billion (33%), respectively (Table 1). For context, according to the Stockholm Peace Research Institute’s 2013 report, health expenditures ranged from 2% (Africa) to 8% (North America) of GDP, while military expenditures ranged from 1% (Latin America and Caribbean) to 5% (Middle East) of GDP.³⁹ Therefore, providing BI to those living below the poverty line appears financially feasible.

Furthermore, our analysis reveals that for every dollar invested in implementing BI, approximately USD 7 and USD 4 of economic impacts are generated when considering coverage solely for individuals living below the poverty line and the entire population, respectively. This ratio ranges from approximately USD 5 for individuals living below the poverty line in low HDI countries, Africa, and Asia, to over USD 7 for all high HDI countries combined or independently for the continents of Europe, North America, Oceania, and South America (Table 1). Detailed country-level economic-impact-to-cost ratios are presented in Figure 1.

Financing BI

Table 2 provides an overview of a portfolio of financing options that meet the double dividend hypothesis in environmental economics (e.g., implementing taxes that both reduce environmental degradation, which is the first dividend, and reduce poverty using the revenue generated, the second dividend),³⁸ including, for example, taxes on CO₂ emissions (Table 3, experimental procedures). We estimate that CO₂ emissions taxes alone may be able to generate double dividend financing of about USD 2.3 trillion a year (Table 3), which is enough to cover the BI cost for people living below the poverty line in low and medium HDI countries combined; in Africa, Oceania, and South America combined; or in Asia, Europe, and North America separately (Table 1).

Although there are a variety of potential financing mechanisms for BI (Table 2), we focus on assessing carbon taxes in this study because of the global push to reduce carbon emissions to reach

Table 3. Potential total carbon tax (USD billions) by country grouping to finance basic income

Country groups	Total carbon tax (USD billions)			
	Low	Mean	High	SD
LHDI	3.3	5.0	6.7	2.4
MHDI	826	1,240	1,653	584
HHDI	725	1,087	1,450	513
Africa	62	93	123	44
Asia	852	1,277	1,703	602
Europe	263	395	526	186
North America	305	457	610	216
Oceania	21	31	41	15
South America	53	79	105	37
Global	1,555	2,332	3,109	1,099

Carbon tax estimated for each country group as per Table 1. Carbon tax for each country is estimated by the total CO₂ emissions from fuel combustion (mt) (World Bank Open Data—<https://data.worldbank.org>) including solid, liquid, and gaseous fuel in the most recent year (2016) and proposed tax rates (i.e., USD50 per ton and USD100 per ton of CO₂ produced for the lower and upper bounds of the tax, respectively; [experimental procedures](#)). LHDI includes countries with low human development index HDI (HDI ≤ 0.5); MHDI includes countries with medium HDI (0.5 < HDI < 0.8); and HHDI includes countries with high HDI (HDI ≥ 0.8).

sustainability goals. Williams⁴⁰ demonstrates the potential of this source of income, it reports that a \$30 per ton carbon tax, which is lower than estimates of the marginal damage from carbon pollution) in the USA could raise an average of USD 226 billion per year in 2012 dollars over the first 10 years of implementation. Our approach is similar to a study by the IMF,⁴¹ which estimated that a \$ 70 per ton carbon tax, which is roughly mid-point of our assessed carbon tax rate of USD 50–100 per ton, could raise revenue of around 1%–3% of GDP in most countries. Using the 2023 global GDP of USD 105 trillion puts the total revenue at between USD 1.05 and USD 3.15 trillion.

Aside from carbon taxes, there are other sources of BI financing that can also simultaneously benefit the environment. For instance, Peszko⁴² estimated that a plastic tax of \$280 per ton applied to the 20 most common plastic consumer products that contain less than 30% recycled content could bring in up to \$1.3 billion annually in tax revenue and reduce plastic waste generation by nearly a third below the baseline in Europe. Another possible funding source for BI that can provide a double dividend is the redirecting of environmentally harmful subsidies, such as those for agriculture and fisheries.⁴³ In fact, almost 90% of the USD 540 billion in global farm subsidies are harmful—redirecting these huge subsidies could potentially benefit initiatives for ending poverty, eradicating hunger, and restoring nature while improving the livelihoods of 50 million smallholder farmers worldwide.⁴⁴ With regards to fisheries subsidies, Teh et al.⁴⁵ report that the estimated harmful subsidies in Sumaila et al.⁴⁶ for 30 low-income countries could cover up to 80% of the current gap in poverty line income for the fishers in these countries. Similarly, the IMF⁴⁷ reports that USD 7 trillion was provided to the fossil fuel sector globally in 2022, and they project that this number

would increase to USD 8 trillion in 2030 or about 8% of global GDP.

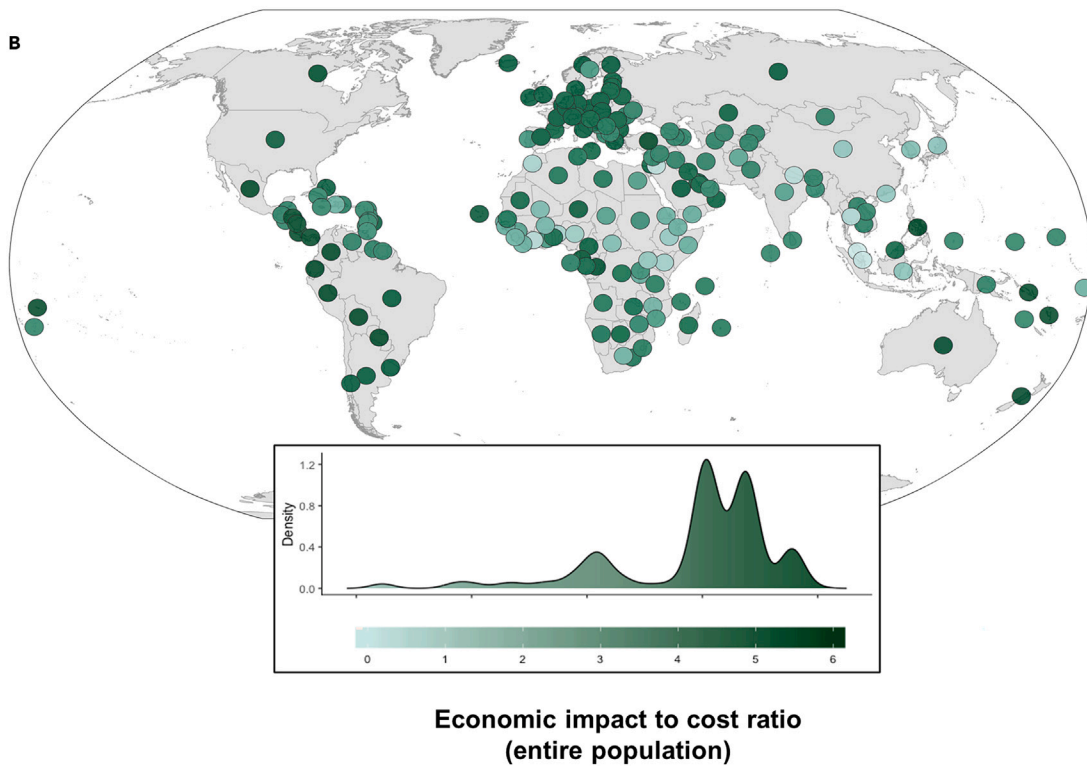
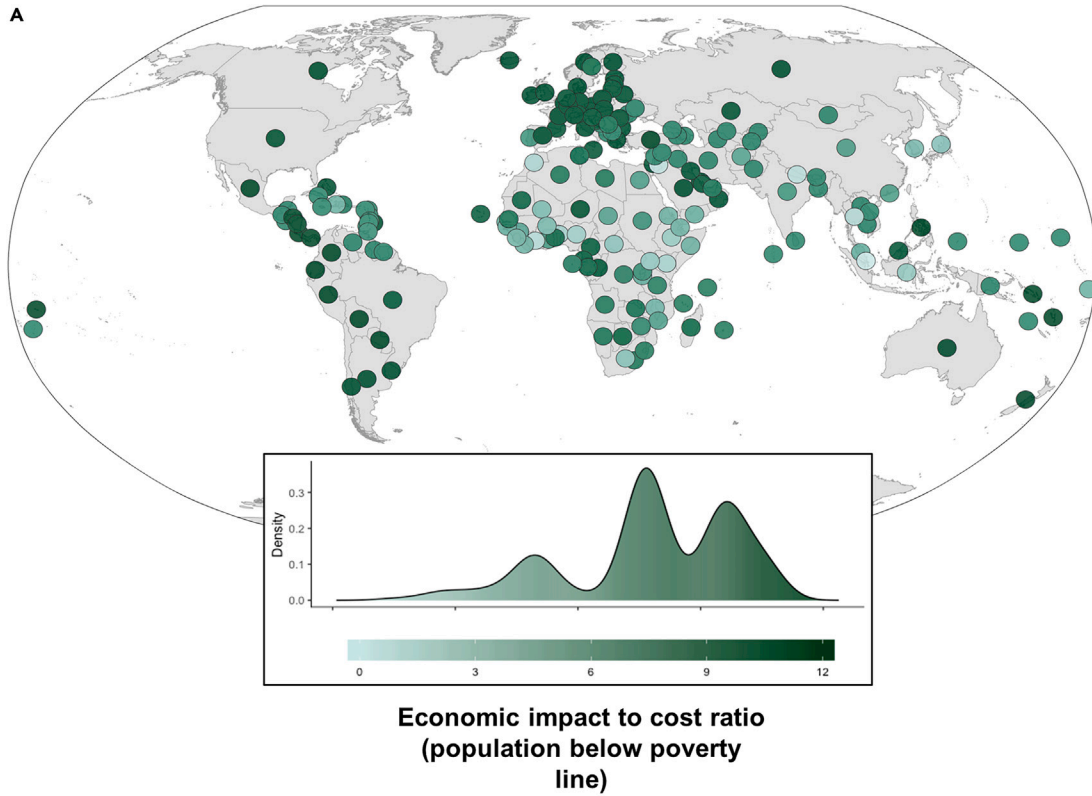
Challenges to BI implementation

Despite the high economic-impact-to-cost ratios, a number of concerns and questions have limited the implementation of BI. These include²⁸ how do we govern its implementation, and how do we mitigate the additional negative effects of BI implementation? These issues are discussed below.

BI can be implemented at a range of scales, from local (e.g., city-scale implementation like Stockton, USA)⁴⁸ to global. Larger scales may require novel institutions for raising funds (Table 2) and delivering payments. Although a universal cash transfer undoubtedly poses challenges in terms of administration and governance, these challenges are not insurmountable as providing BI will involve similar processes and systems as those used to deliver social protection programs that most governments already deliver nationally or via international organizations where applicable. The universality of some BI programs is an advantage and can reduce the cost of implementation over eligibility-based social programs that involve relatively more complex recipient targeting. Additionally, this universality may remove the negative social stigma associated with many social programs, leading to higher uptake, and reduce negative unintended consequences for non-beneficiaries when cash transfers are conditional.^{49,50} The simpler administrative demands of BI also reduce the scope for corruption and abuse of power by frontline officials, particularly in countries where state capacity is low.⁵¹

Innovations in information and communications technology can facilitate BI implementation. For example, mobile phone money transfers have been widely adopted in many low-income countries, even where access to financial infrastructure is limited.⁵² Still, mobile money transfers require reliable electricity and mobile networks, which could unintentionally disadvantage groups that lack access to these infrastructure.⁵²

Additional barriers to BI include the perception that it may weaken incentives to work, save, and invest and the risk that it may increase inflation. It is argued that BI may create negative social outcomes such as alcohol addiction or reduce people's motive to work,⁵³ although evidence suggests these concerns to be unsubstantiated or overblown.^{15,51,52,54} Evidence from two BI schemes, Alaska's Permanent Fund Dividend and Iran's national cash transfer, does not support this claim. The Alaska Permanent Fund has been providing an annual cash dividend to all residents since 1982. A recent study found that the dividend had no effect on employment and, in fact, increased part-time work by 17%.⁵⁵ Moreover, a high percentage of Alaskans save their children's dividends or use them to set up college funds or pay down debt.⁵⁶ In Iran, a national cash transfer program was started in 2011 in which monthly cash deposits amounting to 28% of median per capita household income were made into individuals' accounts. A study found that these cash transfers did not reduce labor force participation or number of hours worked.⁵⁷ Instead, the cash transfers had positive effects on the labor supply of women and self-employed men, although there was a negative effect on the number of hours worked for men aged 20–29 years old. However, this reduction in hours



(legend on next page)

worked was likely due to youth not being attached to the job market and because many in this age group had the option to enroll in higher education.⁵² Although not provided universally, negative income tax experiments carried out in the US and Canada, which provided an unconditional income floor to a targeted group of people, also found no, or only moderate, reductions in work participation.⁵² BI can in fact have positive effects on the labor market by increasing human capital investments (e.g., using cash transfers to acquire a new skill). The security of having an income floor can also increase entrepreneurship by reducing the risk of trying out new business ventures.⁵⁸

Inflation can occur if income transfers increase aggregate purchasing power without an accompanying increase in the supply of goods and services, as was the case during COVID.^{59,60} This situation is unlikely to manifest given the widespread unemployment and/or underemployment in many countries. The question of whether or not BI will increase inflation depends on factors that likely differ across countries, such as peoples' responses to the extra income, individual countries' current political and economic conditions, as well as how governments plan to finance BI. Nikiforos et al.⁶¹ found that the effect BI has on inflation is moderate at an annual increase of less than half a percentage point in most scenarios studied. Based on results from smaller cash transfer programs, Ortiz et al.³⁶ argue that BI has no significant effect on inflation. However, a recent study reported that there was a 136.5% cumulative rise in prices 5 years after the introduction of an unconditional, universal cash transfer in Iran.⁶² But given Iran's political and economic situation in recent years, it is difficult to attribute this increase to BI. One could argue that inflationary pressures could arise if the government decided to print money rather than pay for BI costs through increased taxes or similar measures.

Closing the inequality gap?

It should be noted that the fact that we set payments at poverty lines means there is the potential that global economic hierarchies may be reinforced because people in rich countries will continue to receive greater amounts of BI. What is more, our analysis shows that marginal propensity to consume (MPC) is greater in rich countries, and therefore the economic impacts of UBI will be greater in rich countries. We note here that the focus of this paper is mainly to get people out of extreme poverty and the inability to meet their essential needs. Clearly, this is only a start, because to truly reduce overall global inequality, we need measures such as investment in education and skills development, as argued for in World Bank,⁶³ implementation of progressive taxation and redistribution,⁶⁴ and the promotion of fair trade practices and labor rights.⁶⁵

Conclusions

We present a global estimation of BI's economic impact and the associated implementation costs across 186 nations. Our find-

ings show a positive economic-impact-to-cost ratio for BI implementation across all scenarios examined. Although acknowledging barriers beyond financial constraints, including systemic challenges, our study highlights several potential benefits that substantiate the rationale for BI adoption.

Existing evidence indicates that BI implementation can yield substantial dividends beyond mitigating financial costs. Improved social and health outcomes emerge as key components, presenting governments with a viable avenue to curtail economic burdens while concurrently fostering enhanced environmental stewardship, for example, through innovative double dividend financing strategies (Tables 2 and 3).

Given this compelling evidence of BI's multifaceted benefits, we recommend earnest exploration of its implementation by nations, recognizing that its successful implementation hinges on a convergence of factors, including fiscal considerations, societal attitudes toward poverty alleviation, and political resolve. Critical to the viability of BI policies will be the meticulous and participatory design of effective programs⁶⁶—a safeguard against potential individual misuse and systemic corruption that could undermine their efficacy.⁶⁷

We urge governments to perceive BI not merely as a reactive measure but as a proactive and anticipatory economic strategy.⁶⁸ By furnishing a guaranteed income stream to both the unemployed and the economically marginalized, BI serves as a more universal societal safety net, fostering financial confidence among the less affluent segments and fortifying resilience against devastating shocks, such as pandemics and climate disasters, that jeopardize the livelihoods of millions worldwide.⁶⁹ BI stands poised not only to redress existing extreme poverty, but it can also serve as an approach to help mitigate the rising specter of vulnerability worldwide, averting socio-economic instabilities that fuel unrest, conflict, and forced mass migrations, often triggered by such upheavals.^{70,71}

In harnessing the potential of BI, societies pave the way for proactive resilience-building, steering developmental trajectories toward reduced poverty and sustainable futures.⁷² In an era characterized by unprecedented risks and uncertainties, embracing extraordinary policies like BI becomes a necessary stride toward fortifying societies against future shocks, aligning with the ambitions set forth in Agenda 2030.⁷³ In essence, we contend that these extraordinary times necessitate commensurate measures. The adoption of visionary policies like BI emerges as an important step, not merely to cushion against contemporary crises but to proactively shape a more socially resilient, sustainable global landscape. In sum, the convergence of evidence highlights the transformative potential of BI, not merely as an economic stimulant but as a catalyst for societal well-being, resilience, and sustainable progress—aligning with global aspirations for a world free from extreme poverty and environmental degradation.

Figure 1. Economic impact of UBI-to-cost ratio by country

(A) Economic impact of UBI-to-cost ratio by country for people living below national poverty lines.

(B) Economic impact of UBI-to-cost ratio by country for the entire population. The color in the frequency graph denotes the overall global distribution of the economic impact of basic-income-to-cost ratio. The color of the bubbles on the map represents the economic-impact-to-cost ratio for each country. The darker green color represents high economic impact of UBI-to-cost ratio, whereas the light green color represents low economic-impact-to-cost ratio.

EXPERIMENTAL PROCEDURES

Resource availability

Lead contact

The lead contact is U. Rashid Sumaila.

Materials availability

All data used in this study are available from the lead contact upon reasonable request.

Data and code availability

No codes were used in this study. All data are available from the lead contact upon reasonable request.

Computing the cost of implementing BI

UBI cost = direct and indirect cost in country i is the payment amount, times the number of people covered by the scheme. We assume for the indirect cost of raising taxes to be the same as the marginal cost of public funds (MCF), which, for a country, represents the welfare cost to a society from raising additional revenue for public expenditures (in our case, basic income [BI]). This welfare cost arises from the market distortions (the deviation from socially optimal consumption and production) created by the tax instrument used to raise revenues. In public economics, distortions differ based on the tax instrument used; for example, revenue raised through an income tax will have a different MCF than revenue raised through consumption or profit taxes.⁷⁴ We first collected data on average MCFs reported in the literature by country and found numbers for a total of 61 countries.⁷⁴ Next, we used these reported MCFs to compute average numbers for low, medium, and high human development index (HDI) country groups, respectively. These averages were then used to fill the data gap, ensuring that we have MCF estimates for all 186 countries included in our study (Table S2).

Computing the benefit of UBI

A change in fiscal policy has a multiplier effect on the economy, which is a measure of the extent to which fiscal expenditures boost gross domestic product (GDP), i.e., it is a measure of the efficacy of expansionary fiscal policy.²⁸ For instance, a multiplier effect of 2 means that each dollar of stimulus will lead to USD 2 in income generated. This type of effect is due to increases in disposable income, which in turn affects spending, consumption, and investment levels in the economy. More technically, fiscal multipliers relate to the impact of a change in government spending (ΔG) or change in tax paid ($-\Delta T$) on real national output (ΔY). Estimates of the value of fiscal multipliers vary widely—partly because of the use of different modeling methods⁷⁵ and because even a single modeling method will give different results at different times, under different economic circumstances, and using different assumptions.

Here, we estimate fiscal multipliers using the marginal propensity to consume (MPC), which captures the proportion of extra income that is used for consumption. For example, if 80% of all new income in a given period of time is spent on products in a country, the MPC would be 80/100, or 0.8. The multiplier effect generated from this expenditure is then calculated using the following equation: $1/(1 - \text{MPC})$. Hence, if consumers spend 0.8 and save 0.2 of every dollar of extra income, the multiplier is equal to 5, which means that every dollar of new income generates USD 5 of extra income overall.

Many influential papers have studied the effects of direct fiscal transfers to individuals.⁷⁶ Parker et al.⁷⁷ and Sahm et al.,⁷⁸ for instance, examined the effect of the 2008 tax rebates provided by the US after the Great Recession. Both studies found an MPC of about 0.25 and as high as 0.67 for what the authors describe as “liquidity-constrained” households. That is, households that are unable to borrow when income is low and/or are unable to quickly sell assets to cover shortfalls. In general, there is evidence that MPC can be quite high during crises because those who lose their jobs are likely to use their transfer funds or UBI for basic needs such as food, housing, and utilities.⁷⁶ It is therefore reasonable to assume that people with incomes below the poverty line would also have high MPCs. Ganong and Noel⁷⁹ found evidence to support this notion, showing that spending by unemployed individuals decreased sharply when unemployment insurance benefits end, a clear indication that these benefits have a large impact on consumption, resulting in high MPC

and fiscal multipliers. Vladova⁷⁵ reported mean MPC from gross indicators for 10 European countries (Belgium, Britain, the Czech Republic, Hungary, Poland, Portugal, Slovakia, Spain, Sweden, and Switzerland) to be 86.2% (range: 80.5%–89.2%) and 90.9% (range: 85.8%–94.5%) in 1993 and 2003, respectively. By including a further 6 non-European OECD countries (Australia, Canada, Japan, Korea, New Zealand, and the USA), the author found that the mean MPC from net indicators for 1993 and 2003 to be 90% (range: 79.2%–100.2%) and 95.5% (range: 88.9%–106.5%), respectively. Two conclusions may be drawn from Vladova’s study. First, MPC for OECD countries is high, and secondly, MPC in these countries is increasing with time. Carroll et al.⁷⁴ also find that the aggregate consumption response across 15 European countries (Austria, Belgium, Cyprus, Germany, Spain, Finland, France, Greece, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, and Slovakia) ranges between 0.1 and 0.4 and that it is higher in economies with large wealth inequality, where a larger proportion of households have little wealth, as well as under larger transitory income shocks when only households using liquid assets (rather than net wealth) to smooth consumption are considered. The authors conclude that wealth inequality and differences in the dynamics of household income affect the response of economies to a “fiscal stimulus” in an economically relevant way. In a study of the impact of remittances on consumption in a selection of countries in the Middle East and Europe, Glytsos⁸⁰ found MPC in Egypt, Greece, Jordan, Morocco, and Portugal to be 0.735, 0.847, 0.531, 0.607, and 0.667, respectively.

To determine MPC for the 186 countries in our study, we adopted the following step-by-step approach: (1) record all published country-level MPCs; (2) set MPCs greater than 0.82 at 0.82, which is the average of MPCs for high HDI countries. This is done to ensure that our estimates are conservative; (3) use the MPCs recorded in (2) to calculate average MPCs for low, medium, and high HDI country groups and use these to fill data gaps for countries with no data reported in the literature (of the 186 countries studied, we found data for 78). These steps provide average aggregate MPCs for all countries in our study, which we assume match the MPCs for the total population of a country. From the literature summarized above, we can assume that the MPCs for people living below the poverty line within a country are greater than the MPCs for the total population. This is because households living below the poverty line are more likely to face “liquidity constraints” compared with those who are not.

But by how much are MPCs for households living below the poverty line higher than those of the total population? In their study of the effects of “bankruptcy flag” removal using a sample of over 160,000 bankruptcy filers whose flags were removed between 2004 and 2011, Gross et al.⁸¹ find that in the year following flag removal, credit card limits increase by USD780 and credit card balances increase by roughly USD290, implying an “MPC out of liquidity” of 0.37. The authors also found a significantly higher MPC during the Great Recession, with an average MPC roughly 20%–30% larger between 2007 and 2009 compared with surrounding years. Carroll et al.⁷⁶ report that more pronounced wealth inequality increases both the proportion of households with little wealth and the MPC among the lower half of the population. The authors report a difference in MPC between the top 10% and bottom 50% of income earners of 33% and the difference between those employed and unemployed of about 50%. Given these pieces of evidence, we conservatively assume that the MPCs for people living below the poverty line are 10% higher than the MPC for the total population.⁴⁵

Several caveats to our methodology merit consideration. Firstly, one might question the usefulness of a 2-year time horizon. Also, filling in the data gaps in MCP country data could introduce a bias toward wealthier countries, as low-income countries are less likely to have comprehensive data. Additionally, it has been argued that fiscal multipliers are nullified in the long run. However, we maintain that the short-term boost remains valuable, echoing Keynes’ famous sentiment: “in the long run, we are all dead.” Given that BI is not a one-shot policy but rather a continuous one, we anticipate that the economic stimulus would persist over time. Furthermore, we encounter challenges when dealing with averages. One might question the validity of averaging MCFs for country income groups, as this approach may overlook important differences in the distributions of MCFs within and between groups.

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Finally, it is worth noting that the analyses on funds/sources and payments/impacts could be brought together more tightly because, at the moment, the estimates of economic costs and BI payments are at a country level, but the estimates for funds raised through carbon taxes are at country group level. Hence, we acknowledge that there is more work to be done, and our hope is that this work would kick off a number of follow-up papers that would fill up the kind of typical gaps that are often inherent in global large-scale studies such this one.

It is crucial for the reader to be mindful of these caveats and questions as they navigate our analysis.

Sustainably funding UBI through environmental taxes

We present a simple illustrative exercise estimating revenues generated using a carbon tax on fossil fuels. We assume, justifiably,⁸² that most countries have existing infrastructure in place to tax (solid, liquid, and gaseous) fossil fuels. This is because the primary supply of fossil fuels is concentrated within a limited number of state or private entities in almost all countries. We do not extend the carbon tax to carbon emissions from cement manufacturing, or to other greenhouse gases such as methane, and nitrous oxide emissions. Some of these emissions are from non-point sources (such as agriculture), or from specific industries, and to implement such a new tax and monitoring infrastructure may be needed. As carbon emissions are a global externality, we assume that the carbon tax is uniform across the world. This differs from the current approach to reducing emissions via the Paris Agreement, which allows countries to determine their own commitments to reduction.

A caveat is in order: we provide a business-as-usual financing estimate. This ignores the fact that fossil fuel taxes will reduce consumption. Our purpose is to illustrate the power of this financing mechanism, but a complete analysis of the benefits and costs from this tax will account for the elasticity of consumption from the tax. It would recognize that a reduction in consumption of fossil fuel from the tax generates benefits and, correspondingly, reduces revenues that finance the BI. Such an analysis is outside the scope of the current analysis.

Data on carbon dioxide (CO₂) emissions from solid, liquid, and gaseous fossil fuel consumption (kt) is from the World Bank Indicators for the year 2016. Our low tax scenario is USD 50 per ton of CO₂ emissions, and the high tax scenario is USD 100 per ton of emissions. These prices were inspired by the mean of USD 54 per ton reported in Wang et al.⁸³ and the ~USD 130 proposed by the government of Canada to achieve its Paris Agreement commitments.⁸⁴ It should be noted that currently, prices are ~USD 23 per ton of CO₂ equivalent emissions in Canada,⁸⁵ USD2 in Japan, USD 31 in Denmark, USD 68 in Switzerland, and USD 168 in Sweden.⁸⁶ Apart from Sweden, these numbers show that there is room for raising double dividend financing via carbon taxes.

Data used in analyses and definitions

Population

The population of each of the countries in our study for 2019 was taken from the CIA World Factbook. Total populations for low, medium, and high HDI for the 186 countries in our study are 472, 5,693, 1,499, and 7,664 million, respectively.

Percentage of the population below the poverty line

National estimates of the percentage of the population falling below the poverty line for 2019 were taken from the CIA World Factbook, which reports that the estimates are based on surveys of sub-groups, with the results weighted by the number of people in each group.

Labor force

The labor force represents the number of people who are employed plus the unemployed who are looking for work. The numbers used for our analysis are for 2019 and were taken from the CIA World Factbook.

Fiscal multipliers

Fiscal multipliers measure the effect that increases in fiscal spending will have on a nation's economic output, or GDP. It is the response of output in percentage with an exogenous government spending of one percent of GDP. In this study, it is derived from the MPC (experimental procedures).

Purchasing power parity

Purchasing power parity is a measurement of prices in different countries that uses the prices of specific goods to compare the absolute purchasing power of the countries' currencies. In many cases, purchasing power parity produces an inflation rate that is equal to the price of the basket of goods at one location divided by the price of the basket of goods at a different location. The purchasing power parity, inflation, and exchange rate may differ from the market exchange rate because of poverty, tariffs, and other transaction costs.

GDP at purchasing power parity (GDP)

GDP at purchasing power parity (GDP) is GDP converted to international dollars using purchasing power parity rates. GDP can tell us about the cost of living in a country. Take, for example, India's nominal GDP of USD2.182 trillion and its GDP of USD8.027 trillion.

CO₂ emissions from liquid fuel consumption (kt)

CO₂ emissions from liquid fuel consumption (kt) is CO₂ emissions from liquid fuel consumption refer mainly to emissions from use of petroleum-derived fuels as an energy source.

CO₂ emissions from solid fuel consumption (kt)

CO₂ emissions from solid fuel consumption (kt) is CO₂ emissions from solid fuel consumption refer mainly to emissions from use of coal as an energy source.

CO₂ emissions from gaseous fuel consumption (kt)

CO₂ emissions from gaseous fuel consumption (kt) and CO₂ emissions from liquid fuel consumption refer mainly to emissions from use of natural gas as an energy source.

SUPPLEMENTAL INFORMATION

Supplemental information can be found online at <https://doi.org/10.1016/j.crsus.2024.100104>.

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AUTHOR CONTRIBUTIONS

U.R.S. conceived the study and together with C.C.C.W., V.W.Y.L., L.S.L.T., L.C.L.T., and H.S. ran all data collection and analyses. C.F., K.H., J.E.C., N.J.B., S.G., and S.P. contributed to study design. U.R.S. wrote the first manuscript draft with contributions from C.C.C.W., V.W.Y.L., L.S.L.T., and L.C.L.T. W.W.L.C., I.I., K.H., J.E.C., N.J.B., C.F., S.G., and S.P. contributed to result interpretations as well as writing and editing revisions.

DECLARATION OF INTERESTS

The authors declare no competing interests.

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CRSUS, Volume 1

Supplemental information

**Utilizing basic income to create
a sustainable, poverty-free tomorrow**

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SUPPLEMENTAL INFORMATION

Table S1: Summary of key variables. We note that prior to the pandemic, 26% of the global population lived below the poverty line, including a humbling 15% in high HDI countries. Also, the total number of people living below poverty lines in low HDI countries is greater than the number of people in the labour force, likely due in part to many working in the informal sector of the economy and high proportions of children to workers.

<i>Variable</i>	<i>Human Development</i>			<i>Global</i>
	<i>LHDI</i>	<i>MHDI</i>	<i>HHDI</i>	
Number of countries	23	105	58	186
Population (millions)	511	5,693	1,460	7,664
Labour force (% of population)	37	43	49	44
Population below National Poverty Line (NPL) (% of pop.)	48	28	15	26
Average NPL income (USD) per capita per year	967	2,136	16,429	6,448
GDP (PPP, Billion USD)	816	61,140	63,931	125,887
Average fiscal multipliers (% spending) - Total population	3.57	4.62	5.30	4.70
Average fiscal multipliers (% spending) - below poverty line	4.90	7.43	9.61	7.79

Note S1: Economic rescue packages (as of October 2020)

Current forecasts suggest that global recession due to the ongoing pandemic will be the deepest since World War II. In their latest [global economic outlook report](#), The International Monetary Fund (IMF) projected a global economy contraction of 4.9 percent for the year 2020. Governments around the world have been quick to respond, putting forward a number of economic measures and incentives to protect people and attempt to limit some of the financial fallout of the covid-19 crisis.

Detailed economic responses implemented by governments in response to the pandemic are being compiled, summarized and regularly updated by the [IME](#). The key policy responses, focusing mostly on fiscal measures, outlined for a number of countries from each region in the world below are based on this resource. We refer the reader to the website for further and up to date details, particularly concerning additional monetary and macro-financial policies.

Generally speaking, most countries have implemented a range of mechanisms that fall under the following objectives: Healthcare related spending; measures to protect households with a particular focus on vulnerable people; subsidies to support employers hard-hit by the pandemic; tax and social contribution deferrals; and employment protection measures.

Northern America

United States

Key fiscal policies have included:

- USD483 billion [Paycheck Protection Program and Health Care Enhancement Act](#), which includes support in the form of Small Business Administration loans, grants and guarantees to help retain workers, as well as financial support for hospitals and expansion of virus testing.
- USD2.3 trillion (around 11% of GDP) for the [Coronavirus Aid, Relief and Economy Security Act](#) ("CARES Act")

Canada

Tax and spending measures equivalent to 15 percent of GDP (USD317 billion CAD) to date have included:

- USD20 billion allocated to support increased COVID testing, vaccine development, medical supplies, mitigation efforts, and targeted health support for Indigenous communities;
- an approximate USD212 billion in direct aid to households and firms, in the form of wage subsidies, payments to workers without sick leave and access to employment insurance, an increase in existing GST tax credits and child care benefits, as well as a new distinctions-based Indigenous Community Support Fund;
- around USD85 billion in liquidity support through tax deferrals.

Additional monetary and macro-financial incentives beyond those implemented by the bank of Canada around bonds and liquidity provisions have included:

- The federal government is to provide USD95 billion in credit facilities (including USD13.8 billion in forgivable loans) to firms under stress.
- Farm Credit Canada will receive support from the federal government to increase lending capacity to producers, agribusinesses, and food processors by an additional USD5.2 billion.

Central America

Panama

- Deficit is expected to rise to 6.25% of GDP in 2020
- Greater spending on health-related measures, including hospital infrastructure, medical supplies and equipment as well as training of medical personnel;
- payments to affected workers and small business owners (benefiting more than 1.5 million people), as well as financing of several programs (valued at USD235 million) aimed at supporting the micro, small and medium-sized companies in restarting operations and continuing to employ workers;

- Suspension of payments for public services (electricity, landline phones, mobile phone and internet) from March until the end of September (cost estimate upwards of USD250 million);
- Electricity subsidy;
- Starting on August 23, the transfer of USD50 to approximately 250,000 workers with suspended contracts (estimated at about USD12.5 million);
- The extension of grace periods on loan payments until December 31, 2020 for a number of services (e.g., mortgages, credit card loans) if borrowers can demonstrate impact of the pandemic on their economic activities ;
- Panama has also mobilized several sources of financing to support economic reactivation: (i) USD515 million from the IMF; (ii) USD300 million from the Inter-American Development Bank (USUSD150 for micro and small businesses, and USD150 million to support agricultural producers); (iii) another USD400 million loan to support efforts to contain the COVID-19 pandemic, mitigate its impact on vulnerable households, and promote policies to mitigate short-term adverse effects on the economy; (iv) USD41 million from the World Bank to expand the coronavirus care network; (v) a USD1 million grant from the Central American Bank for Economic Integration to go towards COVID-19 prevention activities; and (vi) a USD400,000 grant from the Development Bank of Latin America towards the acquisition of ventilators.

Belize

- Belize, whose economy is strongly tied to the tourism industry, which collapsed as a result of the pandemic, is projected to experience a deep recession in 2020.
- Belize has announced a fiscal stimulus amounting to BZD25 million (equivalent to about 1 percent of GDP) in 2020 to support employees affected by the crisis, especially those in the tourism sector.
- The Central Bank of Belize has also adopted a number of measures to support the flow of credit in the economy, including encouraging banks and credit unions to provide grace periods for servicing interest and reducing the statutory cash reserve requirements.

South America

Peru

The government has approved a fiscal support package worth over 7% of GDP and which includes, among others:

- 3 billion soles (0.5 percent of GDP) to attend the health emergency
- 13.4 billion soles (2 percent of GDP) in direct transfers to support vulnerable households;
- the creation of a fund estimated at 0.5 percent of GDP to help qualified SMEs to secure working capital and/or refinance debts;
- postponement of households' payments of electricity and water and a subsidy for electricity payments of 800 million soles;
- a three-month extension for SMEs' income tax declaration and flexibility for enterprises and households in the repayment of tax liabilities.

Uruguay

Examples of fiscal measures to address the pandemic and its impacts include:

- postponement of or reduction in some tax and pension obligations;
- cancellation of or reduction in utility payments for some companies;
- increased flexibility provided in the rules for claiming unemployment insurance;
- expansion of assistance in the form of cash and direct provision of food to the most vulnerable groups;
- Provision of a subsidy equivalent to $\frac{1}{3}$ of current minimum wage for three months for each new hire;
- the salaries of better-paid public officials are being reduced by up to 20 percent, with the savings directed to the newly-established Coronavirus Fund;
- Deferral of loan payments for households and businesses that occur between March 1 and August 31, 2020 for up to 180 days;

- Extension of soft loans to enterprises through the country's largest commercial bank, with financing from international organisations, worth USD120 million.

Caribbean

Barbados

The virtual collapse of the tourism economy, which accounts for 40% of economic activity, will have a significant impact on the country's economy. Barbados made the news in July by launching its "[Barbados Welcome Stamp](#)", a program that will allow visitors to stay on the island visa-free for up to one year. The aim is to attract remote workers, with a bill to be introduced in Parliament by the government that will remove the local income taxes that normally kick in after six months.

- The government identified upfront emergency health and capital expenditures needed to manage and mitigate the spread of infection, including resources to refurbish the hospital and clinics, build isolation centers, and provide critical medications and supplies.
- Additional measures include a minimum income for households made unemployed by COVID-19 and supplemental unemployment benefits through the National Insurance Scheme.
- Additional monetary measures include a reduction in the central Bank's discount rate at which it provides overnight lending to banks and deposit-taking non-banks licensed under the Financial Institutions Act from 7 percent to 2 percent.

Haiti

The main economic impact of the pandemic will come through a projected start decline in remittances, which account for about 30% of GDP.

Fiscal measures by the authorities include boosting a number of social programs and additional health care and security spending; as well as providing support to workers and households through temporary wage payments in some sectors. Altogether, spending should increase by about 4% of GDP, with an allocation of 2.3% on healthcare, and 0.6% specifically targeted at the protection of vulnerable groups.

Northern Africa

Algeria

In response to the pandemic the authorities:

- recently discussed a socio-economic recovery plan which is to focus on food and pharmaceutical security as well as the promotion of a favorable business climate, high value-added sectors, international trade and FDI;
- enacted a supplementary finance law making provisions worth 70bn dinars to mitigate the health and economic impacts of the COVID-19 crisis. For the health sector, this includes 3.7bn for medical supplies, 16.5bn for bonus payments to health workers, and 8.9bn for the health sector's development. The law also includes 20bn for allowances to the unemployed because of COVID, and 11.5bn for transfers to poor households;
- Announced that (i) the declaration and payments of income taxes for individuals and SMEs have been postponed enterprises; (ii) contractual deadlines would be relaxed; and (iii) penalties for companies that experience delays in completing public contracts would be suspended.
- announced several measures to cut the import bill by at least USD10 billion (6% of GDP).

The bank of Algeria has also lowered its reserve requirement ratio from 10% to 6%.

Egypt

The government has announced stimulus policies worth USD 6.13 billion (EGP 100 billion, 1.8 percent of GDP) to mitigate the economic impact of the pandemic. Fifty percent of this stimulus has been earmarked for the tourism sector, which accounts for close to 12% of Egypt's GDP, 10% of employment. Measures have included:

- Increasing pensions by 14%;
- Expansion of cash transfer social programs to reach more families;
- Small monthly grants (EGP 500) for 3 months to support about 1.6 million irregular workers;
- Provision of EGP 8 million for urgent and necessary medical supplies, and disbursing bonuses for medical staff working in quarantine hospitals and labs;

- a 75% allowance over the wages to support medical professionals, including doctors working in university hospitals;
- Lowering of energy costs for the industrial sector;
- real estate tax relief for industrial and tourism sectors;
- subsidy pay-out for exporters;
- discount on fuel price for the aviation sector.
- Postponement of capital gains tax until further notice.
- Implementation of a Corona tax of 1% on all public and private sector salaries and 0.5 percent on state pensions, with proceeds earmarked for sectors and SMEs most affected by the pandemic;
- Raising the limit for electronic payments via mobile phones to EGP 30,000/day and EGP 100,000/month for individuals, and to EGP 40,000/day and EGP 200,000/per week for corporations.

Western Africa

Senegal

The government's resilience package, estimated at up to 7 percent of GDP focuses on four main pillars, including the following measures:

(i) improving the health system

- Allocation of substantial financing (FCFA 78,7 billion (0.5 percent of GDP)) to improve testing, treatment and prevention;
- Hiring of an addition 1500 health workers over the next 18 months, especially in rural areas

(ii) strengthening social protection

- Distribution of food aid (FCFA 69 billion) to one million households;
- Suspension of utility payments (water and electricity) for poorer customers for a 2-month period (FCFA 18,5 billion)

(iii) stabilizing the economy and the financial system to support the private sector and employment

- Direct support provision in the order of FCFA 100 billion to, and access to additional financing through a credit guarantee fund totaling FCFA 200 billion for, the tourism and transport sectors. The government is to contribute up to FCFA 100 billion to this fund.
- Extension of the deadline for paying suspended tax obligations from 12 to 24 months
- Consideration of tax rebates for companies that keep their workforce and salaries above a certain level (estimated cost is FCFA 40 billion).

(iv) securing supplies and distribution for key foodstuffs, medicine and energy products.

The country has also implemented a number of proactive monetary and macro-financial measures to better satisfy banks demand for liquidity and mitigate the negative impact of the pandemic on economic activity.

Ghana

The government initially made GHC 600 million available to support preparedness and response to the pandemic. It has further committed GHC 11.2 billion to address social and economic consequences of the pandemic, with the bulk of the funding allocated to: (i) support select industries (e.g., pharmaceutical sector supplying COVID-19 drugs and equipment); (ii) help SMEs; (iii) finance guarantees and first-loss instruments; (iv) build or upgrade 100 district and regional hospitals; and (v) address availability of test kits, pharmaceuticals, equipment, and bed capacity.

To compensate for COVID related larger spending, the government plans to:

- cut spending by at least GHC 1.1 billion (0.3 percent of GDP) in goods and services, transfers, and capital investment.
- draw USD218 million from the stabilization fund, and borrow up to GHC 10 billion from the Bank of Ghana.

Additional monetary and macro-financial measures to mitigate impacts of the crisis include cuts to the policy rate by 150 basis points to 14.5% and the establishment of a new bond purchasing program to provide emergency financing to the government in light of a higher projected fiscal financing gap.

Central Africa

Burundi

In addition to spending on the pandemic response plan, the cost of which will depend on the evolution of the pandemic, the government is considering providing support to hard-hit sectors such as the transport and hotel sectors. Costs are to be met primarily by reprioritizing the existing budget, with the rest to be financed (about USD12 million or 0.4 percent of GDP) over 2020 and 2021. Measures also include:

- Waiving of taxes owed for hotels and industries that will not be able to pay;
- Subsidies to help pay salaries in hard-hit sectors and avoid massive layoffs;
- Support for salaries for suspended services such as those provided at the Melchior Ndadaye International Airport.

Gabon

Under a recently approved Amended Budget Law, the government proposes to control non-priority expenditure and to redirect savings and development partners support in the order of FCFA 66.1 billion (0.74 percent of GDP) to COVID-19 related spending.

Other government mechanisms include:

- The allocation of FCFA 108 billion (1.2 percent of GDP) to the provision of food stamps, electricity and water subsidies, direct support to SMEs and tax holidays;
- The allocation of around USD375 million to facilitate access to commercial banks financing for private (formal and informal) companies, including SMEs;

From a macro-financial perspective, the central bank agreed to decrease the policy rate by 25 basis points to 3.25 percent.

Southern Africa

Malawi

The government's response plan includes:

- USD20 million (0.25 percent of GDP) in spending on health care and targeted social assistance programs, including the hiring of 2000 additional health care workers;
- Granting of tax waivers on imports of essential goods to manage and contain the pandemic;
- The implementation of an Emergency Cash Transfer Program of about USD50 million (0.6 percent of GDP), mostly financed by development partners, from May-November 2020 to support small businesses in major urban areas;
- Fees on mobile money transactions have been temporarily waived to encourage cashless transactions;
- Restructuring of SME loans and provision of a moratorium on SME debt service, by commercial banks and micro-finance institutions, on a case by case basis, until the end of 2020.
-

Zambia

- Suspension of import duties on mineral concentrate and export duties on precious metals to support the mining sector;
- Waiver of tax penalties and fees on outstanding tax liabilities resulting from CoVID-19;
- Suspension of customs duties and VAT on some medical supplies and medical related commodities;
- Removal of provisions related to claiming VAT on imported spare parts, lubricants, and stationery, in order to ease pressure on companies;
- Issuance of an 8-billion-kwacha bond (2.4 percent of GDP) to finance CoVID-19 related expenses, including health spending, arrears clearance, and grain purchases, as well as a recapitalization of the development bank (NATSAVE).

The Bank of Zambia Monetary Policy Committee lowered the policy rate by a total of 350 basis to mitigate the adverse impact of the pandemic.

Eastern Africa

Rwanda

The pandemic is expected to cause a revenue shortfall of 4 percent of GDP.

The government's Economic Recovery Plan in response to the pandemic is estimated at about 3.3 percent of GDP. Key policy responses have included:

- Support to vulnerable households through a food distribution program (door-to-door provision of basic foodstuffs every three days);
- cash transfers to casual workers;
- subsidized access to agricultural inputs,
- measures to ensure poor households' access to basic health and education;
- support for affected businesses - especially SMEs and hard-hit sectors such as the hospitality industry - through subsidized loans from commercial banks and MFIs, as well as credit guarantees;
- A number of tax deferral and relief measures, including: (i) suspension of down payments on outstanding tax for amicable settlement, (ii) softening of enforcement for tax arrears collection, (iii) extension of the deadline for filing and paying CIT, (iv) fast-tracking of VAT refunds to SMEs, (v) PIT exemption for private school teachers and tourism and hotel employees earning less than RWF 150,000/month, and (vi) VAT exemption for locally produced masks.
- Removal of the 30-day maturity period for the public health insurance scheme premium to expedite access to medical services;
- Redirecting of the salaries of top civil servants for the month of April to welfare programs;
- Easing of loan repayment conditions for impacted borrowers, and waiving of charges on electronic money transactions between 1 April and 22 of June;
- cutting the policy rate by 50 basis points to 4.5 percent.

Kenya

As part of the FY2019/20 budget (ending June 30, 2020), the government earmarked Ksh40 billion (0.4 percent of GDP) for COVID-related expenditure, including:

- Support for the health sector (enhanced surveillance, laboratory services, isolation units, equipment, supplies, and communication);
- Provision of social protection (cash transfers and food relief);
- funds for expediting payments of existing obligations to maintain cash flow for businesses during the crisis.

The FY2020/21 budget includes a Ksh56.6 million (0.5 percent of GDP) economic stimulus package that includes, among other initiatives:

- a new youth employment scheme;
- provision of credit guarantees;
- fast-tracking payment of VAT refunds and other government obligations;
- increased funding for cash transfers.
- Adoption of a package of tax measure, which includes: (i) full income tax relief for individuals earning below the equivalent of USD225 per month, (ii) reduction of the top pay-as you earn rate from 30 to 25%, (iii) reduction of the base corporate income tax rate from 30 to 25%, (iv) reduction of the turnover tax rate on small businesses from 3 to 1%, and (v) a reduction of the standard VAT rate from 16 to 14%.

The central bank has also encouraged banks to extend flexibility to borrowers' loan terms based on pandemic-related circumstances, encouraged the waiving or reducing of charges on mobile money transactions to disincentivize the use of cash and lowered its policy rate by 125 basic points to 7%.

Northern Europe

Iceland

GDP growth fell to -9.1 percent (y/y) in Q2 from a -1.2 growth in Q1 (y/y).

Key measures to support households and firms include:

- tax cuts, deferrals, and loss offsets;
- increased unemployment benefits;
- child allowances;
- quarantine grants;
- state contributions to firms' dismissal costs to prevent bankruptcies of viable firms and protect workers' rights;

- state-guaranteed loans to companies.

Key measures to restart the economy include:

- public investment;
- tax incentives for real estate improvement;
- temporary tax relief for the tourism sector;
- marketing efforts to encourage tourism in Iceland;
- Adoption of simpler temporary rules for financial restructuring of companies.

The Monetary Policy Committee has cut policy rates by 175 basis points to 1 percent.

Norway

Key implemented and proposed fiscal measures (close to NOK 160 billion, or 5.5% of 2019 mainland GDP) include, among others:

- Expenditure measures:
 - household income protection scheme offering larger wage subsidies for temporary lay-offs, more generous unemployment benefits, and expanded sickness and child care;
 - mechanisms to compensate heavily affected but otherwise sustainable businesses for unavoidable fixed costs;
 - subsidy for businesses to take back temporarily laid-off workers;
 - reinstatement of a government fund that buys bonds issued by Norwegian companies;
 - a green transition package;
 - grants for start-ups and subsidies of domestic air routes;
 - support for the construction and transportation sectors through compensations and transfers to highly impacted localities and purchasing of air and train routes
 - strengthening of critical sectors such as healthcare;
 - expanded funding for education and training.
- Revenue measures:
 - lowering of reduced VAT rate from 12 to 6 percent;
 - deferral of various tax payments and reduction of the employer tax for May and June 2020;
 - temporary amendments to the petroleum tax system to improve liquidity in the sector;
 - suspension of aviation charges;
 - temporary lowering of the employers' social insurance contributions.

The policy rate was cut by 1.5% to 0%.

Western Europe

Netherlands

Three support packages have been introduced to mitigate the economic impact of the outbreak and include spending measures estimated at about 48.1 billion euros (6.3 percent of GDP) through June 2021. The most recent package includes 1.5 billion of public investment. Measures include:

- compensation of up to 90 percent of labor costs for companies expecting a reduction in revenues of 20 percent or more;
- compensation for affected sectors (hospitality, travel, agriculture, culture, and others);
- support for entrepreneurs and the self-employed, start-ups and small innovation companies;
- scaling up of the short-time working scheme (unemployment benefit compensation available to companies needing to reduce their staff by at least 20 percent);
- allowances for SMEs to support fixed costs financing.
- Company tax deferrals without penalties - revenue shortfalls from deferral of tax payments are estimated at 27 billion euros (or 3.5 percent of GDP).
- Expansion of public guarantee schemes (estimated to exceed 33 billion euros, or 4.3 percent of GDP), for loans to SMEs and large firms.
- Support of labor mobility toward expanding sectors;
- Development of platforms to facilitate job transition, and financial support for training of employees.

The Netherlands also implemented a large number of monetary and macro-financial measures and is positively impacted by ones put in place by the European Central Bank.

Germany

Germany has forecast that the pandemic will result in a 6% GDP contraction.

To combat the COVID-19 crisis and support the recovery, the federal government adopted two supplementary budgets: €156 billion (4.9 percent of GDP) in March and €130 billion (4 percent of GDP) in June. The authorities plan to issue €218.5 billion in debt this year to finance the packages. Measures include:

- spending on healthcare equipment, hospital capacity and R&D (vaccine);
- expanded access to short-term work ("Kurzarbeit") subsidies/benefits to preserve jobs and workers' incomes to 24 months;
- expanded childcare benefits for low-income parents
- income support for families;
- easier access to basic income support for the self-employed;
- €50+ billion in grants to SMEs and the self-employed severely affected by the pandemic in addition to interest-free tax deferrals until year-end;
- €2bn of venture capital funding for start-ups;
- temporary expanded duration of unemployment insurance and parental leave benefits;
- temporary VAT reduction;
- financial support for local governments;
- expanded credit guarantees for exporters and export-financing banks;
- subsidies/investment in green energy and digitalization.

At the same time, the government is expanding the volume and access to public guarantees by at least €757 billion (24 percent of GDP) for different sized firms, credit insurers, and non-profit institutions, some eligible for up to 100 percent guarantees.

In addition to the federal government's fiscal package, many local governments (Länder and municipalities) have announced their own measures, amounting to €141 billion in direct support and €63bn in state-level loan guarantees.

Germany also benefits from a number of monetary and macro-financial incentives put in place by the European Central Bank.

Southern Europe

Spain

Key measures (€39 billion, or about 3.5 percent of GDP) implemented by the government in response to the pandemic are numerous and include, among others:

- budget support to the Ministry of Health (€1.4 billion);
- advance transfer to the regions to support regional health services (€2.9 billion);
- additional healthcare related spending including research related to COVID-19 (€1 billion);
- Expansion of unemployment benefit to workers temporarily laid off under the Temporary Employment Adjustment Schemes (ERTE) due to COVID-19, with no requirement for prior minimum contribution or reduction of accumulated entitlement (at least €18 billion);
- an extraordinary benefit for self-employed workers, including seasonal self-employed individuals, affected by economic activity suspension (at least €4.8 billion);
- increased sick pay for COVID-19 infected workers or those quarantined (€1.4 billion);
- introduction of a new means-tested "minimum vital income" (about €3 billion annually);
- strengthened unemployment protection for workers under permanent discontinuous contracts who cannot resume work but do not qualify for unemployment benefits (€99 million);
- extension of unemployment benefits to cover workers who were laid off during their probation period, as well as those who were switching jobs but with the new offer falling through (€42 million);
- expansion of ERTE to cover workers and companies with significant activity reduction in sectors considered essential;
- exemptions of social contributions for impacted companies that maintain employment under the ERTE (€2.2 billion);

- a temporary monthly allowance of about EUR 430 for temporary workers whose contract (at least two months' duration) expired during the state of emergency and are not entitled to collect unemployment benefits (€17.6 million);
- a temporary subsidy for household employees affected by COVID-19 with an amount equal to 70 percent of their contribution base (€3 million);
- new rental assistance programs for vulnerable renters and additional state contribution to the State Housing Plan 2018-21 (€400 million);
- additional budgetary funds of €300 million and further budget flexibility for the provision of assistance to dependents;
- transfer of €25 million to autonomous communities funding meals for children affected by school closures;
- extension of the social benefit for energy provision;
- subsidy for vehicle renewal under the MOVE II program (€100 million);
- additional funds to support industrial R&D (€50 million).
- tax payment deferrals for small and medium enterprises and self-employed for six months, with the first four months exempt from interest;
- extension tax return filing deadlines;
- flexibility for SMEs and self-employed to calculate their income tax and VAT installment payment based on the actual profit in 2020 (€1.1 billion);
- no VAT on purchases of medical material essential to combat the COVID-19 until October 31, 2020 (€2 billion);
- reduction in VAT on digital publications from 21 to 4 percent (€24 million);
- a 6-month suspension of social security contributions for the self-employed (for the period May-July) and companies (for the period April-June) in selected industries (€352 million);
- more flexibility for workers to access savings from their pension plans;
- budget flexibility to enable transfers between budget lines and for local governments to use budget surplus from the previous years for supporting measures in the area of housing.

Spain also benefits from a number of monetary and macro-financial incentives put in place by the European Central Bank.

Greece

The government has announced a fiscal package of measures totaling about 14 percent of GDP (€24 billion), including loan guarantees, financed from national and EU resources (some of the latter involves reprogrammed funds). Key measures include:

- health spending for hiring 3,300 doctors and nurses;
- procurement of medical supplies;
- cash bonuses to health sector workers;
- Temporary financial support to vulnerable individuals, including cash stipends and full coverage of pension and health benefit payments for employees working in hard hit firms and for self-employed professionals;
- Extension of unemployment benefits;
- Support for short-term employment;
- Subsidies to households with delinquent loans tied to their primary residence;
- paid leave for parents who have children not going to school;
- liquidity support for hard hit businesses through loan guarantees;
- interest payment subsidies;
- rent reductions;
- Deferral of tax payments and social security contributions;
- VAT rate reductions for critical products needed for COVID protection, research spending and transportation and hospitality sectors.

Greece is also currently eligible for some monetary support measures implemented by the European Central Bank.

Eastern Europe

Poland

New budgetary measures to mitigate the impacts of the pandemic have been estimated at PLN 104 billion (4.6 percent of GDP), with an additional PLN 75 billion (3.3 percent of GDP) in new credit guarantees and micro loans aimed at entrepreneurs. Additionally, the Polish Development Fund will finance a PLN 100 billion (4.5 percent of GDP) liquidity program for micro, small/medium, and large enterprises. Key measures include:

- Additional funds for hospital equipment and supplies;
- Wage subsidies for employees of affected businesses and self-employed persons;
- a three-month subsidy, including social insurance contributions, for businesses in the event of work stoppages or reduced working time.
- Additional loans for micro-firms;
- Postponement or cancellation of social insurance contributions.
- Deduction of this year's losses for 2021 tax filings;
- An allowance for parents of young children not going to school;
- A 3-month "solidarity benefit" for those who lost their job after March 15;
- An increase in the unemployment benefit by 39 percent during the first 90 days of unemployment;
- Establishment of a new fund (COVID Fund) dedicated to combat the negative impact of the pandemic;
- Interest rate subsidies for granted bank loans granted to provide financial liquidity to entrepreneurs affected by the pandemic.
- Extension of foreign workers permits to allow them to stay in Poland and work.

Arab States and western Asia^[SEP] **Oman**

Because the decline in oil prices will result in a loss of government revenue, the authorities have announced that they will reduce spending in the 2020 budget by 10 percent (about 5 percent of GDP).

Measures implemented by the government to support the economy include:

- the suspension of municipal taxes and some government fees (until the end-August)
- the short terms suspension of rent payments for companies in industrial zones;
- reduction of port and air freight charges
- postponement of loan servicing for borrowers of the Oman Development Bank;
- 6 months support targeted at SMEs
- waiving of fines and penalties for late tax disclosures
- allowing the paying of taxes in instalments, and the deduction of donations made to combat the coronavirus;
- encouraging companies to advance paid annual leave and negotiate salary cuts for Omani nationals;
- Rescheduling of bank loans without interest or additional fees for three months for Omani employees whose salaries are lowered, with the additional provision of fuel subsidies, and short-term postponement of electricity and water bills;
- Short-term postponement of electricity and water fees for affected private sector firms.

Iran

On April 15th the government sold its residual shares in 18 companies (including 12 percent share of Social Welfare Fund (SHASTA), the largest public company) to generate income to counteract the economic consequences of the pandemic and U.S. sanctions.

- The government has made around 10% of GDP available for COVID-19 related relief and recovery measures. These include:
- extra funding for the health sector (2 percent of GDP);
- cash transfers to vulnerable households (0.3 percent of GDP);
- support to the unemployment insurance fund (0.3 percent of GDP);
- subsidized loans for affected businesses and vulnerable households (4.4 percent of GDP);
- a moratorium on tax payments due to the government for a period of three months (6 percent of GDP).

Southern Asia

Maldives

To mitigate the economic impact of the pandemic, the authorities have put in place an Economic Recovery Plan worth 2.5 Billion rufiyaa (2.8 percent of GDP). Measures include:

- Reduction in recurrent expenditure by 1 billion rufiyaa (1.1 percent of GDP);
- increase in the amount of funds allocated to the health sector;
- a 40 percent subsidy of electricity bills and 30 percent of water bills for the months of April and May;
- special allowance to those who lost their jobs due to Covid-19;
- availability of working capital to businesses.

Bangladesh

Fiscal measures implemented by the government to contain and mitigate the impact of the pandemic include:

- additional resources to fund the Ministry of Health's COVID-19 Preparedness and Response Plan;
- Expansion of existing transfer programs that benefit the poor;
- Increased allocations to the Open Market Sale program to facilitate the purchase of rice at one-third of the market price;
- Distribution of food supplies by the Ministry of Disaster Management and Relief at the district level;
- a Tk. 110 billion stimulus package for exporting industries, with loan proceeds to support close to 4 million workers' salaries, for a four-month period;
- the allocation of Tk. 21.3 billion under a housing scheme for the homeless;
- Tk. 7.6 billion to support poor people having lost their jobs as a result of the pandemic;
- Tk. 7.5 billion to provide health insurance for government employees most at risk;
- Tk. 1 billion bonus payment for government doctors and health workers treating COVID-19 patients;
- Tk. 20 billion in interest payments covered by the government on behalf of 13.8 million loan recipients negatively impacted by the national shutdown;
- Suspension of duties and taxes on imports of medical supplies, including protective equipment and test kits
- Greater allocations for health, agriculture, and social safety net programmes.

The government has also approached international financial institutions and bilateral development partners for budget support.

Eastern Asia

China

GDP declined by 6.8% ([source](#)) in the first quarter as a result of the pandemic. With normalizing economic activity, real GDP growth rebounded by 3.2 percent (y/y) in Q2. China's central bank has reduced reserve requirements for banks, allowing them to loan an additional USD80 billion to businesses affected by the crisis. Interest rates will likely be cut in the months to come. The People's Bank of China also implemented a number of monetary support measures to safeguard market stability.

An estimated RMB 4.6 trillion (or 4.5 percent of GDP) of discretionary fiscal measures have been announced. Key measures include:

- increased spending on epidemic prevention and control;
- production of medical equipment;
- accelerated disbursement of unemployment insurance and extension to migrant workers;
- tax relief and waived social security contributions;
- public investment.

Japan

Japan's economy shrunk by 3.4% over the January-March period of 2020, and a record 27% over the April-June period. In response to the economic effects of the pandemic, Japan has made available over 2 trillion dollars, in a series of economic package stimulus responses, the equivalent of 44% of its GDP. The financial package includes a number of health related measures, other objectives include

employment and business protection, rebuilding of economic activities and supporting readiness for the future. Specifically, the measures have comprised:

- Allocations in the form of cash payments to citizens (100,000 yen) as well as small and midsize businesses;
- interest-free loans;
- Deferred tax payments and social security contributions;
- concessional loans from public and private financial institutions;
- rent fee support for small and medium enterprises;
- travel and tourism coupons;
- home return support for Japanese travelers abroad;
- consumption promotion campaigns and public investments.

Japan is the largest contributor to IMF financial resources, and largest contributor to the Fund's concessional lending facilities. In early April, Japan pledged an additional USD100 million contribution to the IMF's Catastrophe Containment and Relief Trust as immediately available resources to support the Fund's capacity to provide grant-based debt service relief for the poorest and most vulnerable countries to combat COVID-19. In order to provide emergency financing for broader emerging markets and developing countries to meet their prospective imminent needs, on April 16, Japan announced that it is aiming at doubling its contribution to the Poverty Reduction and Growth Trust (PRGT) from the current SDR 3.6 billion. Japan made the first SDR 1.8 billion immediately available and has called on other member countries to follow suit. Japan will match contributions by an additional SDR 1.8 billion.

Southeastern Asia

Indonesia

In response to the pandemic the government put in place three fiscal packages amounting to IDR 710.4 trillion (4.4 percent of GDP). The fiscal packages comprise:

- support to the health care sector to boost testing and treatment capability for COVID-19 cases;
- increased benefits and broader coverage of existing social assistance schemes to low-income households such as food aid, conditional cash transfers, and electricity subsidy;
- expanded unemployment benefits, including for workers in the informal sector,
- tax reliefs, including for the tourism sector and individuals (with an income ceiling);
- permanent reductions of the corporate income tax rate from 25 percent to 22 percent in 2020-21 and 20 percent starting in 2022;
- capital injections into SOEs and interest subsidies, credit guarantees, and loan restructuring funds for micro, small, and medium enterprises (MSMEs).

The Bank Indonesia (BI) reduced the policy rate by 100 bps cumulatively in February, March, June, and July 2020, to 4 percent

Vietnam

The government's fiscal support package to support the economy is valued VND 279 trillion (3.6 percent of GDP). Measures include:

- deferring payment of VAT, CIT tax obligations, PIT payments and land rental fees (estimated at VND 180 trillion, or 2.4 percent of GDP);
- cutting registration tax by 50 percent and deferring excise tax on domestically produced cars
- lowering land rental by 15 percent;
- deducting 30 percent of current environmental protection tax on jet-fuel from August to December 2020;
- tax exemptions for medical equipment;
- Deferral of pension and survivorship fund contributions for firms and workers (up to 12 months) without interest penalty (estimated at VND 9.5 trillion or 0.1 percent of GDP);
- cash transfer package worth VND 36 trillion (0.5 percent of GDP) for affected workers and households from April to June. More than 10 percent of the population is estimated to benefit from this program.

Micronesia

Marshall Islands

The Government has approved an initial budget of USD42 million dollars (around 20 percent of GDP) for the national preparedness plan in response to the global health pandemic. Much of the funding, to be covered by grants, will cover urgent needs for RMI's Ministry of Health and Human Services (including infrastructure, medical supplies and equipment, and surge support) and support to the Neighboring Islands COVID19 preparedness plans. An additional USD17 million will be made available for infrastructure in the outer islands, but the details remain unclear.

Other major activities include:

- building of hand-washing stations;
- RMI foreign missions assisting Marshallese citizens living abroad and impacted by the pandemic;
- relief payouts to hard-hit local companies;
- food baskets, fishing gears and farming tools for neighbouring Islands/outer islands.

Polynesia

Samoa

The government has put together a fiscal and economic response package, amounting to 149.4 million Samoan tala (about 6.8 percent of GDP). The first package centered around the mission of "Support the private sector so they can feed the nation," while the second centered around the mission of "Weaving a prosperous and secure future for Samoa together". Both included measures around:

- expenditure to cover health related costs including the immediate medical response as well as construction and upgrade of rural hospitals;
- Private sector assistance;
- Individual and household assistance
- Establishment of temporary quarantine facilities;
- temporary exemption for SME on import duties on most commonly bought food items for households;
- duty concessions for SME to be applied to an expanded list of agricultural and fishing materials;
- a grace period for SME of three months for all loan payments;
- a six-month moratorium on pension contributions for the hospitality sector.
- establishment of the Emergency Price Control Board to keep wholesale and retail prices in check and bring them down, if necessary;
- provision of financial assistance to members of the National Provident Fund in the form of a refund of their loan payments for March 2020;
- a temporary reduction of utility bills (both electricity and water) for six months through September 2020;
- a benefit of 50 tala per citizen for a national ID registration;
- Unemployment benefits;
- paid training for the hospitality sector;
- a special one-off pension payment.

On April 24, the IMF Executive Board approved the disbursement of USUSD22 million in emergency financing under the Rapid Credit Facility (RCF) to help Samoa address urgent balance of payments needs created by COVID-19.

New Zealand

The government has put in place fiscal measures amounting to a total of NZUSD62.1 billion (21.3 percent of GDP) through FY2023-24. The total amount includes the NZUSD50 billion COVID-19 Response and Recovery Fund, of which NZUSD14 billion have been set aside as contingency for a possible second wave. Announced fiscal measures include:

- healthcare-related spending to reinforce capacity (NZUSD0.8 billion or 0.3 percent of GDP);
- a permanent increase in social spending to protect vulnerable people (total NZUSD2.4 billion or 0.8 percent of GDP);
- a wage subsidy to support employers severely affected by the impact of COVID-19 (NZUSD14.8 billion or 5.1 percent of GDP); (iv) income relief payments to support people who lost their jobs (NZUSD0.6 billion or 0.2 percent of GDP); (v) a permanent change in business taxes to help

cashflow (NZUSD2.8 billion or 1.0 percent of GDP); (vi) infrastructure investment (NZUSD3.8 billion or 1.3 percent of GDP); (vii) transport projects (NZUSD0.6 billion or 0.2 percent of GDP); (viii) a temporary tax loss carry-back scheme (NZUSD3.1 billion or 1.1 percent of GDP); (ix) support for the aviation sector (NZUSD0.6 billion or 0.2 percent of GDP); (x) a tourism recovery package (NZUSD0.4 billion or 0.1 percent of GDP); (xi) a government housing program (NZUSD0.7 billion or 0.2 percent of GDP); and (xii) school infrastructure upgrades (NZUSD0.2 billion or 0.1 percent of GDP). The government has also approved a NZUSD0.9 billion debt funding agreement (convertible to equity) with Air New Zealand to ensure continued freight operations, domestic flights and limited international flights. The New Zealand government also provides loans of up to NZUSD100,000 to small businesses that employ 50 or less employees (NZUSD5.2 billion). In addition, on March 28 the government announced temporary removal of tariffs on all medical and hygiene imports needed for the COVID-19 response.

Melanesia

Vanuatu

Tourism, which contributes 24.6 percent of Vanuatu's GDP, has effectively ceased.

The government, using its existing budget envelope, a package worth 4.4 billion vatu (roughly 4.5 percent of GDP) and with help from Australia, China, New Zealand, UNICEF, WHO, other NGOs/CSOs and some local businesses is implementing a number of fiscal measures, including, but not limited to:

- Expansion of health facilities, restocking personal protective equipment and supplies, and further training healthcare workers, especially in Port Vila;
- spending on community education and awareness.
- Provision of flights and support for arrival and short-term quarantine costs in Port Vila for repatriated ni-Vanuatu;
- Provision of Hardship Loans, an interest-free withdrawal from a member's account for 6 months of up to 100,000 vatu, through The Vanuatu National Provident Fund (VNPF). When the loan facility closed on May 1, the VNPF had paid out about 1.5 billion vatu (USUSD12.5 million);
- Deferral and cancellation of taxes, license fees and charges for businesses in 2020 (796 million vatu);
- the Employment Stabilization Payment (ESP) (reimbursing employers 30,000 vatu per employee per month up to September 15th, plus an additional 12 percent to the employer, for a total of 2.5 billion vatu);
- Provision of a Commodity Support Grant provided to producers of copra, kava, cocoa and coffee (300 million vatu);
- Provision of a Shipping Support Grant to facilitate farmers' access to major market centres such as Port Vila and Luganville (100 million vatu);
- Suspension of secondary school tuition fees for 2020 (42,000 vatu per student for a total of 510 million vatu, paid directly to schools).

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Note S2: Universal income supporters

Julen Bollain, Economist from Spain¹

"Analysing them one by one, it has been possible to demonstrate how a basic income overcomes them perfectly thanks to the principles of universality, unconditionality and income accumulation."

Tim Berners-Lee, English Inventor of the World Wide Web²

"I think a basic income is one of the ways of addressing massive global inequality,"

Milton Friedman, US Economist³

Negative Income Tax.

Barack Obama, Former US President⁴

"It's not just money that a job provides," said Obama. "It provides dignity and structure and a sense of place and a sense of purpose. So we're going to have to consider new ways of thinking about these problems, like a universal income, review of our workweek, how we retrain our young people, how we make everybody an entrepreneur at some level. But we're going [to] have to worry about economics if we want to get democracy back on track."

Elon Musk, South Africa/US Businessman⁵

"There's a pretty good chance we end up with a universal basic income, or something like that, due to automation," said Musk. "I'm not sure what else one would do. That's what I think would happen."

Andrew Yang, 2020 US Presidential Candidate⁶

Proposes a USUSD 1000 per person UBI that he characterized as 'Freedom Dividend'.

Mark Zuckerberg⁷

"We should explore ideas like universal basic income to make sure everyone has a cushion to try new ideas."

Guy Caron, NDP member and economist⁸

On Monday, Caron also unveiled the first plank of his plan, proposing to establish a basic income for all Canadians.

Archbishop Desmond Tutu, South African Nobel Laureate⁹

"Friends, I do not need to remind you of the importance and benefits of campaigns such as the basic income movement that are designed to enhance the dignity, well-being, and inclusion of all people, and to move us closer to our vision of social equity... We have a unique opportunity to wipe out hunger and abject poverty, to make sure that no one falls into absolute destitution. For perhaps the first time in history we have the resources, the know-how, and the technology to make starvation and dependency relics of the past. But do we have the will?"

Martin Luther King Jr., Civil Rights Activist¹⁰

"We have come a long way in our understanding of human motivation and of the blind operation of our economic system. Now we realize that dislocations in the market operation of our economy and the prevalence of discrimination thrust people into idleness and bind them in constant or frequent unemployment against their will. The poor are less often dismissed from our conscience today by being branded as inferior and incompetent. We also know that no matter how dynamically the economy develops and expands it does not eliminate all poverty.

[...]

The problem indicates that our emphasis must be two-fold. We must create full employment or we must create incomes. People must be made consumers by one method or the other. Once they are placed in this position, we need to be concerned that the potential of the individual is not wasted. New forms of work that enhance the social good will have to be devised for those for whom traditional jobs are not available."

Pope Francis¹¹

In a letter dated Easter Sunday, 12 April 2020, amid the Covid-19 pandemic, Pope Francis has called for the consideration of a Universal Basic Wage "that would ensure and concretely achieve the ideal, at once so human and so Christian, of no worker without rights."

James Tobin¹²

American economists James Tobin, Paul Samuelson, and John Kenneth Galbraith signed a document with 1,200 other economists in 1968 calling for the 90th U.S. Congress to introduce in that year a system of income guarantees and supplements.

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