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A Simple Framework for Tracking and Evaluating Fiscal Stimulus Measures in an Economy

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Abstract

This paper introduces a simple policy dynamics-style database system or framework for tracking (monitoring) and evaluating fiscal stimulus interventions in an economy. The framework is comparable and complimentary to global policy dynamics style database frameworks designed to track, compare, and evaluate country policy responses to the COVID-19 pandemic. Its schematic outline borrows from the Institutional Analysis and Development (IAD) framework. It proposes three process and output indicators, namely: 1) Nature of measure and Duration, 2) Total Spending and Financing, and 3) Delivery Method, respectively. It also proposes one output indicator (i.e., Policy Impact).

Keywords

Fiscal Stimulus, Institutional Analysis and Development, IAD, Tracking System, COVID-19

1. Introduction

Fiscal policy and the gains from its efficient implementation are topics of discussion that are back in vogue. This is as many of the world's governments are faced with the daunting task of engineering economic recoveries against the backdrop of adverse health and economic ramifications stemming from the COVID-19 pandemic. As at January 2021, global fiscal support measures towards mitigating the effects of the pandemic amounted to US$14 trillion (IMF, 2021a). Despite this unprecedented level of accommodation, as well as strides in vaccination, the downside risks to an economic turnaround are likely to be protracted and made much severer by renewed waves and new variants of the virus. This is coupled

with deteriorating global fiscal positions predominantly characterised by shrinking resource envelopes and widening deficits. According to IMF (2021a), average fiscal deficits in 2020 as per cent of gross domestic product (GDP) are expected to register 13.3 per cent, 10.3 per cent and 5.7 per cent in advanced economies, emerging market and middle-income economies and low-income developing countries, respectively. In the same year, the level of global public debt is projected to reach 98 per cent of GDP. At the same time, World Bank (2021) and IMF (2021a/b) caution against the premature withdrawal of fiscal support before economic recovery takes root, since this could lead to the unintentional bankruptcies of viable but illiquid firms, coupled with exacerbated employment and income loses. When economic recovery hinges on sustaining fiscal support while also balancing the risks to macroeconomic and financial stability, it is critical to have an efficient and easy to understand way of tracking and performing evaluations on rolled out stimulus measures over a designated period of time. Such a tool could be used to buttress and complement existing indicators. It can function as a lens through which policymakers can have a real time perspective of how actual policy measures are performing; from rollout date, through their implementation period until the date they are withdrawn (rolled back).

The unprecedented level of COVID-19 global policy responses since 2020 to date has inspired the development of publically available policy dynamics-style database systems that track country specific counter-cyclical policy measures taken by authorities to mitigate the adverse effects of the virus. The most notable[1] of these global policy tracking systems are those managed by International Monetary Fund (IMF)[2]; World Bank[3]; Organisation for Economic Co-operation and Development (OECD)[4]; European Union (EU)[5]; International Labour Organisation (ILO)[6]; Harvard Business School (HBS)[7] and University of Oxford[8], respectively. A common feature and key advantage in these platforms is that they facilitate cross-country comparison across of a variety of policies including (but not limited to) macroeconomic and financial policy, tax policy, trade policy and foreign direct investment (FDI), social and employment policy as well as health and care policy. The tracking and comparison function is even more useful if it is complemented by an evaluation component that allows for an assessment of the changes in the policy and its associated outputs over time. Most of the mentioned policy dynamics-style database systems also support a periodic reporting component that becomes useful for policymakers to inform the process of decision making. For instance, the IMF system feeds into the institution's flagship reports[9] (i.e. world Economic Outlook, Fiscal Monitor and Global Fi-

[1]Most of the policy dynamics-style database systems are managed by international Standard Setting Bodies (SSBs) and internationally reputable institutions of higher learning.
[2]IMF (2021c/d).
[3]Gentilini et al. (2020).
[4]OECD (2021).
[5]Practical Law (2021).
[6]ILO (2021).
[7]HBS (2021).
[8]University of Oxford (2021).

nancial Stability Report). Similarly, the World Bank system advises (among others) their Global Economic Prospects[10] report.

2. Problem Statement

A policy dynamics-style database system that tracks and evaluates the changes in the policy and its associated outputs over time, is a framework. A framework helps to organise inquiry and direct attention to important features of the social and physical environment under observation. The foundation for inquiry is facilitated by the specification of a class of variables and the general relationships among them. This creates a meta-theoretical language that policy scholars using different theories can utilise as a common format to compare theories, learn from one another and identify urgent questions to pursue. Although a framework helps to organise inquiry, it cannot in isolation, provide explanations for, or predictions of, behaviour and outcomes. Such matters are best served by theories and models (Gentilini et al., 2020; Hammer & Hallegatte, 2020a/b; Cairney & Yamazaki, 2018; Sabatier & Weible, 2014; Luoto et al., 2013; WHO, 2009; Albaek et al., 2007). The handful of policy dynamics-style database frameworks identified earlier face three main challenges. First, they rely on country data sourced from third party representatives. The implication is that the data might not always be up to date and reflective of real-time developments at the country level. Second, some countries may not be adequately represented or represented at all, either due to lack of data (in light of the framework's indicators) or simply because they fall out of the country representative scope. Third, the frameworks cover a wide variety of policy measures and often do so in broad terms while covering a myriad of actors. This hampers a granular evaluation from within an integrated setting, of how interactions between various policy actors affect policy performance and output.

3. Objective

The objective of this paper is to introduce a simple policy dynamics-style database framework for tracking (monitoring) and evaluating fiscal stimulus interventions in an economy. The framework is designed to assess deliberate government social protection interventions by leveraging a set of interconnected base indicators selected with due consideration of international comparability and likelihood of data availability at the country level. The path of the fiscal stimulus is tracked from input signal (stimulus rollout), through the implementation phase and back to steady state (stimulus rollback) against set (planned) targets intended to influence employment and economic activity in the country. The inbuilt monitoring/tracking and evaluation component allows the framework to function as a tool for assessing and reporting on stimulus interventions as though they were government projects with a finite timeline. Upon interpretation, the framework can be considered in conjunction with other fiscal policy

[9]See: https://www.elibrary.imf.org/page/flagships.

[10]See: https://www.worldbank.org/en/publication/global-economic-prospects.

indicators (e.g. fiscal vulnerability index, public debt to revenue ratio, debt to GDP ratio etc.) to inform overall fiscal sustainability.

4. Justification

Currently, Lesotho does not have a comprehensive framework for tracking, coordinating and evaluating fiscal stimulus measures in the economy. The proposed framework is designed to assist analysts and policymakers track and evaluate the progress of deliberate government social protection interventions intended to influence employment and economic activity over time. It can be used in the planning, execution and evaluation phases of fiscal stimulus since it offers the means of transparency and accountability throughout the stimulus implementation process. It allows for a real-time account of developments in specific aspects of fiscal stimulus implementation and can thus be credibly used to evaluate response and efficiency of fiscal counter-cyclical stabilizers. The framework's perpetual learning ability (i.e. inputted real time updates by user) throughout the policy implementation period can be used to inform whether to augment existing policies, develop new and complementary ones or rollback the existing measures. Such flexibility provides assurance that the fiscal stimulus initiatives are being implemented as intended. The framework can also be used to harvest stylised facts about policy response time and efficacy (for e.g. it can track the number of jobs created after so many days/weeks/months, as a direct result of a particular stimulus measure). This is valuable information in the econometric process of policy modelling.

The rest of the paper is organised as follows. Section 2 offers the paper's theoretical background. Section 3 presents a comparison of a handful of global policy dynamics-style database frameworks. Section 4 introduces the proposed fiscal stimulus tracking and evaluation framework. Section 5 concludes.

5. Theoretical Background

This section presents the theoretical background that underpins the development of the policy dynamics-style database framework proposed in this paper. The discussion is two-pronged. First, it makes a distinction between frameworks, theories and models. Second, it elaborates on the Institutional Analysis and Development (IAD) framework, the most commonly used framework by policymakers and scholars to organize diagnostic, analytical and prescriptive work.

5.1. Frameworks, Theories and Models

The policy space is rich with multiple disciplines, disciplinary languages and levels of analysis that are linked to the study of relationships among rules, relevant worldly aspects and cultural phenomena. Investigative work undertaken in such environments is done so with three general aims. 1) to understand and/or explain what influences implementation outcomes, 2) to evaluate implementation, and 3) to translate research into practice through a guided and/or described

process. These general aims are achieved at three essential levels of specificity that are dissimilar but connected and often not clearly distinguished from each other. The essential foundations are: 1) frameworks; 2) theories, and 3) models (Nilsen, 2020; Sabatier & Weible, 2014; Kiser & Ostrom, 1982/87; Ostrom, 1972; Ostrom & Ostrom, 1971). **Table 1** presents general descriptions of the three essential levels of specificity in theoretical investigation.

From the table, frameworks, theories and models are complementary but dissimilar. A Framework helps to identify specific elements and the relationships among them. It provides analysts and policymakers with a way to guide inquiry and generate questions that need to be answered when the first steps of detailed analysis are conducted. Theories focus on a framework and facilitate the development of case specific assumptions that are necessary for the diagnosis of a phenomenon, the explanation of its process and the prediction of its outcomes. Models take matters a bit further by making more pointed assumptions about a finite number of variables and parameters. A model's systematic exploration of the consequences of interactions between the variables and parameters, given assumptions and a limited set of outcomes, is done with the use of logic, mathematics, game theory, experimentation and simulation (among other systematic means) (Ostrom & Ostrom, 1971; Ostrom, 1972; Kiser & Ostrom, 1982/87; Wacker,

Table 1. Framework, theory and model.

Name	General Description
Framework	A framework organises diagnostic and prescriptive inquiry. It identifies the most general set of variables to analyse institutional arrangements. The variable set could range from a modest number to a design as extensive as a paradigm. Frameworks are essential in the conduct of preliminary analysis since they offer analysts perspective and generate questions that need to be addressed. Frameworks do not need to identify directions among relationships, although more developed frameworks specify a particular hypothesis. Frameworks cannot, on their own, provide explanations for, or predictions of, behaviour and outcomes. Such matters are best served by theories and models.
Theory	A theory allows analysts to identify and specify elements from the framework that are pertinent in answering particular questions of interest. It enables the formation of general working assumptions about the elements selected. Theories therefore provide a more concentrated and logically coherent evaluation of the set of relationships. In some cases, it even applies values to some of the variables and specifies how the relationships may vary on account of the values of other critical variables.
Model	A model is ideally a mathematical representation of a specific situation. Its scope is much narrower and its assumptions more precise than the underlying theory. Analysis within a model setting usually involves the use of logic, mathematics, game theory, experimentation and simulation.

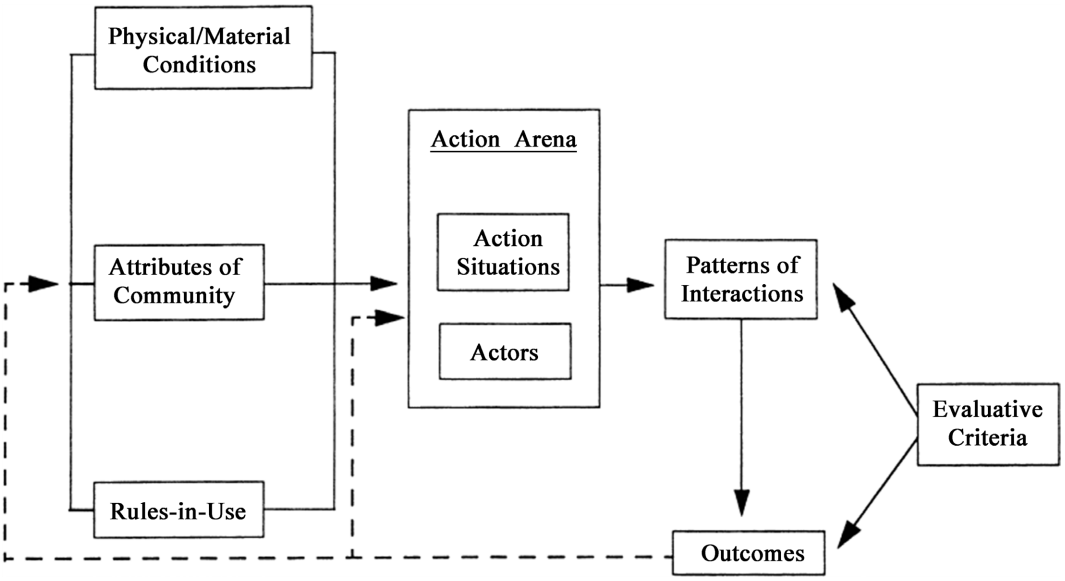
Source: (Ostrom & Ostrom, 1971; Ostrom, 1972; Kiser & Ostrom, 1982/87; Wacker, 1998; Carpiano & Daley, 2006; Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019; Nilsen, 2020).

1998; Carpiano & Daley, 2006; Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019; Nilsen, 2020).

5.2. Overview of the IAD Framework

The Institutional Analysis and Development (IAD) framework can be traced back to the work of Ostrom and Ostrom (1971), Ostrom (1972) as well as Kiser and Ostrom (1982/87). It was first developed as a way to understand how a wide range of paradigms in the political science landscape affected the conceptualisation of public administration and metropolitan organisation. It has since evolved to become a widely used tool by economists, political scientists, anthropologists, geographers, lawyers, social psychologists, and others interested in matters of how institutions affect the incentives confronting individuals and their resultant behaviour. A graphical depiction of the IAD framework is presented in **Figure 1**.

The IAD framework is a multitier conceptual map that has at its core, what it refers to as an action arena with action situations and actors. The action arena is a social space wherein individuals and corporate actors interact, solve problems or exchange goods and services and together arrive at outcomes related to an aspect of the policy question. Action situations describe instances where decision makers jointly address important policy concerns and arrive at important decisions. The framework makes a distinction between three types of action situations. First; operational-choice situations, wherein actors' choices have a direct impact on tangible outcomes. Second; collective choice/policy making situations, wherein rules that constrained actors in the operational choice arena are shaped. Third; constitutional-choice situations, which focus on decisions made with regard to which actors have representative standing in which choice situations and which institutional mechanisms are at their disposal doing their collective



Source: Adapted from Sabatier and Weible (2014)

Figure 1. A framework of institutional analysis.

deliberations and operational choices. The actors within the action arena are brought together by the beliefs they have and incentives they face. These beliefs and incentives, together with other aspects such as official positions held by the actors or information available to them, affect individual choices and collective outcomes. The outcomes are evaluated by relevant actors. The combined feedback from the outcomes and evaluations can be used to reinforce the prevailing policy choice or induce changes given the contextual conditions (Kiser & Ostrom, 1982/87; Wacker, 1998; Carpiano & Daley, 2006; Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019; Nilsen, 2020).

Under the framework, the nature of the decision problem is defined by three categories of contextual conditions, namely: 1) physical material/conditions, 2) attributes of community[11], and 3) rules-in-use[12]. A major strength of the IAD framework is that it provides a systematic and efficient general template that can be used to explore collective action problems of all kinds. Its practical nature has been used in a host of countries to answer a wide array of policy questions, including how institutions organise themselves for the provision and production of public goods such as policing, education and primary health care (Kiser & Ostrom, 1982/87; Wacker, 1998; Carpiano & Daley, 2006; Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019; Nilsen, 2020).

6. Comparing Global Policy Dynamics-Style Database Frameworks

This section offers a birds-eye-view comparison of seven notable global policy dynamic style database frameworks that are designed to track country specific counter-cyclical policy measures taken by authorities to mitigate the adverse effects of COVID-19 around the world. The frameworks discussed are managed by the International Monetary Fund (IMF); World Bank; Organisation for Economic Co-operation and Development (OECD); European Union (EU); International Labour Organisation (ILO); Harvard Business School (HBS) and University of Oxford, respectively.

According to Sabatier and Weible (2014) and Cole et al. (2019), frameworks can generally be compared on the basis of four criteria. These being: 1) types of actors, 2) general classes of indicators and relationship among them, 3) units of analysis, and 4) levels of analysis. For this paper, we add three more criteria to this list, namely: purpose, coverage and policy focus. **Appendix A1** presents the results of the comparison between the eight global policy dynamics-style database frameworks under consideration. All the frameworks track country specific counter-cyclical policy measures taken by authorities to miti-

[11]These could include social ties and the cultural context in which the actors interact (Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019).

[12]The current configuration of laws, regulations, rules and understandings that are understood by the actors to be pertinent to their deliberation (Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019).

gate the adverse health and economies effects of COVID-19. Their overarching aim is to inform analysis and recommendations on a range of topics that can address the health, economic and societal crisis as well as facilitate co-ordination, information sharing and communication in the collective fight against COVID-19. Each of the policy trackers is global in its coverage, although not exhaustive in isolation from the others. That is, in some cases, countries may not be adequately represented or represented at all, either due to lack of data (in light of the framework's indicators) or simply because they fall out of the country representative scope.

All of the global policy trackers compared do not assume to fully reflect all the polices taken by authorities nor do they assume that they reflect the most up-to-date real time developments at each country level. The implication is that the data might not always be reflective of real-time developments at the country level. The units of analysis and class of indicators are largely influenced by how specific the policy focus is. For instance, the IMF's fiscal monitor database of country fiscal measures in response to the pandemic has two broad indicators that focus on the kind of stimulus measure and its implication on public finances in the short to long term. The indicators are: 1) above the line measures and 2) liquidity support, respectively. Above the line measures are divided into *additional spending or foregone revenues* and *accelerated spending/deferred revenue*, respectively. Liquidity support is subdivided into *below the line measures and contingent liabilities*, respectively. The units of analysis in most cases are in USD million or billion and per cent of GDP. Similarly, the ILO's policy tracking framework tracks policy action at country level across four action pillars. These are: 1) policies stimulating the economy and jobs, 2) policies supporting enterprises, employment and incomes, 3) policies protecting workers in the workplace and 4) the use of social dialogue between government, works and employers to find solutions.

Some extent of action situation evaluation can be done at a cross country and even at the country level in most of the frameworks. However, the action situations usually include rules-of-use and attributes of the community not immediately made clear in the framework. This is coupled with a myriad of actors whose representation is not comprehensively articulated. This hampers any extensive and on the spot evaluation of how interactions between various policy actors within the action arenas affect policy performance and output. The World Bank framework is arguably the only one that offers a comprehensive and real-time comparative review of the cross-country social protection and job response measures put in place in response to COVID-19. What is comforting, in all cases, the frameworks are used to inform much more in-depth analysis which is subsequently reported in institutional flagship reports (e.g. the IMF fiscal monitor; World Bank Global Economic Prospects) that inform policy after benefiting from extensive and detailed engagements with relevant actors involved in policy action situations of interest.

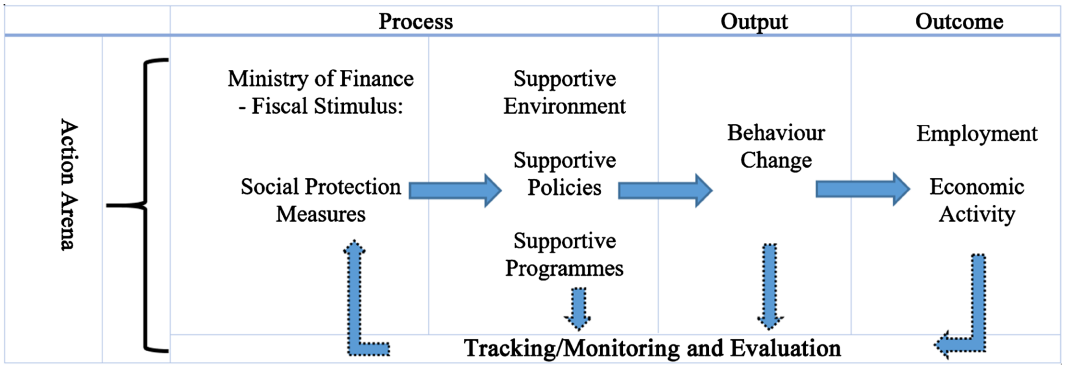
7. Framework for Tracking and Evaluating Fiscal Stimulus

This section introduces a simple policy dynamics-style database framework for tracking (monitoring) and evaluating fiscal stimulus interventions within an economy. The stimulus interventions considered comprise of a handful of social protection measures whose intention is to influence employment and economic activity in a country. The discussion is divided into four parts. First, a presentation of the framework's schematic diagram and interpretation. Second, a description of the framework's action situations and main actors. Third, an explanation of the framework's process, output and outcome indicators. Fourth, an outline of the recommended steps to follow during the tracking/monitoring and evaluation process.

7.1. Schematic Diagram and Interpretation

A schematic diagram of the framework is provided in Figure 2. From the figure, fiscal stimulus measures are developed and implemented by the Ministry of Finance. They form part of the framework's action situations, as captured in the action arena. The stimulus measures and the interactions between the various policy actors during roll out, are provided as inputs into the value chain. The path of the fiscal stimulus is tracked along process, output and outcome indicators in a clock-wise fashion from input signal (stimulus rollout), through the implementation phase and back to steady state (stimulus rollback) against set (planned) targets intended to influence employment and economic activity.

The framework's inbuilt monitoring/tracking and evaluation component allows it to function as a tool for assessing and reporting on stimulus interventions as though they were government projects with a finite timeline. In line with the Institutional Analysis and Development (IAD) framework discussed previously, it is necessary for a policy dynamics-style database framework that monitors policy implementation to take note of and underscore the interactions between various actors, and relevant institutional and/or policy changes that are essential to the successful delivery of each proposed fiscal stimulus measure (World Bank, 2020; Nilsen, 2020; Pierce et al., 2020; Cole et al., 2019; Sabatier & Weible, 2014;



Source: Authors' Own Illustration

Figure 2. Schematic diagram.

McGinnis & Ostrom, 2014, as well as Luoto et al., 2013). The proposed framework recognises and caters for various stakeholder interrelationships in the policy process by including supportive environments as well as policies and programmes, as action situations in the action arena.

By incorporating the interrelationships between supportive environments, policies and programmes, the framework builds-in efficiency since it allows for such relationships to be accounted for ahead of time. As an example; suppose a fiscal stimulus measure could benefit from a supportive programme from the Ministry of Health. Timely incorporation of detailed information regarding planned against actual reports of the Ministry of Health's supportive programme, as aided by efficient information sharing among partners and actors, would make the framework a more effective policy lens. Similarly, assume that in order to update the framework, an analyst from the Ministry of Finance needs data on employment and GDP from the National Bureau of Statistics. It helps for the analyst to know beforehand and therefore to duly internalise the Bureau's data release timelines and requisite data, into the framework. It is also important in this respect to have a highly efficient, communicative and healthy data sharing relationship between actors. Upon interpretation, the framework's indicators can be considered in conjunction with other fiscal policy indicators (e.g. fiscal vulnerability index, public debt to revenue ratio, debt to GDP ratio etc.) to inform overall fiscal sustainability.

7.2. Action Situations

This section discusses the framework's five action situations, namely: 1) Social Protection Measures (fiscal stimulus); 2) Supportive Environments; 3) Supportive Policies; 4) Supportive Programmes, and 5) Tracking/Monitoring and Evaluation.

1) *Social Protection Measures*

These are government initiatives designed to help poor and vulnerable individuals and families cope with crises and shocks. Examples could be measures that facilitate access to employment, investment in health and education of vulnerable children as well as protection of the elderly. The main actors in this action situation usually comprise of macroeconomic policymakers and analysts. (IMF, 2021a/b; ILO, 2021; OECD, 2021; World Bank, 2020; Gentilini et al., 2020; Hammer & Hallegatte, 2020a/b; WHO, 2009; Tibandebage et al., 2003).

2) *Supportive Environments*

These are actions taken by relevant actors/partners/stakeholders to influence the creation of a suitable environment in which the fiscal stimulus can arrive at its intended goal (e.g. the creation of forums for policy dialogue and sharing of ideas). The main actors in this action situation usually consist of a wide array of actors (individual and corporate) within financial, macroeconomic and legal sectors, together with private sector employers and workers organisations (IMF, 2021a/b; ILO, 2021; OECD, 2021; World Bank, 2020; Gentilini et al., 2020; Ham-

mer & Hallegatte, 2020a/b; WHO, 2009 and Tibandebage et al., 2003).

3) *Supportive Polices*

These are policies developed by relevant actors/partners/stakeholders that if implemented effectively can help the fiscal stimulus to arrive at its intended goal (e.g. a national fintech strategic plan to coordinate development of the financial sector). The main actors include but are not limited to actors (individual and corporate) within financial, macroeconomic and legal sectors. The actors also include international development partners, private sector employers and workers organisations (IMF, 2021a/b; ILO, 2021; OECD, 2021; World Bank, 2020; Gentilini et al., 2020; Hammer & Hallegatte, 2020a/b; WHO, 2009 and Tibandebage et al., 2003).

4) *Supportive Programmes*

These are activities undertaken by one or more stakeholders geared to the efficient implementation of the fiscal stimulus measures. Possible examples include steps towards greater efficiency in the digital payment space coupled with reliable and expansive mobile phone connectivity. This can assist in the delivery and coverage of a particular stimulus measure (e.g. cash transfers) to the vulnerable, via mobile phones and other digital payment platforms. The main actors comprise financial, macroeconomic and legal sectors (IMF, 2021a/b; ILO, 2021; OECD, 2021; World Bank, 2020; Gentilini et al., 2020; Hammer & Hallegatte, 2020a/b; WHO, 2009 and Tibandebage et al., 2003).

5) *Tracking/ Monitoring and Evaluation*

These are recommended steps (elaborated later in the paper) used in the framework to process and perform evaluation of the fiscal stimulus measure along process, output and outcome indicators. This is done in a clock-wise fashion, from the time the fiscal stimulus measure is rolled out, through its implementation phase until the date it is rolled back. The evaluation of the stimulus implementation process and output is done against planned targets intended to influence employment and economic activity. The main actors in this action situation are usually analysts and policymakers.

7.3. Process, Output and Outcome Indicators

This section provides a discussion of the framework indicators. Indicators are variables which assist in measuring changes in the process. They facilitate the understanding of where the process is, where it is going and how far it is from arriving at the underlying goal (IMF, 2021c/d; Gentilini et al., 2020; OECD, 2021; Practical Law, 2021; ILO, 2021; HBS, 2021; University of Oxford, 2021; WHO, 2009). The proposed framework indicators and list of social protection measures were developed with guidance from the surveyed global policy dynamics style database frameworks discussed earlier. The selection also benefited from a set of criteria as recommended by WHO (2009) and World Bank (2020), presented in **Appendix A2**. The indicators are useful in tracking and evaluating fiscal stimulus interventions that are in the form of social protection measures

intended to influence employment and economic activity. They come in three general types, namely: process, output and outcome indicators.

1) *Process and Output Indicators*

The purpose of process indicators is to measure progress in the investigation of how something has been done, instead of what has transpired as a result of the process. To measure progress, clear goals and targets to be achieved will have to be established beforehand. Conversely, output indicators measure the products that emerge from the processes (IMF, 2021c/d; Gentilini et al., 2020; OECD, 2021; Practical Law, 2021; ILO, 2021; HBS, 2021; University of Oxford, 2021; WHO, 2009). In the context of the proposed fiscal stimulus tracking and evaluation framework, there are three process indicators, namely: a) Nature of measure and Duration, b) Total Spending and Financing, and c) Delivery Method. In each one of the processes, a series of relevant output indicators can be developed at the discretion of the analyst and/or policy maker(s) using the framework. The output indicators comprise complementary actions by actors/stakeholders that improve the social and physical environments of various settings in a way that supports the goals of the fiscal stimulus (i.e. the creation employment and stimulation of economic activity). Examples could be: the publication of a strategy document or the launching of a national programme or implementation of policy such as; the upward revision of limits on mobile money transactions by the central bank.

Tables 2-4 provide an illustrative representation of the three process and output indicators. An extract of the framework and a fictional fiscal stimulus measure (i.e. social assistance) is used to explain how to interpret the framework after it has been updated with relevant information from actors involved in respective action situations. A template depiction of the process and output indicator bars, alongside a list of customisable social protection measures is presented in **Appendix A3** to **A5**.

Table 2. Fiscal stimulus tracker - nature of measure and duration.

Date and time of reporting:
31 *May* 2020-10:30*hrs*

Type of Social Protection Measure	Nature of Measure		Duration (short-term: 3 - 18 months)			General Comments
	Pre-Existing	New	Planned Start	Planned End	Months Since Implementation	
Social Assistance						
Cash-based measures	*Yes*	-	1st *Apr*, 2020	31st *Aug*, 2020	*Two*	*The cash transfers are given on condition that individuals prove they had a job prior to the nationwide lockdown of March* 2020.
Cash transfers (Conditional & unconditional)	*Yes*	-	1st *Apr*, 2020	31st *July*, 2020	*Two*	*The cash transfers are given on condition that individuals prove they had a job prior to the nationwide lockdown of March* 2020.

Table 3. Fiscal stimulus tracker - financing and total spending.

Date and time of reporting:
31 *May* 2020 - 10:30*hrs*

Type of Social Protection Measure	Financing					Total Spending		General Comments
	Domestic			External				
	Spending reallocation	Debt & Deficit	State reserves/ contingent funds/fiscal savings	International Financial Institutions	Bilateral/ Multilateral development partners	Planned (US$ or % of GDP)	Actual (US$ or % of GDP)	
Social Assistance					*$*			
Cash-based measures	*Yes*	*Yes*	-	*Yes*	-	1,000,000.00	200,000.00	*The fiscal stimulus measure is financed by a mix of spending reallocation (from capital budget) and sale of government bonds coupled with external financing from the IMF*
Cash transfers (Conditional & unconditional)	*Yes*	*Yes*	-	-	-	400,000.00	200,000.00	*The fiscal stimulus measure is financed by a mix of spending reallocation (from capital budget) and sale of government bonds.*

Table 4. Fiscal Stimulus Tracker - Delivery Method.

Date and time of reporting:
31 *May* 2020 - 10:30*hrs*

Type of Social Protection Measure	Delivery Method			General Comments
	Digital Payment Platforms	Accounts at Financial Institutions	Other	
Social Assistance				
Cash-based measures	*Yes*	*Yes*	-	*The central bank has implemented upward revisions of mobile money transaction limits in response to outbreak of covid-19 in May 2020.*
Cash transfers (Conditional & unconditional)	*Yes*	*Yes*	-	*The central bank has implemented upward revisions of mobile money transaction limits in response to outbreak of covid-19 in May 2020.*

From Tables 2-4, the date and time of reporting is 31st May 2020, 1030 hrs. The framework tracks the latest developments concerning a fiscal stimulus

measure (i.e. *Social Assistance*). The extracts depict *Cash based measures* as a sub-component of the overarching social protection initiative being tracked, and *Cash transfers* as its sub-sub component. The cash based measures were rolled out by the Ministry of Finance on the 1st April 2020 with the plan to roll them back on the 31st August 2020. Therefore, at the time of evaluation, this was not a new measure. Cash based measures and the cash transfer sub-sub component have so far been implemented for a period of two months each. The cash transfers are given on condition that individuals prove they had a job prior to the nationwide lockdown of March 2020. The cash based measures are financed through a mix of spending reallocation, domestic debt and assistance from external international financial institutions. The planned total spending for all cash-based measures is US$1,000,000.00, with US$200,000.00 of this already spent on cash transfers in the first two months of the total implementation period. The cash transfers are being delivered to the vulnerable through digital payment platforms and accounts at financial institutions, with a planned total spending of US$400,000.00 and an actual spending of US$200,000.00. A development worth noting is the central bank's upward revisions of mobile money transaction limits in response to outbreak of COVID-19, in the reporting month. In Lesotho's case, this could have bearing on the evaluation of outcome indicators given that the growing interest in mobile money is underpinned by the medium's importance in delivering and facilitating financial services such as payment services and remittance facilities among a largely unbanked population with high mobile subscriber base. It is also worth noting that, the financing indicator ensures that during the monitoring and evaluation process, the framework can be interpreted and considered along with other fiscal policy indicators (e.g. fiscal vulnerability index, public debt to revenue ratio, debt to GDP ratio etc.) to inform overall fiscal sustainability.

2) *Outcome Indicators*

The proposed fiscal stimulus tracking and evaluation framework can be customised to track and evaluate long-term fiscal objectives. However, the current focus is on tracking and evaluating the process, output and outcome indicators of short-term fiscal stimulus measures (i.e. 3 - 18 months)[13]. Outcome indicators measure the ultimate outcomes of the policy action. Continuing with the fictional fiscal stimulus measure depicted earlier in **Tables 2-4**, **Table 5** helps to illustrate how to evaluate and interpret the framework's output indicators after it has been updated with relevant information from actors involved in the action situations. A template version of the outcome indicator bar is presented in **Appendix A6**, alongside a list of customisable social protection measures.

From **Table 5**, policymakers plan to have rolled out the cash based measures to a total of 800 vulnerable people by the end of August 2020 in order to ensure 100 per cent job retention in the textile and clothing sector (among other planned

[13]The 3 - 18 month definition of short-term fiscal stimulus measures is advised from the average duration of social protection initiatives taken by countries around the world in the wake of COVID-19 (World Bank, 2020).

Table 5. Fiscal stimulus tracker - policy impact.

Date and time of reporting:
31 May 2020 - 10:30 hrs

Type of Social Protection Measure	Policy Impact				General Comments
	Coverage		Employment & Economic Activity		
	Planned	Actual	Planned	Actual	
Social Assistance					
Cash-based measures	800 people identified as vulnerable	300 people in textile and clothing sector	100% Job retention of 600 people in textile and clothing sector	96.25% Job retention in textile and clothing sector	Latest numbers in textile and clothing sector show a 5% drop in employment.
Cash transfers (Conditional & unconditional)	600 people in textile and clothing sector	300 people in textile and clothing sector	100% Job retention in textile and clothing sector	95% Job retention in textile and clothing sector	Latest numbers in textile and clothing sector show a 5% drop in employment.

Table 6. Steps to set up a monitoring and evaluation process.

Step	Action
1	Consider the process, output and outcome indicators proposed in the framework as a usable, yet customisable guide. Routinely evaluate them for appropriateness and identify suitable ones should there be a need.
2	Identify existing monitoring and evaluation activities and the actors/agencies responsible. This will help ensure timely updates with the most recent data, if necessary, to inform, or be useful to, policy implementation.
3	Carry out monitoring and evaluation activities in a consistent and repeated manner to enable any revision or adjustment of the implementation activities. International best practice recommends collecting baseline data before any activity is carried out. This can be followed up with another round of collection at a designated and later time.
4	Develop a clearly defined timeline of the frequency of data updates, evaluation and reporting. This will help with establishing a regimented approach to the tracking and evaluation activity.

Source: Authors' Own Illustration.

policy impacts). At the time of reporting (31st May 2020), of the 600 people in the textile and clothing sector identified to receive cash transfers, only half of them have received the transfer in the first two months of four-month duration of the sub-sub component of the cash based stimulus rollout. Despite the stimulus, since the last reporting time (assuming the framework was last updated on 31st April 2020), five per cent of jobs in the textile and clothing sector have been lost. This translated into a total of 3.75 per cent of jobs lost among the total of 800 people identified as vulnerable at the start of the policy measure. The analyst and/or policymakers can use these framework results to conduct more in-depth analysis.

7.4. Tracking/Monitoring and Evaluation

The process of tracking/monitoring and evaluating is a systematic one that is intended to assess progress in ongoing activities. This exercise measures the effi-

cacy and effectiveness of a desired policy outcome and helps identify possible constraints to facilitate early corrective action. For these reasons, tracking/monitoring and evaluation has to be done in a regular and on-going fashion. This will provide critical and regular information that can be internalised towards more detailed analysis of whether the policy is arriving at desired goals (Sabatier & Weible, 2014; McGinnis & Ostrom, 2014; Cole et al., 2019, Nilsen, 2020; World Bank, 2021; WHO, 2009). The proposed policy dynamics-style database framework recommends four essential steps to help set up a systematic tracking/monitoring and evaluation process. They are presented in **Table 6**.

8. Conclusion

The purpose of this paper was to introduce a simple policy dynamics-style database system or framework for tracking (monitoring) and evaluating fiscal stimulus interventions in an economy. The framework is comparable and complimentary to global policy dynamics style database frameworks designed to track, compare and evaluate country policy responses to the COVID-19 pandemic. Its schematic outline borrows from the Institutional Analysis and Development (IAD) framework (Ostrom & Ostrom, 1971; Ostrom, 1972 as well as Kiser & Ostrom, 1982, 1987). It proposes three process and output indicators, namely: 1) Nature of measure and Duration, 2) Total Spending and Financing, and 3) Delivery Method, respectively). It also proposes one output indicator (i.e. Policy Impact). In order to accurately track and evaluate the indicators, much emphasis is placed on the need for timely communication and information sharing between actors in the proposed action arena.

The path of a particular fiscal stimulus measure can be tracked from input signal (stimulus rollout), through implementation and back to steady state (stimulus rollback) against set targets intended to influence employment and economic activity. The framework allows the fiscal intervention to be evaluated for rollout efficacy, extent of coverage, mode of financing and impact magnitude over time. It can be used to evaluate and report on stimulus interventions as though they were government projects with a finite timeline. Upon analysis, its financing indicators can be interpreted in conjunction with other fiscal policy indicators (e.g. fiscal vulnerability index, public debt to revenue ratio, debt to GDP ratio etc.) to inform overall fiscal sustainability. The proposed framework offers analysts and policymakers the following four key advantages. First, real time assurance that the fiscal stimulus initiative is being implemented as intended. Second, a perpetual learning capability fostered throughout out the implementation period by an evaluation component and up to date reports from relevant actors in identified action situations. Third, a real time monitoring and tracking component that offers flexibility to either develop new and complementary aspects of the stimulus or rollback existing ones. Fourth, a clear and concise way to facilitate transparency and accountability throughout the fiscal policy reporting process.

Areas for Further Study

We are convinced that the fiscal policy tracker can be a valuable tool to policymakers interested in implementing and evaluating fiscal policy measures intended to affect output and employment objectives. However, a major limitation of the study is that it does not immediately lend itself to cross-country comparability. This is due, in part, to the fact that it is highly reliant on publicly available government disseminated information that usually comes packaged as part of their recovery plans or budget documentation. Such information tends to be defined and hence reported at varying levels of disaggregation, time horizons and baselines. An area for further study would be to undertake a cross-country investigation, using real data to evaluate the efficacy of the framework.

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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Appendix

A1: Comparison of global policy dynamics-style database frameworks

Policy Tracking Framework	Purpose	Coverage	Policy Focus	Types of actors	Class of Indicators and relationship	Units of analysis	Levels of analysis
IMF Global Policy Response Tracker	To track and summarize key discretionary economic responses taken by governments around the world to limit the human and economic impact of the COVID-19 pandemic. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments.	Global, with country specific coverage Tracker includes 197 economies.	Macroeconomic and Financial counter-cyclical Policy. Automatic insurance mechanisms and existing social safety nets.	Wide array of actors (individual and corporate) within financial and macroeconomic sectors.	Different types of monetary and fiscal counter-cyclical policy measures and their financing implications. Nature of relationship between indicators would require detailed appreciation of the action situation and actors involved.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.
World Bank Global Policy Response Tracker	To provide a real-time review of social protection and job responses to COVID-19 taken by countries around the world. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Global, with country specific coverage.	Developmental, poverty reduction, health care, macroeconomic and financial counter-cyclical policy. Automatic insurance mechanisms and existing social safety nets.	Wide array of actors (individual and corporate) within financial and macroeconomic sectors..	Different types of monetary and fiscal counter-cyclical policy measures. Detailed evaluation, review and comparison of social protection and jobs responses to COVID-19 taken by countries around the world.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.
OECD Global Policy Response Tracker	To compile data, analysis and recommendations on a range of topics to address the emerging health, economic and societal crisis, facilitate co-ordination, and contribute to global action in the collective fight against COVID-19. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Global, with country specific coverage.	Macroeconomic and Financial Policy. Automatic insurance mechanisms and existing social safety nets.	Wide array of actors (individual and corporate) within financial and macroeconomic sectors.	Different types of developmental, poverty reducing as well as monetary and fiscal counter-cyclical policy measures. Nature of relationship between indicators would require detailed appreciation of the action situation and actors involved.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.

Continued

European Union (EU)	To track the EU's response to the 2019 novel coronavirus disease (COVID-19) pandemic. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Limited in its coverage to countries that are members of the EU.	Macroeconomic and Financial Policy. Automatic insurance mechanisms and existing social safety nets. The tracker includes Practical Law legal updates on legislative and non-legislative developments, reports and guidance documents.	Wide array of actors (individual and corporate) within financial, macroeconomic and legal sectors.	Different types of monetary and fiscal counter-cyclical policy measures and their financing implications. Nature of relationship between indicators would require detailed appreciation of the action situation and actors involved.	Euro/USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.
International Labour Organisation (ILO)	To track the unprecedented measures countries are taking to combat the spread of the disease, while ameliorating its pernicious effect on the economy and labour market. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Global, with country specific coverage. 188 countries and territories.	Macroeconomic and Financial Policy. Automatic insurance mechanisms and existing social safety nets.	Governments, employers' and workers' organizations, and the ILO	(1) policies stimulating the economy and jobs, (2) policies supporting enterprises, employment and incomes, (3) policies protecting workers in the workplace and (4) the use of social dialogue between government, works and employers to find solutions.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.
Harvard Business School (HBS)	Although no longer active, the tracker was used to collect and standardize economic policies implemented by governments as a response to the COVID-19 pandemic around the world. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Global, with country specific coverage. Over 50 countries.	Fiscal policy, monetary policy and lockdowns.	Wide array of actors (individual and corporate) within financial and macroeconomic sectors.	Different types of monetary and fiscal counter-cyclical policy measures and their financing implications.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.

Continued

University of Oxford Super tracker	Designed to assist researchers and policy-makers in keeping track of a rapidly growing number of data sources related to COVID-19 policies. The policy tracker does not assume to fully reflect all the polices taken by authorities nor does it assume that they reflect the most up-to-date real time developments	Global, with country specific and multifaceted actor (agency) wide coverage. 100 policy trackers and surveys	Non-Pharmaceutical Interventions, Macroeconomic and Financial Policy, Tax Policy, Trade Policy and FDI, Social and Employment Policy, Health and Care Policy, Education Policy, Research and Innovation, Regions and Cities, Behavioural Responses and Mobility, Politics, Elections, Policy Making, Media, Civic Freedom and Human Rights, War, Peace and Civil Unrest, Prisons, Courts and Judiciary Systems, International Development, Philanthropy, Surveys with probability samples, Surveys with non-probability samples.	Wide array of actors (individual and corporate) within a vast spectrum of financial, macroeconomic and other policy sectors.	Different types of monetary and fiscal counter-cyclical policy measures and their financing implications. Nature of relationship between indicators would require detailed appreciation of the action situation and actors involved.	USD M/Billions Per cent of GDP	Evaluation of policy implementation and output process across countries can be done however scope is limited to do so within the framework due to heterogeneity between countries and ambiguity about all actors involved. The framework is used to inform more detailed analysis and development of policy briefs and flagship reports.

A2: Questions for defining and checking indicator suitability.

Questions for deigning indicators	Questions for checking suitability of indicators
• Which indicators are relevant to fiscal stimulus implementation? • Which data are available and can be collected so that the indicators have reliable sources? • How much burden can be put onto statistical institutes, Ministries of Finance and other involved parties? • Which indicators will meet methodological criteria at the level of their precise definition, such as: **Validity** - does the indicator measure what it is intended to measure? **Reliability** - is the measurement reproducible? **Sensitivity** - is the measurement sufficiently discriminative in space or time?	• Are reliable data for the proposed indicators realistically available in a timely fashion, or do the indicators portray data that already exist? • Is the set of indicators easy to read and understand? • Are the indicators mutually consistent? • Are the indicators ideally comparable to other countries or regions? • Is it possible to find operational definitions for the proposed indicators? • Do the indicators, if possible, take into account work by international organizations?

Source: Adopted from WHO (2009) and World Bank (2020).

A3: Fiscal stimulus tracker - nature of measure and duration.

Date and time of reporting:

Type of Social Protection Measure	Nature of Measure		Duration (short-term: 3 - 18 months)			General Comments
	Pre-Existing	New	Planned Start	Planned End	Months Since Implementation	
1. Social Assistance						
Cash-based measures						
· Cash transfers (Conditional & unconditional)						
· Social pensions						
In-kind measures						
· In-kind food/voucher schemes						
· School feeding						
Utility/financial obligation support (*waiver/postponement*)						
Cash for work						
2. Social Insurance						
Paid Sick Support						
Healthcare insurance support						
Pension						
Social security contrition waiver/subsidy						
Unemployment benefit						
3. Active Labour Market (supply side)						
Wage subsidy						
Activation (*training*) *measures*						
Labour market regulations						
Shorter work time						

Source: Authors' Own Illustration.

A4: Fiscal stimulus tracker - financing and total spending.

Date and time of reporting:

Type of Social Protection Measure	Financing					Total Spending		General Comments
	Domestic			External				
	Spending reallocation	Debt & Deficit	State reserves/ contingent funds/fiscal savings	International Financial Institutions	Bilateral/ Multilateral development partners	Planned (US$ or % of GDP)	Actual (US$ or % of GDP)	
1. Social Assistance								
Cash-based measures								
· Cash transfers (Conditional & unconditional)								
· Social pensions								
In-kind measures								
· In-kind food/voucher schemes								
· School feeding								
Utility/financial obligation support (*waiver/postponement*)								
Cash for work								
2. Social Insurance								
Paid Sick Support								
Healthcare insurance support								
Pension								
Social security contrition waiver/subsidy								
Unemployment benefit								
3. Active Labour Market (supply side)								
Wage subsidy								
Activation (*training*) *measures*								
Labour market regulations								
Shorter work time								

Source: Authors' Own Illustration.

A5: Fiscal stimulus tracker - delivery method.

Date and time of reporting:

Type of Social Protection Measure	Delivery Method			General Comments
	Digital Payment Platforms	Accounts at Financial Institutions	Other	
1. Social Assistance				
Cash-based measures				
· Cash transfers (Conditional & unconditional)				
· Social pensions				
In-kind measures				
· In-kind food/voucher schemes				
· School feeding				
Utility/financial obligation support (*waiver/postponement*)				
Cash for work				
2. Social Insurance				
Paid Sick Support				
Healthcare insurance support				
Pension				
Social security contrition waiver/subsidy				
Unemployment benefit				
3. Active Labour Market (supply side)				
Wage subsidy				
Activation (*training*) *measures*				
Labour market regulations				
Shorter work time				

Source: Authors' Own Illustration.

A6: Fiscal stimulus tracker - policy impact.

Date and time of reporting:

Type of Social Protection Measure	Policy Impact				General Comments
	Coverage		Employment & Economic Activity		
	Planned	Actual	Planned	Actual	
1. Social Assistance					
Cash-based measures					
· Cash transfers (Conditional & unconditional)					
· Social pensions					
In-kind measures					
· In-kind food/voucher schemes					
· School feeding					
Utility/financial obligation support (*waiver/postponement*)					
Cash for work					
2. Social Insurance					
Paid Sick Support					
Healthcare insurance support					
Pension					
Social security contrition waiver/subsidy					
Unemployment benefit					
3. Active Labour Market (supply side)					
Wage subsidy					
Activation (*training*) *measures*					
Labour market regulations					
Shorter work time					

Source: Authors' Own Illustration.