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Macroeconomic Policy Coherence for SDG 2030: Evidence from Asia Pacific

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Abstract

The paper analyses the macroeconomic policy coherence required for sustainable development goals (SDGs) in the context of Asia Pacific region. Specifically, the paper analyses the monetary, fiscal and structural policy reforms and suggest specific policy tools to integrate SDGs in macroeconomic policies. The analysis reveals that the transition of macroeconomic framework from 'discretion' to 'controlled discretion' and 'rules' acts as a constraint to integrate SDGs into the policy framework. In the region, the monetary policy is increasingly focusing on inflation targeting, while the fiscal policy is based on the threshold rules of fiscal deficit-GDP ratio. Within these constraints of the macroeconomic framework, a few countries in the region have identified specific policy tools to integrate SDGs within a 'beyond GDP paradigm'- in particular using the tools of accountability like gender budgeting, the climate responsive budgeting and the strategies for financial inclusion.

Key words: SDG, Macroeconomic policy coherence, Asia Pacific

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Macroeconomic Policy Coherence for SDG 2030: Evidence from Asia Pacific

Macroeconomic policy management is a significant element for delivering the Sustainable Development Goals (SDGs). It has been increasingly recognized as an important core strategy in the implementation of the SDG 2030 Agenda. The objective of the paper is to analyse how macroeconomic policy making – monetary, fiscal and structural reforms – can be improved in Asia Pacific so as to contribute to the 2030 Agenda. Specifically, the paper attempts to identify the significant constraints of the macro policy making in the region and build the capacity of the policy makers through some specific tools to understand how macro policies relate to the 2030 Agenda.

The SDGs were officially adopted by the member nations at the UN Summit in New York in September 2015. The SDGs are more ambitious than expiring MDGs as "leave no one behind" is the strategy adopted by the SDGs, by focusing on five key elements: people, planet, peace, prosperity and partnership. There are 17 SDGs and 169 targets. Two global meetings need special mention in this context. One is the Addis Ababa Action Agenda on sustainable financing strategy and second the UN Climate Summit in Paris on a global agreement on climate change commitments. The SDGs hold the view that development needs to be economically, socially and environmentally sustainable. The commitment to the SDGs is made by each country at two levels: internal and external. The internal commitment aims to create enabling macroeconomic environment and robust sustainable growth. The external commitment is stability in trade and financial flows, and co-operation among countries to ensure a coherent macroeconomic policy framework.

Against this backdrop, the paper is organized into six sections. Section I discusses the role of monetary policy towards the implementation of the 2030 Agenda. This section will be confined to prices, unemployment and assets and take a critical analysis of monetary policy stance in the region, conducive or not for SDGs. Section II focusses on the role of fiscal policy, to address the SDGs. This section carries out an overview of the focus of fiscal policy in Asia Pacific and a normative assessment of what fiscal policy "ought to be" (normative) in achieving SDGs using a methodology to reach SDGs. Section III analyses how structural policies can contribute to achieve the SDG agenda. The regulatory policies are emphasized in this section. Section IV prepares a matrix of 17 SDG Goals, and maps plausible macroeconomic policy tools to contribute towards the achievement of the SDGs (selective analysis). This section also tries to review the empirical evidences that economic growth does not translate into SDG attainment and tries to identify the critical gaps and the complementary fiscal and monetary policies which have been successfully applied to improve development outcomes. Section V narrates specific policy tools for SDGs and highlights the policy implementation challenges to ensure SDG 2030. Section VI concludes.

I. Monetary Policy Stance for SDGs

Globally there is a growing recognition about how to address the challenges of existing macroeconomic thinking and policy making – both fiscal and monetary policies – including the issues relate to inflation, unemployment, rising inequality, stagnating productivity and unresponsiveness of long term interest rates to rising public debt, among others. In a recent meeting titled "Rethinking Macroeconomic Policy" at the Peterson Institute in USA, Oliver Blanchard and Lawrence Summers have flagged these issues including the widening inequalities.

Blanchard and Summers (2017) highlighted the use of monetary and fiscal policy tools to reduce risks and react to adverse shocks through stabilization measures. They have also argued for an active financial regulation and macro-prudential policy measures to reduce inequalities[2]. Bernake (2017) in a paper titled "Monetary policy in a new era" has highlighted that Central Bankers are looking forward to an era of relative financial and economic stability in which growth and distribution – growth and inequality – the issues that are the "not primarily" the province of Central bankers, but how monetary policy can meet these challenges of growth and rising inequalities[3].

Furman (2017) in his paper titled "Should policymakers care whether inequality is helpful or harmful for growth?" argued that high levels of inequality can make sustained growth impossible or even cause recessions[4.] He argued that exogenously higher levels of inequality result in lower longer-run growth rates and policy co-ordination is required to address this. This has direct policy inferences for integrating SDGs in macroeconomic policies to reduce widening inequalities. Furman (2017) further argued that equal weight to $1 added to the income of a poor person or a billionaire is misplaced, and most social welfare functions would place more weight on the bottom than on the top. Therefore, the macroeconomic policies – monetary and fiscal policies - that reduce inequality while increasing growth are clearly worth prioritizing.

Against this backdrop, the calibration of regulatory frameworks, both discretion and rules in financial system, requires reforms[5] (Ande, 2017). The monetary and financial system are dynamic and adaptive to address the question of inequalities. The distributional effects of many policies are orders of magnitudes larger than the growth effects (Furman, 2017). This section would be focusing on different targets (prices, unemployment, assets) that the Asia Pacific region has been applying in the monetary policy stance and collating the evidences on these developments in Central Bank's perspectives of monetary policy targets in the region.

I.1: The Role of Monetary Policy

The role of monetary policy is primarily price stability, credit control, financial inclusion and debt management. In other words, the objectives of central banks are

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[2] https://piie.com/system/files/documents/blanchard-summers20171012paper.pdf
[3] https://piie.com/system/files/documents/bernanke20171012paper.pdf
[4] https://piie.com/system/files/documents/furman20171012paper.pdf
[5] https://www.bankofengland.co.uk/-/media/boe/files/speech/2017/rethinking-financial-stability.pdf?la=en&hash=C6F5991F2DD69E1C84610B0EBE51FB03F5F62E61

maintenance of price and exchange rate stability and curbing inflationary pressures. The emerging market economies in Asia have increasingly adopted the monetary policy strategies to establish price stability especially after the global financial crisis (Filardo and Genberg, 2010). The countries have adopted inflation targeting approaches to peg their policy rates based on the nominal anchor. Inflation targeting has been accepted by the advanced countries as the superior framework of monetary policy (Bernanke et al., 1999).

I.2: Monetary Regimes in Asia Pacific Region

Most countries follow a specific monetary policy regime, to provide an institutional structure for the monetary policy stance. This regime also decides on the tools of the monetary policy and the decisions to be communicated clearer to the people. The basic monetary regimes include monetary targeting, exchange rate targeting, a regime with inflation targeting and a regime with an “implicit” nominal anchor. A multiple indicator approach is also followed by many Central Banks.

In the monetary regime, the monetary aggregates are targeted. The growth of chosen monetary aggregate – money supply – is closely watched in this regime. This is based on the assumption that in the long term, rate of change in prices (inflation) is affected by the money supply. The choice of selecting a desirable monetary aggregate is with the specific country. However, over the years, Central Banks have realized that digitization, financial innovation and financial liberalization have weakened the relationship between monetary aggregates and price changes.

Under inflation targeting, The Central Bank announces an inflation “target” under the inflation targeting regime, and frame policy relates to achieve this target. Inflationary expectations form a crucial determinant of this regime. In many countries, expectations surveys are carried out to arrive at inflationary expectations. This regime requires wider information than just information on monetary aggregates and exchange rates. This regime requires information about employment, labour markets, the output gap (the deviation of actual output from potential output), nominal and real interest rates, fiscal variables and the nominal and real exchange rates. Each country articulates their policy rates, inflationary expectations and the “target” of inflation differently.

The exchange rate targeting focusses on nominal exchange rate stability pegging to a currency of an “anchor” country through FOREX interventions or interest rate differentials. This regime thus “imports” price stability from the anchor country. The exchange regime requires a sufficient level of international reserves and a macroeconomic policy which ensures minimum inflation differentials between the country and the anchor-country, and a favorable Terms of Trade and competitiveness and political stability. The legal and institutional framework is important for exchange rate regime to function without uncertainties. The autonomy of monetary policy is constrained to a great extent under the exchange rate regime.

A regime with an “implicit nominal anchor” is targeting a variable without it being announced explicitly by the Central Bank. The credibility of Central Bank is highly significant for arriving at “implicit” nominal anchor, internally by the monetary policymakers. The Central bank internally makes the desirable changes in inflationary expectations to achieve the price stability, without announcing it publically, using explicit targets.

I.3: Monetary Policy Stance in Asian Countries and Pacific

Apart from inflation targeting regime, monetary policy has several other regimes as mentioned above. In most of the Asian countries, an eclectic policy regime is also framed in case of monetary policy. Inflation targeting, is usually misunderstood as just targeting the rate of inflation as an objective of economic policy. In reality, inflation targeting includes five steps. One, the setting a numerical target range for the rate of (price) inflation, usually Central Bank in co-ordination with the Government. Two, the use of monetary policy as the key policy instrument to achieve the target, with monetary policy pegging the policy rate incorporating inflation expectations. Three, the operation of monetary policy in the hands of an “independent” Central Bank, unless an agreement between Central Bank and the Government is framed for a Monetary Policy Framework. Four, the monetary policy is only concerned with the price stability. Usually, the other plausible effects of monetary policy on other policy objectives including economic growth is ignored.

Inflation targeting is a framework which follows the principle of “constrained discretion”, unless it is designed through a monetary rule, more often Taylor’s rule [6] is used by the countries. This “constrained discretion” principle constrains the monetary policy to aim for long-term and sustainable goals, other than the single focus on price stability. In this framework, the “discretion” is allowed to respond to unanticipated monetary or output shocks. In this way, inflation targeting serves as a nominal anchor for price stability. This monetary policy stance can restrict the central bank and the government within a flexible policy framework to achieve SDGs.

A few countries in the Asia Pacific region have also adopted exchange rate-based strategies, while still others have been following “eclectic approaches” with respect to multiple goals, indicators and instruments with a comprehensive monetary policy reaction function. Inflation targeting is preferred by many countries to money supply targeting, as it targets a final rather than intermediate objective of monetary policy. The inflation targeting is also preferred over monetary targeting due to the “credibility”, “flexibility” to react optimally to unanticipated shocks and the “legitimacy” in this monetary policy framework which has parliamentary backup.

The credibility of inflation targeting framework is closely monitored to avoid “time-

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[6] The Taylor’s rule is as follows:
i = r* + pi + 0.5 (pi-pi*) + 0.5 (y-y*)
Where:
i = nominal fed funds rate
r* = real federal funds rate (usually 2%)
pi = rate of inflation
p* = target inflation rate
Y = logarithm of real output
y* = logarithm of potential output

inconsistency". The "time-inconsistency" refers to the inability of the central banks that pursue discretionary monetary policy stance with specific objective of enhancing output and unemployment in the short run, which might end up in inflation without any gains in real economic activity (output and employment) in the long run (Barro and Gordon, 1983). Therefore the countries in Asia Pacific who have adopted the inflation targeting have preferred argued that they prefer "constrained discretion" through inflation targeting.

I.4: Transition from Credit Regime to Inflation Targeting Regime

Yet another key feature of monetary policy in the region is the high frequency interventions by the monetary policy authorities in the FOREX markets. What is the plausible impact of high frequency interventions of central bank in FOREX markets for international competitiveness and employment? Is there any quasi-fiscal costs in this process? The central Banks in Asia Pacific still grapples with multiple objectives. In addition to price stability, financial stability and avoiding exchange rate volatility are also objectives of a few central banks in the region. It may be the fact that even non-inflation targeting central banks in the region might also have been equally successful in containing inflation; and these central banks have not tried "conspicuously" to provide transparency and accountability as in the case of inflation targeting regime.

Yet another significant issue is to distinguish between goal independence and operational independence. What independence do central banks seek? In India, recently a Monetary Policy Committee (MPC) was set up for operational independence. It is often argued that it is more relevant for the government to set a goal of price stability and pursue the central bank towards this goal by independently setting the operations and instruments. The instrument independence enables the central bank to be forward-looking. Yet another limitation of undertaking monetary policy within committees is that committees can tend to be inertial and maintain status quo in maintaining policy rates in the monetary policy stance for long. The MPCs may laboriously aggregate individual preferences that tend to be inertial, irrespective of whether is a strong Chairman for MPC or not. This would in turn lead the central banks to overstay their stance.

Inflation targeting may not be a sufficient tool to handle balance-sheets problems. These imbalances in the balance sheets may not have immediate impacts on inflation, but they have impacts on output and employment. The ultimate form of these balance sheets disorder can be asset price bubbles, which inflation targeting may not address effectively.

The flexible inflation targeting is a long-run monetary policy strategy to minimise price instabilities as well as minimizing the fluctuations in the output (unemployment). Because the main limitation of "nominal anchor" is that such as an inflation target does not leave much room for macroeconomic stabilization in terms of output fluctuations as it is confined only to price stability. The flexible inflation targeting framework provides simultaneously space to a dual mandate to monetary policy- both price stability and macroeconomic activity - to focus on both output (unemployment) and price fluctuations. The flexible inflation targeting accommodates symmetrically both inflation and the output gap.

This central bank's function contains forecasts for both inflation and output gap as target variables. However empirical evidences from the region is mixed regarding the impact of monetary policy on economic growth.

The country-wise analysis of monetary policy of SIDS (Small Island Developing Economies) and Asian LDCs is an under-researched area. In the UNESCAP- Ministry of Foreign Affairs meeting in November 14-17, 2017, in Bhutan, this specific issues were discussed as a roundtable and also in specific thematic working groups which included policy makers from Bhutan, Thailand, Bangladesh, Laos, Timor Leste, Cambodia, Viet Nam, India, Vanuatu etc. On monetary policy, the issues raised by the delegates from Asia Pacific LDCs focused on the ways to finance the implementation of the 2030 Agenda, from orthodox ones such as domestic resource mobilization, to more heterodox such as "helicopter money" or central bank "seigniorage". Ideally seigniorage financing is not a way to finance SDGs, though it will happen even if the country pursues domestic resource mobilization. Seigniorage is not an exclusive way of financing. It will remain irrespective of a country's ability to pursue domestic resources. Along with the domestic resource mobilization, seigniorage financing or helicopter money (either as Money Financing of Public Programmes (MFP) or as cash transfers to households and firms) to a limited extent can also be used for SDG financing . Helicopter Money is introduced when a central bank aims to increase inflation and output from below threshold levels. The Helicopter Money is a kind of "direct money transfers" to households and/or firms during deflation or in negative interest rate regimes to induce quick increase in aggregate demand, spending and thereby recovery of investment and economic growth. The purpose is to revert inflation back to the target zone.

I.5: Monetary Policy and Inequalities

Inequalities can be addressed by monetary policy in though different channels. The effectiveness of inflation targeting depends on the relative significance of channel – whether interest rate channel or credit channel or wealth effect channel or exchange rate channel is prominent in the specific country context. The cross-section regressions may not be able to provide clear inferences on impact of monetary policy stance on output gap and in turn SDGs.

Yet another concern is the models and methodologies we have used in monetary macro to address inequalities. These models may not be conducive to incorporating the human development dimensions. Since global financial crisis, monetary macro has undergone drastic changes. Blanchard (2018, 2016a and 2016b) has highlighted that there is an increasing acceptance that the prevailing dynamic stochastic general equilibrium (DSGE) models have performed poorly and we need different types of macroeconomic models for different purposes. Blanchard (2018, 2017 a and 2017b) further highlighted the significance of purpose-specific models rather than full integration of all models into one, which has proven counterproductive as "No model can be all things to all people[7]". The success of monetary policy in integrating SDGs will depend on central bank independence in a particular country[8].

[7] https://academic.oup.com/oxrep/article/34/1-2/43/4781808

[8] SDG commitments within a macro policy framework is closely related to question "who moves first? Fiscal policy maker or central bank governor? The "first mover advantage" makes a lot of difference in a macroeconomic policy framework. In the countries where there is fiscal dominance (with no fiscal rules and controls), the monetary policy is supplementary. Given the rules-based fiscal legislations across many countries, fiscal policy is viewed as a less powerful macroeconomic tool as it has pro-cyclical bias and viewed as a passive instrument. The implication of

In the Asia Pacific region, at the practical level, policy implementation requires variations in articulation while executing it. Though the concept dates back to Friedman, recently when Ben Bernanke was the Chairman of the US Federal Reserve, he raised the possibility for monetary-financed tax cuts, and this led the press to call him "Helicopter Ben". What he suggested was that the government cut taxes in a recession while the central bank committing to purchase government debt issued to meet its expenditure. A cut in tax rates provides more disposable money with the people and they may spend it. On the other side, central bank gives money to the government as it purchases government bonds. Overall, public spending in the economy thus goes up. This suggestion was floated as an alternative to "Quantitative Easing (QE)". QE is a different type of monetary stimulus launched by the Federal Reserve in US after the global financial recession. The difference between Helicopter Money and QE is that the former works directly by stimulating the aggregate demand of people, while the latter works through the banking system. Under QE, the rate of interest comes down when the central bank makes large-scale purchases of assets or bonds from financial markets by supplying money into the banking system. This reduction in interest rate may stimulate the lending by banks and revive consumption, investment and economic growth.

In the Bhutan LDC deliberations, international experiences were invoked, while discussing about the various monetary policy tools available to meet 2030 Agenda. With fiscal austerity and low economic growth in Europe, policy economists are considering increasingly unconventional policy tools like Helicopter Money, where it is articulated as "monetary financing of government deficits[9]". With regards to monetary policy, countries in the Asia Pacific region follow different policy tools based on their country-specific requirements. For instance, the delegate from Bhutan's Royal Monetary Authority emphasized that as Bhutan has its currency pegged to the Indian rupee, the Terms of Trade (TOT) and competitiveness would not get affected. This stability in TOT is due to the fact that Bhutan's 90% of trade is with India. Bhutan's Royal Monetary Authority has also highlighted the significance of "priority sector lending" to promote diversification of the economy, entrepreneurship and financial inclusion. Yet another monetary policy tool with them is to maintain a prudent Foreign Reserves management (equivalent to 20 months of reserves for imports), to maintain their current account deficit within threshold and the country's currency peg.

Yet another example highlighted in the Bhutan SDG meeting was the monetary policy tool from Timor Leste. In Timor Leste, the currency is the US Dollar which limits the scope of monetary policy for SDG 2030 Agenda. As the economy relies heavily on oil, the country is focused on structural reforms to develop institutions and infrastructure, among others.

fiscal policy being passive gives monetary policy makers enough room to contain inflation. However the empirical evidence is mixed in the region about this assertion that "fiscal rule is required for monetary rule". It is often argued that restraining the fiscal authorities from engaging in excessive deficits financing is a pre-requisite to align fiscal policy with monetary policy to contain inflation, where the monetary policy moves first and dominates, forcing fiscal policy to align with monetary policy through fiscal legislations. This leads to Central Bank independence and usually referred to as "Unpleasant Fiscal Arithmetic (UFA)". An UFA is a pre-requisite for SDG commitments or fiscal re-dominance is required for SDG commitments is a compelling empirical question.

[9] https://dupress.deloitte.com/dup-us-en/economy/global-economic-outlook/2016/q4-helicopter-money-unconventional-monetary-policy-tool.html

Cashing in on oil for the SDG targets – linking natural resources revenue to human development – is an area worth exploring for Timor Leste.

Broadly, there is an agreement that inflation targeting alone is not the magical tool for SDG. There can be a plethora of country-specific monetary policy tools which includes fiscal-monetary policy co-ordinations than a central bank independence. The political economy of blurring the central bank independence is also flagged as a point worth considering while implementing the alternative monetary policy tools.

II. Fiscal Policy Stance for SDGs

This section provides an overview of the focus of fiscal policy in Asia Pacific. SDGs require large public investments to achieve the goals by 2030. To ensure that, the countries require fiscal sustainability. However, a number of countries in the region have huge fiscal deficits, with fiscal consolidation measures on board.

II.1 Enhancing Fiscal Space for SDGs

Fiscal consolidation is the recent policy initiative in the region where the fiscal deficit to GDP ratio is restricted to 3 per cent of GDP in the countries in the region and the debt-GDP threshold is also articulated. Given the rule-based fiscal dynamics, which has led to the transition in the fiscal policy from discretion to rules, attaining SDGs would be the major challenge. Most countries, including China, Indonesia, the Republic of Korea and the Russian Federation, had wider fiscal deficits or narrower surpluses and slower economic growth in the period 2014-2016 compared with the period 2011-2013, while India and Pakistan had higher economic growth and smaller fiscal deficits[10] (UN ESCAP, 2017).

II.2: Debt Sustainability

In terms of debt sustainability, r>g (real interest rates ® greater than growth of the economy (g)) is the point where debt becomes unsustainable and it can affect a country in meeting SDGs. In Sri Lanka, though debt-GDP ratio is above 100, as r<g provides them leverage to engage in human development financing. In the region, Sri Lanka stands out in human development achievements irrespective of the fact that it is a low income country.

II.3: Impacts of Fiscal Consolidation

Impact of deficits on economic growth has been captured in two ways, one through the link between fiscal stance and output gap to arrive at whether fiscal policy is countercyclical (Tanzi, 2016), which is a short run fiscal consolidation exercise and the other link through analyzing the impact of deficit on crucial macroeconomic variables like rate of

[10] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2051-Fiscal-May17.pdf

interest, private corporate investment etc. It is often debated that rule-based fiscal consolidation measures have provided Asia Pacific region strong macroeconomic fundamentals. However this argument is correct only if there is significant macroeconomic channels operating from fiscal deficit to other fundamental variables like rate of interest, private investment, rate of inflation and capital flows. Empirical evidence is mixed, if deficit causes rise in real interest rates and there is strong fiscal-monetary linkages in the region (Chakraborty, 2016). The real interest rates are mostly determined significantly by inflationary expectations, not deficits. This is especially true in the context when Central Banks in the region increasingly moving towards rule-based inflation targeting framework. Financial crowding out through pre-emption of resources for financing deficits and in turn restricts the loanable funds available to private sector.

If the impact of deficit is increasingly nil in worsening the macroeconomic fundamentals, the argument that fiscal prudence through deficit control mechanisms is essential for sustainable growth in the region fails. This may be confirmed looking into the patterns of fiscal policy stance in the region, especially during negative shocks like the global financial crisis of 2007/08. It is the fiscal re-dominance that helped the region to cope up with the global financial crisis through economic stimulus packages than the fiscal prudence of restrictive public spending.

II.4: Repriotisation of Public Spending

Enhancing the role of fiscal policy stance for inclusive policies for SDGs may or may not have trade-offs with fiscal sustainability. Over the years, the fiscal policy stance in Asia Pacific is to sustain the economic growth through public infrastructure investment and human capital formation. This leads to the question what "ought to be" the role of State in the region to maintain and achieve the SDGs – a "security state" or a "development state" (Horst, et al, 2017). In the context of G20 countries, it has been revealed that public spending on innovation and human capital formation has more impact on economic growth (Horst et al, 2017). Other studies have concluded that public spending on defense does not ensure peace, security and stability (SIPRI).

Public spending in Asia Pacific is lower than in advanced economies. This makes it compelling to analyse whether strict adherence to fiscal rules is for fiscal prudence in revenue/current expenditure or has it eroded the capital formation in the region which in turn has severe long term growth consequences. If fiscal prudence is achieved through less or no spending in capital formation, the fiscal consolidation may result in stagnation in economic growth. The path of fiscal consolidation may be as important as the target of fiscal consolidation. If the targets are achieved through cuts in capital spending, fiscal responsibility legislations to control deficit might lead to adverse macroeconomic consequences[11].

Phasing out revenue deficit[12] is yet another significant tool of fiscal consolidation. Early warning signals need to be provided to the Asia Pacific region to design their fiscal

[11] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief-53-Environment-May17.pdf
[12] revenue deficit is revenue expenditure minus revenue receipts. It is also referred as current deficit in fiscal literature.

consolidation packages judiciously. These policy articulations have direct consequences for achieving SDGs. Fiscal stance and output gap links need to be empirically analysed to understand whether the fiscal policy is counter-cyclical or pro-cyclical. Restrictive macroeconomic policies might result in constrained fiscal space to sustainably finance the implementation of the SDGs. Empirical analysis showed that expansion in fiscal space is more likely to be sustainable when public spending finances investment rather than consumption (Roy and Heuty, 2009).

Economic growth and debt sustainability are the two significant priorities of the fiscal policy regime in Asia Pacific. If the region has to frame the fiscal policy for SDGs, the policies may have to move forward from economic growth paradigms and fiscal rule-based policy prescriptions. Asia Pacific countries need sustained economic growth to reach advanced economies, but if growth is at the cost of inclusiveness, SDGs cannot be met because majority of people in the region live in poverty. It is also relevant to analyse the structural transformation, along with the aggregate economic growth. What kind of structural transformation that promotes economic growth and employment is an empirical question, specific to country-contexts. Asia Pacific region is also experiencing a "youth bulge", e.g. the share of those in the working age population is projected to rise at least until 2030 (ESCAP 2017).[13] Decent jobs is a matter of urgent concern, especially when informal employment accounts for about 70 per cent of all jobs in Sri Lanka, almost 90 per cent in Bangladesh, India and Pakistan, and up to 95 per cent in Nepal (ILO, 2015).

There is also a significant empirical link between governance and the ability of the countries to raise tax revenue. The reasons may be corruption in tax collection and low tax morale due to perceived governance deficits[14]. Considering the relationship between governance and social development, it has been shown that the efficiency of the public provisioning of health and education services is affected by governance performance, particularly through corruption and ineffective bureaucracy (ESCAP). Governance is a crucial determinant in reducing the income and development gap in Cambodia, Lao People's Democratic Republic, Myanmar and Viet Nam (CLMV) countries, along with other factors such as the availability and quality of physical capital, the availability of decent, skilled and productive jobs, strong macroeconomic fundamentals, wage and social protection systems or effectiveness of fiscal policy. From the SDGs perspective, it has been found that ineffective governance and weak institutions can exacerbate income inequality[15].

II.4.1: *Fiscal Rules constraints SDG Agenda: Deliberations by policy makers in the region*

On fiscal policy, the issues raised in the Bhutan Meeting on SDG Agenda 2030, during November 14-17, 2017 were related to what are the rules governments should follow, e.g. should they have a maximum level of fiscal deficit, debt-to-GDP or tax-to-GDP? International experiences were evoked and discussed. The consensus among the macro policy makers was that there is no golden rule. For instance, to analyze fiscal deficit issues, besides quantity governments should also consider quality. There was no consensus on which "deficit" needed

[13] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2057-SSWA-May17.pdf
[14] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2058-SEA-May17.pdf

[15] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2061-May17.pdf

to be targeted to remain fiscally prudent – whether revenue deficit, or primary deficit (fiscal deficit minus interest payments) or fiscal deficit. As the revenue generation of various nations are predominantly hydroelectric power generation among the LDCs in the region, it may also be worth exploring the Public Sector Borrowing Requirement (PSBR) to measure the deficits as it includes the intra-public sector budgetary transactions in addition to the governmental budgetary transactions.

In terms of fiscal policy, policy deliberations among countries were about using progressive taxation systems and have social security and safety nets - under several formats. Inequality, as measured by the Gini coefficient, is often a problem. Some countries such as Bhutan have education and health fully subsidized, which is particularly good because it favors inclusiveness. In Bangladesh, the financing required to achieve the SDGs was estimated at about 1 trillion USD. Then it was studied how much could be contributed by the different stakeholders. Once the financing gap was identified, tapping capital markets and local currency bonds is expected. The country's strategy is to create an enabling environment where finance can be mobilized, both in local and international currency, both by national and foreign actors.

The Universal Basic Income (UBI) may be another option. However, as the capacity of health and education infrastructure is poor in many countries in the region, the UBI may not be enough to achieve the intended results. The linking of UBI to helicopter money – seigniorage financing of UBI- was also beyond the scope of individual nations in the Asia Pacific region[16].

II.5 Effective Fiscal Management and Governance

A global governance arrangement and regulatory framework is required to make sure that foreign investment promotes equality and sustainability as well as economic growth across geopolitical entities. A global governance arrangement and regulatory framework is required to make sure that foreign investment promotes equality and sustainability as well as economic growth across geopolitical entities.

II.5.1 Transparent and Equitable tax system

A transparent and equitable tax system is a pre-requisite for adequate revenue mobilization to meet SDGs. The Panama Papers released in April 2016 revealed 214,488 offshore tax havens, created through tax avoidance. Reforms are required to track illicit financial flows and flaws in the global financial architecture. The introduction of GST in India is expected to bring transparency into the system as tax invoices are required to redeem tax credit and this in turn is expected to prevent tax avoidance, and avoid cascading effects of multiple taxation at various levels of inputs.

[16] http://www.euractiv.com/section/economy-jobs/interview/champion-of-helicopter-money-questions-universal-basic-income/ and https://www.euractiv.com/section/economy-jobs/interview/standing-every-country-can-afford-universal-basic-income/ for the debates on UBI and helicopter money.

There is a growing recognition towards domestic resource mobilization and fiscal self-reliance to achieve SDGs. The fiscal consolidation through enhanced tax buoyancy is better than cuts in expenditure. A few countries have introduced innovative taxes, for instance carbon tax, which could be an additional source of financing SDGs.

II.5.2: Inequalities in Fiscal Policy: Public Expenditure Benefit Incidence analysis

Monitoring outcomes of public expenditure is equally significant as designing public expenditure policies. The public expenditure benefit incidence analysis (BIA) across categories of gender, geography and social groups can capture the distributional impacts of public spending. The public expenditure BIA is based on two factors: unit costs and unit utilised[17]. The unit costs are prepared from budgets, while unit utilized data is collected from sectoral National Sample Surveys. The BIA quintile wise revealed that in India and in Philippines, the poor (q1) depend on public provisioning of health care and education. It can be technically analysed using concentration curves of BIA, whether the public spending in education and/or health care is pro-poor. The public spending BIA deciphered that the access and utilization of public spending is regressive in Philippines and India, with gender differentiated patterns while in Sri Lanka a study showed gender parity in the utilization of public provisioning across sectors. These empirical evidences showed that unless governance and implementation issues are taken care of, a well-designed public spending system can be regressive - and therefore continue making it difficult to attain the SDGs. Inequalities in fiscal policy incidence can be captured through BIA.

II.5.3: Fiscal Marksmanship analysis

Higher budgetary allocation per se does not ensure higher spending. There can be budget forecast errors or unspent money which in turn affects the outcomes. Capturing this deviation or errors between budget estimates and actual spending is called 'fiscal marksmanship analysis'. The analysis can determine whether these deviations or errors are random or happened due to some policymaking bias. Fiscal marksmanship is the accuracy of budgetary forecasting. This can be one important piece of such information the rational agents must consider in forming expectations. Empirical studies have used Theil's inequality coefficient (U) based on mean square prediction error, to estimate the magnitude and sources of budgetary forecast errors[18]. In the context of India, the analysis revealed that neither

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[17] Benefit incidence is computed by combining information about the *unit costs* of providing the publicly-provided good with information on the *use* of these goods.
Mathematically, benefit incidence is estimated by the following formula:
$X_j \equiv \sum_i U_{ij} (S_i/U_i) \equiv \sum_i (U_{ij}/U_i) S_i \equiv \sum_i e_{ij} S_i$ where X_j = sector specific subsidy enjoyed by group j;
U_{ij} = utilization of service i by group j;
U_i = utilization of service i by all groups combined;
S_i = government net expenditure on service i; and
e_{ij} = group j's share of utilization of service i.

[18] A rigorous measure of Theil's inequality statistics by incorporating the lags in the actuals and the difference of predicted value from the lag of the actuals to capture the magnitude of error, is : **U** =

$$\sqrt{\frac{1/n\sum[P(t)-a(t)]^2}{1/n\sum[P(t)]^2+1/n\sum[a(t)]^2}}$$

Where a(t) = A(t)-A(t-1) and P (t) = P (t)-A (t-1). This mean square prediction error has been decomposed in order to indicate systematic and random sources of error. The systematic component is further divided into the proportion of the total forecast error due to bias and the proportion of total forecast error attributable to unequal variation.

revenue nor expenditure forecasts uphold rational expectations (Chakraborty and Sinha, 2008).[19] It was also revealed that capital budget revealed more forecast errors than revenue budget (Chakraborty and Sinha, 2008; Nitin and Roy, 2016). If the proportion of error due to random variation is significantly higher, it reflects that these errors have beyond the control of the forecaster or the macro policy maker. In India, empirical studies showed that errors due to policy maker bias have been negligible. Fiscal marksmanship is conducted at the aggregate revenue and expenditure categories. From the SDGs perspective, sectoral fiscal marksmanship analysis is highly relevant, and therefore a matter for future macroeconomic policy research in the region.

II.5.4: Linking Resources to Results: Outcome Budgets

Several countries in the region have undertaken fiscal reforms to promote efficient fiscal management and fiscal sustainability. These initiatives include Fiscal Councils, Medium Term Fiscal Framework (MTFF), accrual accounting and outcome budgets[20]. These fiscal reforms aim to improve the performance, efficiency and the prioritization of public spending by converging national and line ministry's outcomes with programs and budgetary resources through integrating planning, budgeting and auditing. SDGs are integrated in this processes or not in these countries is a matter of concern.

II.6: The Political Economy of Public Expenditure Decisions

There is a growing recognition that fiscal policy can affect household dynamics, e.g. division of labor by supporting initiatives that reduce the burden of women in unpaid care work. Examples of such government intervention are improved infrastructure in water sector, rural electrification, sanitation services, and better transport infrastructure. The public infrastructure deficit in rural areas may deepen rural poverty due to the time allocation across gender skewed towards more unpaid work, which is time otherwise available for income earning market economy activities. Public investment in infrastructure, like water and fuel, can also have positive social externalities in terms of educating the girl child and improving

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1 = $$\frac{(\overline{P}-\overline{A})^2}{1/n\sum(P_t-A_t)^2} + \frac{(Sp-Sa)^2}{1/n\sum(P_t-A_t)^2} + \frac{2(1-r)\,Sp.Sa}{1/n\sum(P_t-A_t)^2}$$ where P and A are mean predicted and mean actual changes respectively; Sp and Sa are the standard deviations of predicted and actual values respectively; and r is the coefficient of correlation between predicted and actual values. The first expression of RHS is the proportion of the total forecast error due to bias. It represents a measure of proportion of error due to over prediction or under prediction of the average value. The second expression of the RHS of equation is the proportion of total forecast error attributable to unequal variation. In other words, it measures the proportion of error due to over prediction or under prediction of the variance of the values. The third expression on the RHS of the equation measures the proportion of forecasting error due to random variation. The first two sources of error are systematic. Presumably they can be reduced by the improved forecasting techniques; while the random component is beyond the controller of the forecaster.

[19] According to the theory of efficient markets, economic agents use all available information to form rational expectations.

[20] Fiscal Councils are autonomous public institutions aimed at strengthening commitments to sustainable public finances through various functions, including public assessments of fiscal plans and performance, and the evaluation or provision of macroeconomic and budgetary forecasts. Medium-term Expenditure Framework Statement is a statement presented to the Parliament, which outlines a three-year rolling target for the expenditure indicators with specification of underlying assumptions and risks involved. Accrual accounting is an accounting method that measures the performance regardless of when cash transactions occur. Outcome budgets aim to measure and control the expenses of concerned ministries to introduce effectiveness in the public expenditure.

the health and nutritional aspects of the household (Chakraborty, 2010). There can be a link between deterioration in infrastructure and rural poverty.

Duflo and Chattopadyay (2001) analysed whether feminization of governance alters public expenditure decisions favouring women's preferences and needs. They measured the impact of the feminization of governance at the local level on the outcomes of decentralization with data collected from a survey of all investments in local public goods made by the village councils in one district in West Bengal. They found that women leaders of village councils invest more in infrastructure that is relevant to the needs of rural women (like drinking water, fuel, and roads) and that village women are more likely to participate in the policymaking process if the leader of their village council is a woman (Chakraborty, 2010). Stern (2002) highlighted their inferences that placing women in local level governance can change the expenditure decisions of the local bodies and, in turn, change the types of public-good investments at the local level to correspond more to the revealed preferences (voice) by women.

In terms of fiscal policies to redress poverty, the aspects of time poverty [21] are often surpassed. Time poverty affects income poverty. Fiscal policies designed to redress income poverty can be partial if they do not take into account the aspects of time poverty. This policy discussion has a gender dimension, as women are time poor and fiscal policies designed for pro-poor measures need to incorporate the time allocation aspects across gender.

Using time use statistics of water revealed that the incidence is significantly higher for girls and women in both rural and urban areas, which, in turn, points to the deficiency in adequate infrastructure in water and sanitation (Chakraborty 2008 and 2009). It has significant fiscal policy implications, as easy accessibility to drinking water facilities might lead to an increase in school enrollment, particularly for girls, by reducing the time utilized for fetching water. The time budget statistics enable the identification of the complementary fiscal services required for better gender-sensitive human development.

II.7: Integrating Climate Change Criteria in Intergovernmental Transfers

In a fiscal federalism, SDG commitments cannot be confined just to the national governments[22]. There is a growing recognition to the role of intergovernmental fiscal transfers (IGFT) in SDGs to integrate climate change and disaster management. However there are relatively a few attempts to translate the financial devolution commitments[23] into SDG commitments. For instance, Fourteenth Finance Commission in India has incorporated climate change variable as one of the criteria for devolution of funds. This is a radical approach

[21] An individual is time poor if he/she is working long hours and is also monetary poor, or would fall into monetary poverty if he/she were to reduce his/her working hours below a given time poverty line. https://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-4961

[22] This refers to intra-country, not inter-country commitments. Within a country, there can be three tiers of government in a federal set up, viz., national, Provincial and local governments.
[23] This financial devolution refers to intra-country arrangements, not inter-country arrangements. This fiscal devolution refers to the flow of funds from the upper government to lower tiers of government, which is also referred to as Inter-governmental fiscal transfers (IGFT).

because the criteria of devolution across countries in the region are more or less confined to fiscal and growth variables. Variables relating to natural disasters also form part of fiscal devolution, as an exogenous shock at the subnational government levels, and usually the disaster management devolution is granted through specific transfers than through unconditional formula-linked fiscal transfers. This opens a significant debate of integrating human development-related variables in fiscal devolution. As another example, Chakraborty (2010) has argued for integrating gender criteria in IGFT.

II.8: Normative Framework and Methodology to Analyse the Fiscal Policy for SDGs

Sen's Capability Approach may provide an analytical framework to build a normative framework and methodology to analyse the fiscal policy for SDGs[24]. Such frameworks were used by Chakraborty (2010) in integrating time budgets into macro policy making and used by Meghanand Desai in his Discussion paper in London School of Economics, in integrating poverty and inequality variables in "ought to be" macro policies using Sen's framework and methodology.[25] It is plausible to adopt this normative framework to integrate SDGs in macro policy framework (Chakraborty, 2010).

In terms of Sen's capability approach, there are three crucial layers, which need interpretation in the context of SDGs: capabilities, functioning and commodities. The first step is to propose a list of basic capabilities relate to 17 SDGs. Basic capabilities can be a set of capabilities that should have only a few elements and this set is common for all individuals. These capabilities can be capability to stay alive and live long, capability to lead a healthy life, capability to have knowledge, capability to have social interaction etc, which are closely linked to SDGs. The second step would be to gather relevant information on the functioning of different socio-economic variables, that are observable data. In this step of listing the functionings, the data needs to be incorporated in terms of SDG targets. The third step is to estimate the optimal commodity space, especially the fiscal policy stance in terms of SDGs, which is necessary to be at individual's command to match commodity characteristics and capability requirements and then analyze the actual commodity space to identify the gaps.

III. Structural Reforms

This section deals with how can structural reforms contribute to achieve the SDG agenda. Structural policies are defined as the macroeconomic policies framed to impact on

[24] Capability Approach has been central to the Human Development Reports series (HDRs) launched by UNDP since 1990s by Sen's close associate, the late Mahbub ul Haq, and has subsequently influenced policy at World Bank during the Wolfensohn era (Gasper, D 2002). It provided a channel for an alternative economic development thinking, which goes beyond the undue emphasis on economic growth as in the economic planning of 1970s and its tricking down effects. It revealed that GDP (economic growth) was never suited to be a measure of well being as it conceals extreme deprivation for large parts of the population.

[25] In Sen's terminology a "functioning" is what an individual chooses to do or to be, in contrast to a "commodity," which is an instrument which enables her to choose.

the total factor productivity (TFP)[26] of the country, incorporating the regulatory policies[27] (SOURCE). These policies comprise innovation policies, price and energy policies, regulations and labour market policies. Looking into the determinants of TFP, the following variables have been denoted: knowledge and skills; education and research and development activities; exports, imports and FDI and institutional quality, good governance and infrastructure. It has been suggested that Asia-Pacific economies made progress in enhancing the quality of labour forces, with the increase in the average years of schooling of adults, the literacy rate and the net enrolment rate at the secondary level (ESCAP). Average public spending on research and development activities in the region has increased in terms of GDP, to almost equal to the world average – though slightly below the OECD average. The expansion of trade that has taken place in the Asia-Pacific region over the past 25 years, and the dramatic increase in FDI into the region have contributed to the overall increase in total factor productivity (ESCAP). Poor governance, low institutional quality and inadequate infrastructure can negatively affect TFP growth by increasing the cost of inputs (ibid). Countries with lower levels of corruption experience higher TFP growth (ibid). Lack of physical infrastructure, in particular transport infrastructure and trade facilitation systems increase costs of production and reduce TFP.

The structural policies by government for lifeline infrastructure like electricity, gas, mining and communication services are significant for enhancing economic growth. In India, the recent policy reform to absorb the power debt of the DISCOMS (electricity distribution companies) is called UDAY (Ujjwal Discom Reassurance Yojana). UDAY is introduced in a special context where the country has excess power generation, but due to huge debt of DISCOMs the power is not distributed across Provinces and many poor live without electricity. This policy was introduced to provide electricity to poor by correcting the financial and operational efficiency parameters of DISCOMs. The procedure consisted of the state governments absorbing the power debt of DISCOMs – by issuing bonds through a tripartite form between the Central government, State government and the DISCOMs. Though the programme has led to marginal improvements in access of poor to electricity, the subnational public finance of a few States have encountered problems in terms of their deficit going up beyond the fiscal legislations, which hindered these states not to access excess borrowing powers in bond market which otherwise they were entitled to. From the SDG perspective, though this programme is to provide "lifeline infrastructure", it has aggravated the public finance management issues by exploding the debt deficit conundrum in particular states[28].

Another major structural policy initiative in the region is related to natural resources and extractive industries. Despite having one of the highest reserves of coal, India is also the highest importer of coal. The carbon tax is framed from the production and import of coal,

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[26]Total factor productivity can be obtained as the residual from sector-specific estimations of a logarithmic Cobb-Douglas production function, and the coefficients can be estimated using Levinsohn and Petrin (2003). Taking natural logs of Cobb Douglas production function in a linear function, we obtain $y_{it} = \beta_0 + \beta_k k_{it} + \beta_l l_{it} + \beta_m m_{it} + \varepsilon_{it}$ where Y_{it} is the physical output of firm i in period t; K_{it}, Lit, and M_{it} are inputs of capital, labor, and materials, respectively; and A_{it} is the Hicksian neutral efficiency level of firm i in period t and $\ln(A_{it}) = \beta_0 + \varepsilon_{it}$ where β_0 measures the mean efficiency level across firms and over time; ε_{it} is the time- and producer-specific deviation from that mean, which can then be further decomposed into an observable and unobservable component.

[27] https://www.imf.org/en/News/Articles/2017/10/12/NA101317-For-Asia-Growth-Pickup-Provides-Opportunity-for-Reforms

[28] The brief review of structural reforms recently happened in Asia – including India, China, Indonesia - is given in this paper. https://www.lazardassetmanagement.com/docs/-m0-/27787/EmergingAsia-AnUpdateOnReforms_LazardResearch_en.pdf

with 500 Rupees per metric ton, to be used as clean energy access. Yet another major initiative is to link the fiscal space derived from mining revenue to the spatial and human development of the region where the revenue is extracted from. These social impact policies relating to extractive industries are rare. As per the recent MMDR policy a fund is created as DMF to link fiscal space to human development. This has positive implications in terms of SDG, as the socio-economic indicators of the mining districts are the worst in the country when compared to non-mining districts. Such policies can be compared to BEE (Black Economic Empowerment) policy of South Africa and Oil-to-Cash policies of Ghana, linking fiscal space to human development in the mining sector.

The financial sector legislations reforms commission (FSLRC) in India has prepared Indian Financial Code, which is another highlight of structural policy initiative. The aim of FSLRC is to ensure a sound financial system with less Ponzi finance and in turn lead to higher economic growth. The labour market reforms are relevant especially when growth is not followed by increase in jobs. The states like Rajasthan and Maharashtra have begun to loosen rules for hiring of labour. The labour market policies should attempt to avoid both excessive regulation and extreme disregard for labour conditions. Improving skills and Start Ups are other initiatives to improve productivity. The bankruptcy code recently introduced is a structural reform to give a public resolution and restructuring for the firms in loss and for a turnaround.

IV. Mapping of Macro Policies for 17 SDGs

This section maps macro policies on SDGs in the region and provides examples. However this mapping is not comprehensive with all 17 SDGs [29]. Widening inequalities within and between countries in wealth, opportunity and power as well as persistent gender inequalities are confronting the world today and hence formed the framework for the 2030 Agenda for Sustainable Development. The United Nations System Shared Framework for Action (2017) has articulated the need to build up on the lessons of the Millennium Development Goals (MDGs), and move towards the commitments to "leave no one behind" and to reach the furthest behind first[30]. It aims not only to end poverty and hunger, but also "to combat inequalities within and vii among countries; to build peaceful, just and inclusive societies; [and] to protect human rights and promote gender equality and the empowerment of women and girls" and "to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment".

At the national level, governments must attempt to boost investor confidence, strengthening public finances, social inclusion and environmental regeneration. The matrices of policies for SDGs country-wise are provided in Appendix 1. The matrices revealed that programmes relate to SDG on reducing inequalities within the country are rare in the region. The programmes relate to SDG 14 is also found rare. However, a global analysis of normative

[29] https://sustainabledevelopment.un.org/post2015/transformingourworld
[30] file:///C:/Users/lenovo/Downloads/CEB%20equality%20framework-A4-web-rev3.pdf

SDG assessments of SDG14[31] is carried out by IIED showed how fiscal instruments can be designed to provide the necessary incentives for achieving SDG 14 and the goal of leaving no one behind, using of three particular fiscal instruments (taxes, subsidies and conditional transfers) to this sector. Yet another study analysed the fiscal policy tools in green economy sector linking to SDG[32] (AfDB 2012, Andersen, M.S. and Ekins, P. (eds.), 2009; IMF 2012). Examples are rare in the region in terms of technical co-operation for SDGs. UNESCAP (2017) highlighted one such recent initiative- “Evolution” initiative[33] - launched by Japan to provide developing countries with a one-stop mechanism including technical support, for preparing energy policies. Other examples are the Green Technology Center-Korea (which links the Republic of Korea’s public-private cooperative green technology research projects with the demand for green technology from developing countries) and a new centre jointly planned by China’s National Energy Administration and the International Energy Agency to enhance partnership in attaining energy data, renewable and clean energy policy technologies.

UNESCAP (2017) study on fiscal policy in health sector of Pacific Islands revealed that highly constrained national budgets of Pacific island developing economies are often subject to volatility from a narrow revenue base, dependency on foreign aid and recurring external shocks, such as natural disasters. The Pacific Islands require a better design and implementation of fiscal policy to improve health outcomes while ensuring fiscal sustainability. Public spending on health in most Pacific island developing economies averaged close to 9 per cent in 2014, ranged between almost 5 per cent of GDP in Fiji and Papua New Guinea to about 17 per cent of GDP in Marshall Islands and Tuvalu[34]. This is higher than the case of India where public spending on health by national governments is only around one per cent of GDP.

V. Identifying Specific Policy Tools

The specific tools for implementing SDGs in the region identified in this section are the culmination of the critical analysis of monetary, fiscal and structural policies and cross-cutting issues emerges from the mapping of policies for SDGs in the Asia Pacific region. Some key macroeconomic policy tools identified are the following.

V.1 Gender Responsive Budgeting (GRB)

Gender budgeting is an approach to government fiscal policy that seeks to use a country’s national and/or local budget(s) as a tool to resolve societal gender inequality and promote inclusive development. Gender budgeting does not involve the creation of separate budgets for men and women. Instead, it involves studying a budget’s differing impacts on men and women so as to set new allocations and revenue policies to promote greater efficiency and equity as regards gender equality (Chinkin, 2001; Stotsky, 2016). Ideally, gender budgeting is an approach to fiscal policies and administration that translates gender-related

[31] Dave Steinbach, Essam Yassin Mohammed and Paul Steele (2016), A sustainable future for fisheries: how fiscal policy can be used to achieve SDG 14, IIED, United Kingdom http://pubs.iied.org/pdfs/17411IIED.pdf
[32] UNEP, 2016. Green Economy: Fiscal Policies and the SDGs, UNEP Geneva http://www.greenfiscalpolicy.org/wp-content/uploads/2016/05/Fiscal-Policies-and-the-SDGs-Briefing-note.pdf
[33] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2054-ENEA-May17..pdf
[34] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief%2056-Pacific-May17.pdf

commitments into fiscal commitments through identified processes, resources, and institutional mechanisms, impacting both the spending and revenue sides of the budget (Chakraborty, 2014).

Chakraborty (2016) conducted a survey of 26 Asian countries' activities in gender budgeting, finding that Brunei, China, Hong Kong, Japan, Myanmar, New Zealand, Papua New Guinea, Singapore, and Taiwan have not implemented gender budgeting. Among Asian countries that are pursuing gender responsive budgeting, several are doing so by use of a budget circular: Afghanistan, Bangladesh, Bhutan, India, Indonesia, Malaysia, Nepal, and Pakistan. Korea, the Philippines, Timor Leste, Vietnam, the Lao People's Democratic Republic, and Mongolia have embodied gender budgeting in law. Cambodia and Sri Lanka are pursuing gender budgeting but have not incorporated the initiative into a budget circular document or law.

Elements of the Budget Adaptable through Gender Budgeting

A typical budget may be composed of three primary elements – expenditures, revenues, and intergovernmental fiscal transfers – all three of which may be adapted through gender budgeting to advance gender equality. Government expenditures comprise the regular fiscal allocations for various departments and programmes. When public expenditures are designed according to gender priorities, they are grouped by the percentage of the expenditure that will impact women. When measuring expenditures through a gender lens it is especially critical to consider "fiscal marksmanship" or the difference between the authorized and actually allocated funds (Chakraborty, 2016). Although government revenues have received less focus than expenditures as a means to advance gender equality goals, tax policies also can and should be designed with gendered priorities (Stotsky, 2016). Too lenient concessions to high-earning individuals or corporations, taxation of certain household necessities, and ensuring payment of certain tax credits to caregivers as opposed to the primary earner have all been shown to positively impact women (Sharp and Elson, 2008; Elson, 2006; St. Hill, 2002). Finally, intergovernmental fiscal transfers from the national government to lower-tier governments can also be modified to achieve gender-based priorities under a gender budgeting regime. Anand and Chakraborty (2016), for example, observing that climate change variables were factored into transfer formulas in India, have suggested that transfer formulas could similarly be based upon gender-related indicators, such as to reward lower-tier governments for success in promoting gender parity in education enrollment.

The links of SDGs to its efficiency and equality arguments and its links to human rights is explained in this section only using SDG 5. Economic growth is often cited as an outcome of reducing gender inequality (SDG 5), which serves to close inefficient gender gaps in workforce participation, education, and health (Berik et al., 2009; Hill and King, 1995; Dollar and Gatti, 1999; Klasen, 2002; Seguino, 2008)

A second primary motivation for SDG5 is its perceived potential to promote equitable development, distinct from economic growth. There are two facets to this motivation: at a basic level, women and girls tend to suffer greater disadvantage across a range of social and economic indicators, therefore alleviating these development disparities through gender budgeting programmes has been seen as a valid development end in itself. Secondly, policy makers and academics have long highlighted the value of gender equality as a precursor to, or tool for promoting, economic development more broadly (World Bank, 2011, Chakraborty et al, 2017).

Against this backdrop, gender budgeting has been developed in the region as a plausible policy tool to achieve SDG5. Literature often posits advancement of gender equality and women's and girl's development as a motivation for gender budgeting (Stotsky, 2016a; Sharp and Elson, 2008). Moreover, governments adopting gender budgeting highlight amelioration of gender disparities and empowerment of women as the key motivation. For example, in Asia, the Indian, South Korean, and Afghan gender budgeting initiatives all posit women's advancement as the motivator for their programmes (Chakraborty 2016; Kolovich and Shibuya, 2016). In addition to pursuing gender equality and development of women and girls for their own sake, however, these goals are discussed in the gender budgeting literature as a means to economic development overall (Stotsky, 2016a).

In 2005, the UN Department of Economic and Social Affairs called gender equality and women's empowerment a "prerequisite" to achieving the other MDGs, and in 2011, the World Bank asserted that "[g]ender equality matters also as an instrument for development" and empirical evidence has proved how redressing capability deprivation in education , health , access to land and governance can lead to gender equality (United Nations, 2005; World Bank 2011, Qian, 2008; Andrabi et al., 2011; Allendorf, 2007; Chattopadhyay et al. 2004; Agarwal 2010a; Agarwal 2010b). It is often argued that gender budgeting advances human rights in several ways. First, it translates the governments' commitments to international legal obligations into required budgetary commitments to implement it, to seek sex equality and equal realization of human rights within their states (Chakraborty et al, 2017). Second, by helping states promote women's development and equal rights, gender budgeting can help women actually achieve those rights. And third, the process of gender budgeting, including the collection and evaluation of sex-disaggregated social and economic data and the study of challenges facing women, can encourage countries to promote the rights of women through new internal laws.

One basic element of gender budgeting is the collection of sex-disaggregated statistics; indeed several countries have begun their gender budgeting efforts with a requirement on each ministry to begin disaggregating by sex the data they collect annually to guide their allocation requests (Chakraborty, 2016; Kolovich and Shubuya, 2016; Chakraborty et al, 2017). Sex-disaggregated data can be used to justify passage of laws addressing gender disparities, such as laws promoting women's health and safety, access to education, equal rights to work, etc.

Chakraborty, et al (2017) show that the Gender Development Index (GDI) is positively and significantly linked to gender budgeting and education variables[35]. Female literacy rate

[35] Human development can be understood as a process of enlarging people's choices and raising their level of well-being. The United Nations Development Programme (UNDP) has identified three elements of choice and well-being that are the most socially critical: the ability to lead a long and healthy life; the ability to acquire knowledge and be educated; and the ability to access the resources (often synonymous with income) necessary for a decent level of living (UNDP Human Development Reports, various years). A gender-neutral geometric mean of these three development dimensions was created, called the Human Development Index (HDI). Later in 1995, the UNDP constructed the Gender Development Index (GDI) as an offshoot from the HDI. The GDI has been used to measure global gender development since then. The GDI uses the same variables as the HDI, but adjusts them according to a country's degree of disparity in achievement across genders. Under the GDI, the average value of each of the

increases GDI by 0.004 percentage points, while gender budgeting increases GDI by 0.062 percentage points. Economic growth is found insignificant in determining GDI and GII.

Disaggregated for GRB and Non-GRB countries are also carried out for sectoral equations in education, health and labour force participation. A categorization of gender budgeting and non-gender budgeting countries in Asia Pacific has been undertaken on the basis of Budget Call Circulars. In case of MMR, we found that education spending by public sector (-33.04 percentage points) and female literacy rates (-7.93 percentage points) reduces MMR in non-GRB countries. However, the female labour force participation is found inducing MMR by 10.07 percentage points. The economic growth of a country is found to have no impact in reducing MMR. The public spending on health is also found insignificant in reducing MMR in Asia Pacific.

In gender budgeting countries, one per cent increase in GDP per capita decreases MMR by 0.0019 percentage points. The female literacy rate was also found to be significant (-5.879 percentage points). However, female labour force participation and education and health spending by public sector are found to be insignificant in reducing MMR. In non-gender budgeting countries, one percent increase in GDP per capita increases female literacy rate by 21.53 percentage points, while public spending on health increases female literacy rate by 19.42 per cent. Public spending on education is found to be insignificant for literacy. In countries where gender budgeting is stipulated by Budget Circulars, one percent increase in GDP per capita induces increase in female literacy by 11.55 percentage points, whereas public spending on education induce a rise of 6.711 and increase in health spending increases the literacy rate of females by 8.5 percentage points (Chakraborty, et al, 2017).

In non-gender budgeting countries, the female labour force participation responds to increase in economic growth (GDP per capita) to a range of 1.38 percentage points and public spending on health by 1.61 percentage points. Public spending on education is found to be insignificant in determining a rise in female labour force participation rate in non-gender budgeting countries. In gender budgeting countries, only economic growth is found to be significant by 1.035 percentage points. Public spending on education and health are found insignificant (Chakraborty et al, 2017).

V.2 Climate Responsive Budgeting

Environmental federalism is a challenging issue as the policy making determining the environment quality takes place with different levels of government. There is a continuous debate on the consensus over decentralised policy-making or a centralised policy making to control and set environmental standards. This demands a great deal of Centre-State coordination, especially in federal countries. Climate responsive budgeting is an important policy tool to climate change commitments. It is pertinent to analyse these climate change Plan commitments and how it can be integrated into the Budgeting and Public Financial Management (PFM) processes.

component variables is substituted with "equally distributed equivalent achievements". The equally distributed equivalent achievement (X_{ede}) represents the level of achievement that would, if attained equally by women and men, be considered exactly as valuable to society as the actually observed disparate achievements.

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For instance, though India has National Action Plan on Climate Change and 29 States has developed their own State specific climate action plans, India has not yet developed a climate responsive budgeting process. Climate responsive budgeting (CRB) for both adaptation and mitigation is a dynamic process. A promising framework for CRB has been firmly evolving within purview of the Public Financial Management over the years, across selected Asian and African countries including Morocco, Cambodia, China, Nepal, Philippines, Indonesia, Vietnam, Bangladesh, Ethiopia, Uganda, Burkina Faso, Tanzania, Samoa and Thailand. However, ironically India still does not have climate responsive budgeting at national and subnational levels.

At the international level, some countries in the region have developed Low-Carbon Development Plans. These development plans mark a milestone in climate change agenda. However, if these development plans are not translated into sustainable budgetary commitments, there is a high probability for these significant development agendas to fail.

V.3 Policy to Act as "Employer of Last Resort" in Redressing Poverty and Inequality

The role of fiscal policy in attaining SDGs may take two routes. One, a route of fiscal policy, acting as 'employer of last resort' by providing "participation income" in return to economic activity. Two, fiscal policy acting as a provider of "basic income" to all citizens unconditional and non-targeted. In Asia Pacific, fiscal policy has acted the role of providing "participation income" through employment programmes rather than "basic income".

Globally, "participation income" is attained through a direct employment transfer - a Job Guarantee programme – which is an "employer of last resort" fiscal policy. This policy envisions the government bearing a guarantee to provide paid work opportunities of predictable duration at a predetermined wage for public works. Though many such job guarantee initiatives have been introduced over the years across the countries, the popular and largest in scale are the US New Deal programs, ex-post to 1929 Great Depression; the Jefes programme in Argentina and the Expanded Public Works Programme (EPWP 2004-05) in South Africa, other than the Mahatma Gandhi National Rural Employment Guarantee Act in India, specific to the region. These programmes are targeted at labor-intensive work in the field of environmental interventions and in providing public benefits in asset-creating public works[36].

A major lacuna of the existing studies on job guarantee programmes is the lack of analysis on the impact of time use patterns and in turn the care economy infrastructure in strengthening the participation of women in wage employment. It is based on the principle of self-selection, and it is a step towards legal enforcement of the right to work, as an aspect of the fundamental right to live with dignity[37]. This programme aims to redress the seasonal, cyclical and structural unemployment in the country by providing the low-skilled poor a work entitlement thereby ensuring that when all else fails, the government acts as "employer of last resort".

[36] For details, refer http://www.levyinstitute.org/pubs/wp_671.pdf
[37] http://ftp.iza.org/dp6548.pdf

V.4 Universal Basic Income

On the other hand, "basic income" is an unconditional cash transfer. It can be universal or targeted, and can involve 2 types of errors: I or II. It is often argued that universal is better than targeted as the latter can encounter exclusion I error (non-targeted getting included) and exclusion II error (needy getting excluded). The fiscal implications of universal basic income is a matter of concern within the constraints of fiscal rules. It is always a dilemma for the government to design "universal basic" income or "participatory" income. If the priority of the government is to design policies to enable people to "participate" in economic activity, then they go for employment –related policies. However, "basic income" has received significance amidst the increasing automation process and lack of jobs availability.

V.5 Energy Subsidies Reforms

In addition to these two fiscal policy designs, energy subsidies also form a major policy. The fossil fuel subsidy is increasingly phased out or better targeted in the region. In India, the policy to provide clean fuel at affordable prices to poor is considered as a major public policy in terms of gender equity. As women spend disproportionate hours in collecting fuel wood, and spend prolonged hours in cooking with non-clean fuel with poor ventilation can lead to increasing health risks of respiratory diseases. UNESCAP (2016) pointed out that in Asia energy subsidies (especially on petroleum products and electricity) accounted for about one third of global energy subsidies in 2013. Such subsidies accounted for about 20 per cent of GDP in the Islamic Republic of Iran, followed by the Russian Federation and India (both at about 10 per cent), Indonesia (7 per cent) and China (4 per cent). In the wake of the global oil price decline in 2014, a number of countries, including Indonesia, have aggressively phased out fuel subsidies. [38]

V.6 Financial Inclusion

Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way. In India, the first ever unique identification project, where identities are biometrically scanned, is enabling unbanked individuals to access credit and other banking services through JanDan project. In the Asia Pacific region, the Philippines has enabling policy environment and business support which helped in implementing affordable and efficient financial services (micro savings and micro insurance) to the poor through technological innovations and mobile banking. In July 2017, the Asian Development Bank (ADB) and Cantilan Bank, in partnership with Oradian, launched a pilot project on cloud-based core banking technology in the southern Philippines[39] to provide digital financial services to poor in hard to reach terrains in Philippines. This digital financial services provide platform for the poor people to save, make a payment, get a small business loan, send a remittance, or buy insurance. TabunganKU (My Savings) and People's Business Credit are the two significant microfinance programmes in Indonesia. The private sector also plays an active role in Indonesia in microfinance programmes. For instance, Bank Rakyat Indonesia, a private bank, has introduced financial inclusion projects to serve the

[38] http://www.unescap.org/sites/default/files/MPFD%20Policy%20Brief-53-Environment-May17.pdf
[39] https://www.adb.org/news/cloud-based-banking-pilot-project-improve-financial-inclusion-philippines

unbanked firms and individuals. In Thailand, financial inclusion is prominently pursued by the Government. The Village Fund of Thailand is recognized as one of the largest microfinance institutions in the world, providing subsidized credit to farm households and small firms in rural areas.

VI. Conclusion

The inventory analysis on macro policies for SDGs reveals that the countries in the Asia Pacific region do not have any policy document relating to macroeconomic policies to attain the SDGs, except a few countries where SDGs are integrated in their National development plans. Broadly, policymakers have articulated a plethora of legislative climate, regulatory mechanisms and economic environment measures to implement SDGs at national and sub-national levels. However, the most significant, and often overlooked, are about the macro policy tools that they have to complement these broad approaches. The macro instruments in the Asia Pacific region that are often used to regulate activity, mobilise revenue, promote gender equality and environmental management, provide cash transfers to vulnerable groups and provide employment. The matrices attempted to survey existing policies in the region are not comprehensive, but give an indicative idea of the region's macro policies for achieving the SDGs. Giving special attention to one of the dimensions (gender), the analysis reveals that a number of policy tools, such as gender responsive budgeting can be implemented to fully take into account the principles of the SDGs. Hence, while more research is needed – especially to be able to tailor policies to specific countries' realities, the tools described here are a first step for policymakers to better understand how macro policies can address the SDGs.

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Appendix 1: Country Wise – SDG Related Policies[40]

Table A1: Sustainable Development Goals and Policies (India, Sri Lanka, Nepal, Cambodia)

SDGs	India	Sri Lanka	Nepal	Cambodia
1. End poverty in all its forms everywhere	Mostly in the form of intergovernmental fiscal transfers and sector specific programmes to redress poverty. For instance, *Jawahar Gram Samridhi Yojana* (JGSY) is the program which provides sustained wage employment to Below Poverty Line (BPL) people. In terms of budgetary allocation, job guarantee programmes (rights-based policy titled Mahatma Gandhi National Rural Employment Guarantee scheme) are significant in India than household cash transfers.	Poverty Reduction Strategy: The overarching objective of the PRS is poverty alleviation through a basic strategy of mainstreaming the poor into the growth process.	· Micro Enterprise Development Programme (Phase IV): The Micro enterprise Development Programme is creating employment and income opportunities for the rural poor by providing skill and business training and other support, mainly for women and poor and disadvantaged people to set up micro-enterprises.	
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture	The National Food Security Act (also Right to Food Act) is an Act of the Parliament of India which aims to provide subsidized food grains to approximately two thirds of India's 1.2 billion people.	National Nutrition Policy of Sri Lanka: The Nutrition Policy for Sri Lanka was first developed in 1986. It sets goals for food security throughout the stages of the life cycle.	A Food and Nutrition Security Policy, Food Sovereignty Act, and National Food and Nutrition Security Action Plan will be formulated and implemented. The government of Nepal (GoN), with technical support from FAO, has formulated this Food and Nutrition Security Plan (FNSP) that constitutes a chapter in the	National Strategy for FSN – The objective is to ensure that Cambodian Households can produce and gain access to nutritious food through more productive and diversified agriculture and livestock production, sustainable use of fisheries and forest resources

[40] I acknowledge Bhavya Aggarwal for her inputs in this matrix .

			Agricultural Development Strategy (ADS) for the decade 2013-23. The FNSP also complements the Multi-sector Nutrition Plan for Accelerating the Reduction of Maternal and Child Under-nutrition in Nepal (MSNP).	
3. Ensure healthy lives and promote well being for all at all stages	The National Rural Health Mission is launched in India with the aim of reducing maternal mortality rates and infant mortality rates. This programme is designed in the form of intergovernmental fiscal transfers, which is transferred directly to local level functionaries surpassing state budgets till recently.	Health Policy in Sri Lanka: Sri Lanka adopted the Free Health Policy after gaining independence and has been consistent in its progress ever since. It comprises of a system of grass-root level workers including Public Health Midwives and Public Health Inspectors who visit all households and provide advice on health, nutrition and control of communicable diseases.	To protect the achievements made so far and to adequately address prevalent and new challenges faced within health sector by developing people-centered and efficient management by optional utilization of available means and resources to provide promotive, preventive, curative and rehabilitative health services , National Health Policy 2048 has been updated and National Heath Policy 2071 (2014) has been formulated.	The Health Information System Strategic Plan (HISSP), 2015 is the first strategic plan for the health information system ever produced in Cambodia. It is based on a comprehensive assessment of the current health information system and the needs of a variety of users
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	The National Policy on Education (NPE) (Right To Education) is a policy formulated by the Government of India to attain progress in elementary education. India has appointed a new committee under K. Kasturirangan to prepare a	Free Education Policy in Sri Lanka	Free basic education will be gradually made qualitative, useful and compulsory. In accordance with the objective of School Sector Reform Program, legal and structural improvements will be made and syllabus modified so as to improve the quality and extend equitable access to integrated	The Education Strategic Plan (ESP) 2014-2018 has been designed to respond to these demands and makes clear the relationship between national policy and the education policy

	Draft for the new National Education Policy in 2017.		secondary education comprising classes 9 to 12.	
5.Achieve gender equality and empower all women and girls	India has adopted Gender Budgeting at national and subnational governments. A recent study by Zaman and Stotsky (2017) pointed out that gender budgeting in India has been successful to reduce the gender parities in education. Prior to gender budgeting, India has also adopted a Women Component Plan as one of the major strategies of planning and budgeting and directed both the Central and State Governments to ensure that 'not less than 30 per cent of the funds/benefits are earmarked in all the women's related sectors".		In the fiscal year 2007-08, the Ministry of Finance, Government of Nepal introduced gender budgeting. A new classification of budgetary transactions was introduced to incorporate gender budgeting into the budget.	Cambodian Gender Strategic Plan - Neary Rattanak IV is the five-year strategic plan (2014 – 2018) for Gender Equality and the Empowerment of Women in Cambodia.
6.Ensure availability and sustainable management of water and sanitation for all	Rural Sanitation Programme with the objective of accelerating sanitation coverage in rural areas. It was restructured with a paradigm shift in the approach, and the Total Sanitation Campaign (TSC) was introduced. National Rural Drinking Water Program was revised multiple times,	National Policy on Water Supply and Sanitation: Providing safe drinking water and access to sanitation services is an essential or fundamental element of the Government's program for the economic and social development of Sri Lanka.	Nepal's Sanitation Policy. And a new National Rural Water Supply and Sanitation Policy	National Policy on Water Supply and Sanitation - The purpose of the National Policy is to set up the sanitation policy for provinces, cities and downtown focusing on selecting available options of sanitation technologies that contribute to the protection and conservation of water and its resources.

	10% is earmarked for North-Eastern states.			
7. Ensure access to affordable, reliable and modern energy for all	Non-conventional energy projects for wind, solar and small hydro-electric projects. UDAY scheme was launched to improve financial and operational efficiency in power distribution.	National Energy Policy: The basic objective of the policy is to meet the basic energy needs, ensure energy security and promote energy efficiency and conservation	Renewable Energy Subsidy Policy of Nepal: The Policy aims to develop the renewable energy sector and encourage very poor households to use renewables by providing subsidy for deployment. It revises the subsidy determined in the Renewable Energy Subsidy Policy and Urban Solar System Subsidy and Credit Mobilization Guidelines.	
8. Promote sustained, inclusive and sustainable economic growth, full of productive employment and decent work for all	Government, as Employer of last resort programme titled National Rural Employment Guarantee scheme was launched, recently with increased budgetary allocation.			
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Make in India, Skill India and Start Up projects. Modern technology projects in rail transport including Bullet Trains.	Industrial Policy and Strategy: The economic policy framework of the government provides broad guidelines and directions for a sustainable industrial development and promotion of local industries.	Public-Cooperative Partnership concept will be applied in national production growth programs for cottage and small industries. All cooperatives have to work on the concept of "One cooperative - Key Identity" considering their local potential products and industries.	· Royal Government of Cambodia (RGC) has prepared and adopted this “Industrial Development Policy” as a guide to promote the country's industrial development that will help maintain sustainable and inclusive high economic growth through economic diversification, strengthening competitiveness and promoting productivity.

10.Reduce inequality within and among countries	Jan Dhan Yojna, digital financial inclusion programmes for poor		Nepal Government Program for the Reduction of Inequality in 2008/09	
11.Make cities and human settlements inclusive, safe, resilient and sustainable	Smart Cities Mission - The strategic components of area-based development in the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) and city extension (greenfield development) plus a Pan-city initiative in which Smart Solutions are applied covering larger parts of the city.	Sustainable Cities Program: Responding to the Government's request for specialised technical support in solid waste management, an issue that all 18 cities had prioritised under the Urban Governance Support Programme		
12. Ensure sustainable consumption and production patterns	National Environment Policy (NEP) focusses on development that is sustainable, respects ecological constraints and imperatives of social justice ii. National Policy for farmers – focusses on sustainable development of agriculture, improving quality of land and soil, conservation of water and sensitizing farming community iii. National Electricity Policy and Integrated Energy Policy – both underscore the use of renewable sources of energy iv. National Urban Sanitation Policy seeks to generate	The SWITCH-Asia Sustainable Consumption and Production National Policy Support Component - The SWITCH-Asia Sustainable Consumption and Production National Policy Support Component is a joint European Union and the Government of Sri Lanka a 4-year comprehensive programme, which aims to enhance capacity, skills, knowledge and understanding of key policy makers, stakeholders and the	EU SWITCH-Asia Programme is currently supporting Nepal to switch to SCP patterns through several grant projects. The SWITCH-Asia projects implemented in Nepal have attempted to promote behavioural and technological changes in order to produce goods and services more sustainably.	

	awareness, eliminate open defecation, promote integrated city wide sanitation and efficient operation of all sanitary installations.	public about the main principles of SCP, available policies, tools, instruments and mechanism.		
13. Take urgent action to combat climate change and its impacts	Jawaharlal Nehru National Solar Mission, National Mission on Sustainable Habitat, National Water Mission, National Mission for Sustainable Agriculture and • National Mission for Sustaining the Himalayan Ecosystem were initiated	National Climate Change Policy of Sri Lanka: The major goal of the policy is adaptation to and mitigation of climate change impacts within the framework of sustainable development	Climate Change Policy 2011- The following policies are adopted to meet its goals and objectives: • Climate adaptation and disaster risk reduction; • Low carbon development and climate resilience; • Access to financial resources and utilization; • Capacity building, local participation and empowerment; • Research; • Technology development, transfer and utilization; and • Climate-friendly natural resource management.	Cambodia Climate Change Strategic Plan - The Royal Government of Cambodia officially launched the first-ever, Cambodia Climate Change Strategic Plan 2014-2023 in November 2013.The CCCSP captures the main strategic objectives and directions for a climate-smart development of Cambodia in the next 10 years.
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development		National Environmental Policy and Strategies- • National Environment Policy- Key coastal and marine ecosystems rich in biodiversity are declared as conservation areas and given adequate protection. • Minimize negative impacts of offshore mineral resource extraction.		
15. Protect, restore and promote		· National Wildlife Policy for Sri Lanka: The		

sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		first National Policy on Wildlife Conservation was approved by cabinet in June 1990. The present National Wildlife Policy addresses many of the same issues in updated form, while also adding some points that respond to the evolving needs of Sri Lankan society and the additional mandates of the Convention on Biological Diversity(CBD), which Sri Lanka ratified in 1994.		
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels				
17 Strengthen the means of implementation and revitalize the Global Partnerships	(https://sustainabledevelopment.un.org/partnership/countries/?country=25) and https://niti.gov.in/sites/default/files/2019-07/LSDGs_July_8_Web.pdf	The below is a list where the government/entity/organization Sri Lanka is listed as a partner. (https://sustainabledevelo	The below lists where the government/entity/organization Nepal is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=209)	The below is a list where the government/entity/organization Cambodia is listed as a partner. (https://sustainabledevelopment.

for sustainable development		pment.un.org/partnership /partners/?id=241)		un.org/partnership/partners/?id= 141)

Table A2: Sustainable Development Goals and Policies (Australia, New Zealand, Myanmar, Japan)

SDGs	Australia	New Zealand	Myanmar	Japan
End poverty in all its forms everywhere	Compulsory Income Management: In 2010, the Australian Government passed legislation expanding the operation of compulsory income quarantining to apply to all "vulnerable" welfare payment recipients across the Northern Territory.		The draft FESR references the need for upgrading the health system, establishing a social protection scheme and better disaster preparedness separately.	Japan Fund for Poverty Reduction- Japan established the JFPR in May 2000 to provide grants for projects supporting poverty reduction and related social development activities that can add value to projects financed by ADB. In 2010, the JFPR expanded its scope of grant assistance to provide technical assistance grants in addition to project grants.
End hunger, achieve food security and improved nutrition and promote sustainable agriculture	National Food Plan: The Australian Government is just one of many participants in the food system, with decisions taken by individual food businesses and consumers largely guiding the direction the system takes– for example, what crops are grown, what products are sold and where to shop.	The Toi Te Ora - Public Health Service (Toi Te Ora) Plan outlines the need for policy work in the area of food security. It was identified that there was a need to review relevant literature to inform the direction required to achieve this annual plan objective.	Policy guidelines for health service provision and development have also been provided in the Constitutions of different administrative period that focus on improving the healthcare of children and mothers	To manage the food supply so as to improve agricultural productivity and to promote the sound development of agriculture and food industries.
Ensure healthy lives and promote well	The Pharmaceutical Benefits Scheme (PBS) provides subsidized	New Zealand Health Strategy 2016 – Future direction outlines the high	Public spending on education in 2014 increased by 49% and the government of Myanmar has also	Japan Health Policy Now- The central government supervises and regulates health care through

being for all at all stages	drugs at a set co-payment (at a lower level for welfare recipients). It was established more than 50 years ago and now covers about 600 drugs in over 1,500 formulations.	level direction for New Zealand's health system over the 10 years from 2016 to 2026. It lays out some of the challenges and opportunities the system faces; describes the future we want, including the culture and values that will underpin this future; and identifies five strategic themes for the changes that will take us toward this future	been reforming the national education system.	control of the health insurance system. Specifically, the central government oversees health insurance contracts between the government and providers. This power is provided through the 1922 Health Insurance Law.
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		The Tertiary Education Strategy 2014-19 sets out the Government's long-term strategic direction for tertiary education.		
Achieve gender equality and empower all women and girls	Gender Equality Fund: In 2015–16, Australia established the Gender Equality Fund ($55 million in 2017-18) to strengthen work on gender equality and women's empowerment in the aid program.	(http://women.govt.nz/inspiring-action-for-gender-balance/gender-equality-and-corporate-governance-policy-strategies)	National Strategic Plan for the Advancement of Women: Launched in 2013, the National Strategic Plan for the Advancement of Women 2013-2022 (NSPAW), set out a framework to advance the status of women in Myanmar across.	Enforcement on the Act on Promotion of Women's Participation and Advancement in the Workplace
Ensure availability and sustainable management of water and sanitation for all	National Waste Policy: avoid the generation of waste, reduce the amount of waste (including hazardous			In Japan, a rational mechanism that consists of rules and regulations is implemented for programs and projects relating to

	waste) for disposal and manage waste as a resource.			sanitation and wastewater management.
Ensure access to affordable, reliable and modern energy for all	National Waste Policy: avoid the generation of waste, reduce the amount of waste (including hazardous waste) for disposal and manage waste as a resource. The LRET creates a financial incentive for the establishment or expansion of renewable energy power stations, such as wind and solar farms or hydro-electric power stations. It does this by legislating demand for Large-scale Generation Certificates (LGCs).	The New Zealand Energy Strategy (2011-2021) sets the strategic direction for the energy sector and the role energy will play in the New Zealand economy. The overall goal is to make the most of our abundant energy potential, for the benefit of all New Zealanders.	The National Energy Management Committee (NEMC) and the Asian Development Bank are preparing Myanmar´s Energy Master Plan (EMP). This plan also considers Renewable Energy options for solar, hydro, wind, and biomass electricity generation both, for grid connection and off-grid applications.	Government adopted the fourth SEP in April 2014 and based on it, METI prepared the "Long-term Energy Supply and Demand Outlook" to 2030, which was adopted in July 2015
Promote sustained, inclusive and sustainable economic growth, full of productive employment and decent work for all			Economic Policy 2016	Japanese Prime Minister Shinzo Abe has introduced an audacious set of economic policies designed to spur the country out of its decades-long deflationary slump. The results have so far been mixed.
Build resilient infrastructure, promote inclusive and	Industry Policy in Australia: Tariffs have been phased out on		Industrial Policies-(https://ash.harvard.edu/files/industrialization.pdf)	

sustainable industrialization and foster innovation	Australian manufacturing and free trade provisions, freeze PMV and TCF tariffs for five years from the year 2000 and place greater emphasis on the principle of reciprocity in reviews of Australia's trade barriers.			
Reduce inequality within and among countries		Reducing inequalities is a whole of government policy encompassing both social and economic initiatives. The reducing inequalities policy aims to reduce disadvantage and promote equality of opportunity in order to achieve a similar distribution of outcomes between groups, and a more equitable distribution of overall outcomes within society.		The tax and benefit system provides strong financial incentives for spouses to work part-time in non-regular employment and limit their earnings. In 2013, spouses with earnings below 1.05 million yen were exempt from income tax.
Make cities and human settlements inclusive, safe, resilient and sustainable	Building Sustainable Cities: The Council of Capital City Lord Mayors released in May 2010 a submission to the Government on the development of a national urban policy Towards a City	Green Technology Policy is a driver to accelerate the national economy and promote sustainable development. Green technology will contribute to a better fuel-economy and lower greenhouse emissions.		

	Strategy aiming to secure the productive, sustainable and livable future of their cities.			
Ensure sustainable consumption and production patterns	In 2004, UNEP produced a document entitled Tracking Progress: Implementing Sustainable Consumption Policies that included a case study on Australia as 'one of a group of countries that has taken a leadership role in supporting and facilitating international work on changing consumption and production patterns'			
Take urgent action to combat climate change and its impacts	Emissions Reduction Fund: The Emissions Reduction Fund provides incentives for emissions reduction activities across the Australian economy. The fund is made up of three components: crediting, purchasing and safeguarding emissions reductions.	• In November 2015, the New Zealand Government submitted an addendum to our INDC. • The addendum clarifies New Zealand's assumptions about accounting for anthropogenic greenhouse gas emissions and removals from forestry and other land use underpinning the INDC. These assumptions will inform New Zealand's		Ahead of COP21 held in December 2015, Japan announced in July 2015 its intended nationally determined contribution (INDC) to reduce GHGs by 26% from FY2013 to FY2030 (a reduction of 25.4% from 2005, or 1 079 MtCO2-eq in 2030).

		participation in the negotiations on a new global climate change agreement.		
Conserve and sustainably use the oceans, seas and marine resources for sustainable development	The vision and goals for Australia's Oceans Policy are consistent with a range of related national policies and agreements, including: • the National Strategy for Ecologically Sustainable Development (1992)			
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss				
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels				

Strengthen the means of implementation and revitalize the Global Partnerships for sustainable development	The complete list can be found here – (https://sustainabledevelopment.un.org/partnership/partners/?id=5)	The below is a list where the government/entity/organization New Zealand is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=210)	The below is a list where the government/entity/organization Myanmar is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=206)	The below is a list where the government/entity/organization Japan is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=30)

Table A3: Sustainable Development Goals and Policies (Singapore, Malaysia, Philippines, Indonesia, Pakistan)

SDGs	Singapore	Malaysia	Philippines	Indonesia	Pakistan
End poverty in all its forms everywhere		The Malaysian government has been committed to eradicating poverty through various Malaysian policies since 1957; including Malaysia Plans, New Economic Policy (1970-1990), National Development Policy (NDP, 1991-2000), “Vision 2020”, Industrial Master Plans, National Agriculture Policies, Privatization Master Plan and the New Economic Model (NEM, 2010).		Indonesia’s National Long-Term Development Plan 2005-25 sets out the country’s key aims in terms of poverty reduction and development.	· Provided with significant support by USAID, the World Bank, DFID, and the Asian Development Bank, BISP has taken the lead in establishing “cash transfer” programs, which provide the financial support families need to meet educational, health and livelihood requirements.

End hunger, achieve food security and improved nutrition and promote sustainable agriculture		· Malaysia has formulated the National Agro Food Policy (DAN) 2011-2020, which emphasizes on expanding food production to ensure food supplies are sufficient, of better quality, edible, safe and nutritious and at affordable prices.	· National Food Authority was established in 70's.	· Indonesia provides significant market price support and fertiliser subsidies to agricultural producers, which are among the most market-distorting forms of support.	
Ensure healthy lives and promote well being for all at all stages	· Ministry of health Budget Initiatives- Ministry of Health will focus on providing good healthcare that is affordable and sustainable for Singapore's future generations. · Healthier Catering Guidelines for Government agencies from 1 April 2017		· HPDP2 is a five-year (2012-2017) health policy project of the USAID/Philippines implemented in partnership with the UPecon Foundation, Inc. It supports the DOH-led policy formulation process for scaling up the Government of the Philippines' Universal Health Care initiative or Kalusugan Pangkalahatan.	· Key multisectoral reforms include the delegation of authority for certain government functions from central to local governments, including responsibility for the management and provision of public health services; and the progressive introduction of greater autonomy in management of public service organizations, which include hospitals.	· National Health Vision (2016-2025)- To improve the health of all Pakistanis, particularly women and children, through universal access to affordable quality essential health services, and delivered through resilient and responsive health system, ready to attain Sustainable Development Goals and fulfill its other global health responsibilities.
Ensure inclusive and equitable quality education and promote		The Malaysia Education Policy Review (M-EPR) was initiated through a Memorandum of	National Program Support for Basic Education - The National Program	The first priority is to raise the quality of education and ensure that all learners acquire the skills	National Education Policy 2016: The broader objective of the NEP 2016 exercise is to engage with

lifelong learning opportunities for all		Understanding (MOU) between the government of Malaysia and UNESCO in November 2010. The education policy review analysed five specific policy areas, while taking a sector-wide perspective of education development.	Support for Basic Education (NPSBE) played an important catalytic role in implementing the government's Basic Education Reform Agenda (BESRA) over a six-year period (2006-2012).	they need to succeed in life and work.	focused constituencies, especially youth through consultations, face to face and through social media for the NEP 2016 ensuring links with 25 A and the Sustainable Development Goal No 4 for voice and recommendations.
Achieve gender equality and empower all women and girls	Also, in a groundbreaking move, the Singapore Parliament debated for the first time on 3 April 2017 and 4 April 2017 a proposal to express more support for women in the workforce in Singapore including amongst others, to discuss ways to reduce the gender imbalance in the Singapore workforce especially at senior management levels	· Malaysia has embarked on a gender responsive budget since 2003 to integrate gender perspectives in the policy and budget system of line ministries.	· In the Philippines, efforts to make governance gender responsive are promoted through legislation, such as the Magna Carta of Women (MCW) which mandates non-discriminatory and pro-gender equality and equity measures to enable women's participation in the formulation, implementation, and evaluation of policies, plans, and programs for national, regional, and local development.	· Gender focal points have been set up in more than 10 related ministries to coordinate the implementation of the policy. The National Working Group on Gender coordinated by the Ministry of Women Empowerment has also been set up with membership from various ministries to discuss gender issues and implement Presidential Instruction No 9/2000 on Gender Mainstreaming.	USAID is working to narrow the gaps between men and women to promote a more prosperous, stable society in Pakistan. • Provided healthcare, legal services, and counseling to nearly 40,000 female survivors of gender-based violence.

Ensure availability and sustainable management of water and sanitation for all			The Philippine Water Supply Sector Roadmap and the Philippine Sustainable Sanitation Sector Roadmap each have targets of 100%, by 2025 for water and by 2028 for sanitation.	· Sanitation Development 2015 – 2019 - – Wastewater: 13% offsite (decentralized and centralized city wide system), 87% onsite improved system – Solid waste: 100% collection and sanitary landfill for urban area.	By 2025, water efficient production and consumption predominates as best practice in Pakistan's major industrial cities as part of a broad engagement of businesses in water management, contributing to improved environmental sustainability and poverty reduction within the context of sustainable development
Ensure access to affordable, reliable and modern energy for all	· Singapore is aiming to increase solar deployment from the current 47MWp, to provide around 350MWp of electricity by 2020. By 2030, it is estimated that renewable energy could potentially contribute up to 8% of Singapore's peak electricity demand.	· National Renewable Energy Policy and Action Plan (2009) - Enhancing the utilisation of indigenous renewable energy (RE) resources to contribute towards national electricity supply security and sustainable socioeconomic development.	· National Renewable Energy Program - The National Renewable Energy Program (NREP) outlines the policy framework enshrined in Republic Act 9513. It sets the strategic building blocks that will help the country achieve the goals set forth in the Renewable Energy Act of 2008.	In 2014, the Government Regulation 79/2014 National Energy Policy sets a target to increase the provision of primary energy in Indonesia in 2025 to 400 MTOE with 23 percent from new and renewable energy (NRE) or an equivalent of 92 MTOE, with a growth of 17 percent for the next 10 years.	Energy Policy of Pakistan: The 2010 amendment to Pakistan's Constitution (para. 3), empowered each province to formulate the policy framework for the development of public and private sector power generation.
Promote sustained, inclusive and		• Vision 2020: Economic Development			

sustainable economic growth, full of productive employment and decent work for all		a) Average Annual Output Growth at 7% with low inflation. b) An eight-fold increase in GDP. c) A four-fold increase of per capita income.			
Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	· Defer levy increases for Work Permit holders for one year. Manufacturing Work Permit levies will remain unchanged for another year, as announced at Budget 2015.	• Industrial Policies- a) Investment Incentives - The Malaysian Government has codified incentives available for investments in qualifying projects in target sectors and regions. b) Foreign Trade Zones/Trade Facilitation - The Free Zone Act of 1990 authorized the Minister of Finance to designate any suitable area as either a Free Industrial Zone (FIZ), where manufacturing and assembly takes place		· The 2008 Presidential Regulation on National Industrial Policy has set a long-term industrial development vision for Indonesia to be a strong industrialized nation by 2025. This vision was elaborated further in the Regulation of the Ministry of Industry issued in 2010,8 which states that the vision of Indonesia to be a strong industrialized nation by 2025 would be achieved through becoming a new industrial developed country by 2020 (Vision 2020).	
Reduce inequality within and among countries	Adjustment to the tax system in 2015 raised personal income tax rates for individuals earning				

	above S$160,000. The Government has lent a helping hand to low-income households, for instance, with the permanent implementation of the GST voucher scheme, which provides a small sum to the bottom 20 per cent of households to partially offset GST expenses.				
Make cities and human settlements inclusive, safe, resilient and sustainable		Green Technology Policy is a driver to accelerate the national economy and promote sustainable development. Green technology will contribute to a better fuel-economy and lower greenhouse emissions.			
Ensure sustainable consumption and production patterns		Malaysia intends to reduce its greenhouse gas (GHG) emissions intensity of GDP by 45% by 2030 relative to the emissions intensity of GDP in 2005. This			

		consist of 35% on an unconditional basis and a further 10% is condition upon receipt of climate finance, technology transfer and capacity building from developed countries.			
Take urgent action to combat climate change and its impacts	Public Sector Sustainability Plan- The Public Sector Sustainability Plan 2017–2020 serves to chart the Government's path towards achieving environmental sustainability.		(http://www.mmechanisms.org/cop20_japanpavilion/files/12101500_presentation_4_rev.pdf)	· National Action Plan on GHG emission reduction: The President of Indonesia stated that Indonesia would reduce emissions by 26% unilaterally and up to 41% with internal support by 2020 compared to business as usual emission level.	• Pakistan Climate Change Act, 2016 • National Climate Change Policy – To pursue sustained economic growth by appropriately addressing the challenges of climate change
Conserve and sustainably use the oceans, seas and marine resources for sustainable development					
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land					

degradation and halt biodiversity loss					
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels					
Strengthen the means of implementation and revitalize the Global Partnerships for sustainable development	The below is a list where the government/entity/ organization Singapore is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=46)	The below is a list where the government/entity/organization Malaysia is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=197)	The below is a list where the government/entity/organization Philippines is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=41)	The below is a list where the government/entity/organization Indonesia is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=179)	The below is a list where the government/entity/organization Pakistan is listed as a partner. (https://sustainabledevelopment.un.org/partnership/partners/?id=216)

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