11th Meeting of the Advisory Expert Group on National Accounts,
5-7 December 2017, New York, USA

Agenda item: 7.1

Economic well-being and sustainability
Distributional aspects

Introduction

Distributional measures of income, consumption, saving and wealth across household groups are being developed to assess economic well-being, vulnerability, interconnections and spillovers on a regular basis. A methodology consistent with national accounts definitions is being further developed.

Documentation

A paper on **IMF Perspective on Income Distributional Aspects.**

Main issues to be discussed

The AEG is requested to take note of the ongoing work and provide feedback on:

- On the type of measures that should be used and whether or not alternative definitions of income, consumption, saving and wealth, which are closer to the perception of households, should also be considered.
- On the frequency of publishing data (for example, annual, every 3-5 years).
- On the need to have international standards and develop templates.
- Any shortcomings in the measures currently used that an SNA approach would improve?
- On the resources required to produce distribution measures.
- On particular issues pertaining to developing countries.

IMF Perspective on Wellbeing and Income Distributional Aspects

Paper prepared by Massimiliano Iommi (IMF)

1. INTRODUCTION

Distribution has become an important topic for economic policy and IMF surveillance in recent years (IMF, 2007 and OECD, 2008). The recent focus on inclusive growth put inequality and economic growth, the two sides of inclusion, and the complex interaction between them, at center-stage. The adoption of the Sustainable Development Goals (SDGs) adopted by the UN Assembly in 2015 provide further context to the relevance of the subject for macroeconomic policy.

There is considerable evidence that high and persistent inequality can have adverse consequences for both longer-term growth and macroeconomic stability. High inequality is associated with less durable growth (Berg and Ostry, 2011) and can reduce public support for pro-growth reforms and spurs government to adopt populistic policies (Rodrik,1999). Inequality can yield a less efficient allocation of resources as the poor may be unable to invest in human capital or engage in productive activities (Banerjee, 2004). Inequality can also cause social conflicts, which manifest themselves through political struggles for public resources that result in unproductive government spending (Alesina and Rodrik, 1994) or cause political instability and thus economic instability (Venieris and Gupta, 1986). High inequality can also lead to high financial fragility and macroeconomic instability (Rajan, 2010; Reich, 2010; Kumhof and Ranciere, 2010) and amplify the effect of negative external shocks. High inequality could also have implications for fiscal policy volatility (Woo, 2011)

Against this backdrop, the Fund has been operationalizing inequality issues through its *analytical work*, *capacity development*, and *surveillance*. The Fund's analytical work has examined the causes and consequences of inequality, and better approaches to designing policies, including redistributive fiscal policies, (Fiscal Monitor 2017) to limit inferior tradeoffs between growth and income distribution. On capacity development, the Fund has held courses on inclusive growth and financial development and inclusion. Since 2013, more than 800 government officials have benefitted from external training on Financial Development and Financial Inclusion, especially in Middle East, Central Asia and Africa. IMF has also started to integrate the analysis on inclusive growth issues into surveillance work.

2. IMF SURVEILLANCE AND INEQUALITIES

A core responsibility of the IMF is to oversee the international monetary system and monitor the economic and financial policies of its 189 member countries, an activity known as surveillance. As part of this process, which takes place at the global, regional,

and country levels, the IMF identifies potential risks to stability and recommends appropriate policy adjustments needed to sustain economic growth and promote financial and economic stability.

In a pilot initiative that started in 2015, inequality issues were incorporated as one element of the Fund's policy advice. The pilot work has been carried out in two waves for 2015/16 and 2016/17 Article IV consultations and a third wave of pilot consultations for 2017/18 Article IV cycles has been recently launched.

From a perspective of statistics, we review some of the key findings of some pilot Article IV reports and list the main indicators used in these reports with a view to determining what the key indicators are, and to consider how national accounts statistics can best support data users. All of the reports were published.

Armenia (2015 Article IV consultation). *During the rapid economic growth in the 2000s, Armenia achieved remarkable gains in poverty and inequality reduction. However, with the global downturn in 2007-09, some of these achievements were partially reversed due to severe negative shocks to growth and changes in the composition of growth. While compared to peer countries, inequality in Armenia remains low, it has increased somewhat since 2009. Poverty has marginally declined after the global crisis, but unemployment remains high. Creating jobs, reducing poverty, and higher inclusiveness would require sustained high growth and implementing pro-poor policies. Better-targeted social policies and more attention to the regional distribution of spending would also help reduce poverty and improve inclusiveness.*

Bolivia (2015 Article IV consultation). *Bolivia has registered tremendous reductions in inequality and poverty since 2000. A closer analysis suggests that fast growth was the main driver behind poverty reduction; while a declining skills premium drove down inequality. During 2007–2013, nearly 70 percent of the decline in extreme poverty is explained by GDP growth, while the remaining 30 percent is associated with changes in the distribution of income. Moreover, real labor income increased rapidly for low skilled workers, while it declined for high skilled workers. This declining skills premium was the main factor behind the drop in the Gini coefficient, while the effect of changes in non-labor income (transfers) was limited, notwithstanding an important impact for some groups such as for the elderly poor.*

Ethiopia (2015 Article IV consultation). *Using a model-based framework, staff analysis showed that fiscal and financial sector reforms for increasing private sector participation and developing the manufacturing sector could have regressive outcomes from a distributional standpoint even as growth would strengthen. Thus, staff recommended adjusting the design of reform package to increase financial service access and complementing it with measures to increase labor mobility and advance economic transformation. An expansion of the cash transfers was recommended for immediate support to the most vulnerable.*

Honduras (2016 Article IV consultation). *After a long tradition of fiscal excesses, the government embarked on a path to restore sound public finances. Over the last 2½ years the CPS deficit has been reduced by 6½ percentage points of GDP. This result has been achieved by a combination of spending and revenue measures, including a VAT tax reform. Since VAT increases are potentially regressive, the government also decided to allocate some of the additional revenues to expanding their targeted cash transfers*

program. To understand the expected impact of the fiscal reform on output, poverty and inequality, staff developed a general equilibrium model tailored to key characteristics of the Honduran economy, including distributional features of Honduras household level data (derived from Honduras household expenditure survey). If the VAT reform is combined with compensatory measures such as cash transfers, private consumption expands, and poverty is reduced.

Kyrgyz Republic (Selected issues, 2016). *While extreme poverty has declined, overall poverty remains relatively high compared to regional peers. Addressing growth bottlenecks focused on income inequality has been constrained by volatile growth, high population growth, poor infrastructure, and weak institutions. Looking ahead, reducing income inequality would benefit from achieving macroeconomic stability, redesigning fiscal policy, broadening access to finance, improving the business environment, and building human capital. The analysis looked both at income inequality (World Development Indicator) and land inequality (FAO 2009 Statistical Yearbook).*

Myanmar (Selected issues 2017). *The staff analyzed the macroeconomic and distributional implications of financial sector reform using a dynamic stochastic general equilibrium (DSGE) model. The model calibrated to Myanmar reflects the most salient features of the Myanmar economy for the purpose of examining the macro and distributional impact of financial sector reform. In particular, it replicates key distributional features of household level data (in terms of Gini coefficients of consumption and poverty rates). Financial liberalization in Myanmar, once macro conditions are put in place, can significantly boost economic growth, reduce poverty, and improve nationwide income distribution. Inequality is defined in terms of consumption.*

United States (2016 Article IV consultation). *The decline in the labor share of income, which began to accelerate in 2000, coupled with skill-biased technological progress in both services and manufacturing, has contributed to a shrinking of the share of the population in middle-income jobs and a broader polarization of the income distribution. In parallel, there has been a steady increase in poverty in the United States. Thus, staff recommended raising productivity and bridging the skill divide, including through prioritizing spending for vocational and early childhood education.*

Key statistical indicators and data sources used in these reports

Consumption-based Gini index
Decile dispersion ratio
Labor share of income and break-downs by skill and manufacturing vs. services.
Spending for vocational and early childhood education.
Transfer payments
Regional effects of public spending.
Land inequality
Wealth inequality

Key data sources: Population survey and other census data

3. STATISTICAL ISSUES: MEASURING INEQUALITY FOR POLICY ADVICE

High-quality distributional measures are key to produce robust analytical results and economic policy advice aimed at fostering inclusive growth. One of the recommendations of the G20 Data Gaps Initiative (a set of 20 recommendations on the enhancement of economics and financial statistics) is to encourage the production and dissemination of distributional information on income, consumption, saving, and wealth, for the household sector (Recommendation 16). However, measuring distribution presents some empirical and conceptual issues.

Data sources

Traditionally inequality measures are based on surveys on income, consumption, and wealth. Using surveys to compare inequality across countries and over time is problematic because definitions are not consistent across countries (e.g., income may or may not include transfers), the unit of analysis may vary (person or households), refusal to participate is stronger among the very rich, the surveys generally focus on income, consumption, and wealth separately (while consistent information on their joint distribution would be desirable), long time series are often not available, and there are not international statistical standards for consumption and wealth surveys (Ostry and Berg, 2014 and Van de Ven, 2014).

An alternative to surveys, is to use tax records as a source of income distribution data (Atkinson, Piketty, and Saez, 2011). But there are also shortcomings. First, those who do not pay income taxes are excluded. Second, the calculation of disposable income is not always possible. Third, data are available only for advanced economies and a handful of emerging markets. And fourth, tax data have their own measurement errors because of misreporting and the use of tax avoidance strategies.

Integrating distribution measures in the SNA framework vs. Stand-alone measures

Deriving distributional measures of income, consumption, and wealth in a national account framework allows to address some of the problems associated with using only survey or tax data. National accounts provide measures of income, consumption, and wealth that are consistent with each other, across countries, and over time. National accounts also provide measures of income before and after redistribution, thus allowing to analyse market inequality and net inequality, and allows to derive distributional measures for saving too. Another advantage is that distributional results are consistent with macroeconomic aggregates. Finally, national accounts data also include income and consumption generated by the informal sector and production for own final use (nonobserved economy). This can be a significant part of total income and consumption especially in many low-income countries.

The Eurostat-OECD Expert Group on Disparities in a National Accounts Framework showed that is feasible to produce distributional results for household income, consumption, and saving consistent with national accounts totals using microdata (Fesseau and Mattonetti, 2013, and Zwijnenburg, Bournot and Giovannelli, 2017). Other recent papers that recommend that distributional information should be incorporated into national accounts framework include Fixler at. al (2017) and Jorgenson and Schreyer (2017).

In a nutshell, national accounts based inequality measures amount to a breakdown of income, consumption and wealth in several sub-components and then applying the most appropriate distributional information available to corresponding national account totals for each sub-component. In the experimental Eurostat-OECD Expert Group empirical implementation (for sixteen OECD countries), distributional indicators were mainly based on household surveys sometimes combined with administrative records and other item-specific imputations for the sub-components that fall outside the scope of micro data (either because they are specific to the SNA or because they are likely to be under-reported or completely missing from the micro data).

National accounts based distributional measures of income, consumption, and wealth differ from measures derived directly from surveys or administrative data for both conceptual and statistical reasons (just like national accounts estimates of total income, consumption, and wealth differ from surveys or administrative data values). Conceptual reasons refer to the inclusion of several items that are not captured in micro data sources while statistical reasons refer to the re-scaling of micro data to the national accounts totals.

The inclusion of imputed items (such as social transfers in kind) may reduce income inequality (because the distribution of these transfers is relatively flat across quintiles). Re-scaling of available micro data to the relevant national accounts totals may show an increase of income inequality because the largest adjustments most often concern items that are concentrated in higher income groups, such as property income.

REFERENCES

Alesina, A., and D. Rodrik, 1994, "Distributive Politics and Economic Growth", Quarterly Journal of Economics, Vol. 109, No. 2, pp. 465–90, doi:10.2307/2118470.

Banerjee, A., 2004, "Inequality and Investment." Available on the internet at economics.mit.edu/files/514 (Cambridge: MIT Press).

Berg, A., and J. Ostry, 2011, "Inequality and Unsustainable Growth: Two Sides of the Same Coin?", IMF Staff Discussion Note 11/08 (Washington: IMF).

Fesseau, M. and M. L. Mattonetti (2013), "Distributional Measures Across Household

Groups in a National Accounts Framework: Results from an Experimental Cross-country Exercise on Household Income, Consumption and Saving", OECD Statistics Working Papers, No. 2013/04, OECD Publishing. http://dx.doi.org/10.1787/5k3wdjqr775f-en

Fixler, D., Johnson, D., Craig, A. and Furlong, K. (2017), "A Consistent Data Series to Evaluate Growth and Inequality in the National Accounts", Review of Income and Wealth. doi:10.1111/roiw.12324

International Monetary Fund, 2007, "Globalizaton and Inequality", World Economic Outlook, October (Washington)

International Monetary Fund, 2017, "Fiscal Monitor: Tackling Inequality", October (Washington)

--- , 2017, “Fostering Inclusive Growth”, IMF Staff Background Note to the G-20 Leader’s Summit, July 7-8, 2017, Hamburg, Germany

Jorgenson, D. W., and P. Schreyer (2017), “Measuring Individual Economic Well-Being and Social Welfare within the Framework of the System of National Accounts.” Review of Income and Wealth (Forthcoming).

Kumhof, M., and R. Rancière, 2010, “Inequality, Leverage, and Crises,” IMF Working Paper 10/268 (Washington: International Monetary Fund).

OECD (2008), *Growing Unequal? Income Distribution and Poverty in OECD Countries*, OECD Publishing, http://dx.doi.org/10.1787/9789264044197-en

Ostry, J. and Berg, A., 2014, “Measure to Measure”, Finance and Development, September 2014.

Rajan, R., 2010, Fault Lines: How Hidden Fractures Still Threaten the World Economy (Princeton: Princeton University Press).

Reich, R., 2010, Aftershock: The Next Economy and America’s Future (New York: Random House).

Rodrik, D., 1999, “Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses,” Journal of Economic Growth, Vol. 4, No. 4, pp. 385–412.

van de Ven, P. (2014) “Measuring Inequality in Income and Consumption in a National Accounts Framework”, OECD Statistics Brief, November 2014, No. 19.

World Bank, 2011, World Development Report 2012: Gender Equality and Development (Washington).

Zwijnenburg, J., S. Bournot and F. Giovannelli (2017), “Expert Group on Disparities in a National Accounts Framework: Results from the 2015 Exercise”, OECD Statistics Working Papers, 2016/10, OECD Publishing, Paris. http://dx.doi.org/10.1787/2daa921e-en