Ministry of Foreign Affairs

Donor support to combat poverty and inequality in Africa

Terms of Reference

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Contents

1 Introduction

For decades, after the decolonisation, it appeared that most developing countries were trapped in vicious circles of low economic growth. Since the turn of the century, this picture has been changing a lot. The macro-economic performance of many developing countries and emerging economies has improved. Countries in Latin America, South- and South-East Asia, and Sub-Saharan Africa (SSA) record high growth rates. At the same time poverty declines at a much slower pace in many low and middle income countries. There is increasing awareness that economic growth is a necessary, but not a sufficient condition for poverty reduction. Moreover, economic inequality may hinder economic growth.

Recognition that the poorest groups have not benefitted equally from economic growth in developing countries and that income disparities have widened in industrialised countries has contributed to an academic and political interest in inequality. One of the sustainable development goals (SDGs) is to reduce inequality within and among countries. The first target of this goal is "progressively achieving and sustaining income growth of the bottom 40 percent of the population at a rate higher than the national average" (UN, 2014).

In line with the international goals, the Netherlands Minister for Foreign Trade and Development Cooperation also aims at contributing to the objectives of inclusive growth. A question is how Dutch polices may contribute effectively to the realisation of international objectives, especially in combination with an agenda that combines aid and trade.

These Terms of Reference sketch the background and objectives for a study, to be published by IOB, on the potential role of donors on the reduction of inequality and furthering inclusive growth, especially in Sub-Saharan Africa.

2 Economic growth, poverty and inequality

Economic growth

Since the change of the millennium, many developing countries record high economic growth rates. While for the OECD area average economic growth dropped from 2.6% between 1990 and 2000 to 1.7% between 2001 and 2013, developing countries and emerging economies showed increasing growth rates with averages of 5-6% between 2001 and 2013. Countries in South-East Asia, such as China, Indonesia and Vietnam had the highest growth rates, followed by countries in South-Asia (India, Bangladesh and Pakistan). Economic growth in low income countries, especially in Sub-Saharan Africa (but also elsewhere, for example Myanmar and Haiti), lagged behind, though from the end of the 1990s their track record improves as well.

Table 1: *Economic growth 1990-2013*

	Economic growth (%)		Per capita growth (%)	
	1990-2000	2000-2013	1990-2000	2000-2013
Low income countries	2.3	5.4	-0.3	3.1
Lower middle income countries	3.2	5.8	1.3	4.1
Upper middle income countries	4.2	5.8	2.8	4.9
High income countries	2.4	1.9	1.8	1.3
South-East Asia	8.2	8.6	6.8	7.8
South Asia	5.5	6.5	3.4	4.9
Latin America	2.9	3.2	1.1	1.9
Sub-Saharan Africa	1.8	4.9	-0.9	2.1
OECD	2.6	1.7	1.8	1.1
World	2.7	2.7	1.2	1.5

Source: WDI

Poverty

Worldwide, economic growth had an important impact on poverty reduction (Fosu, 2011; Dollar, Kleineberg and Kraay, 2013). In 1990 about 1.8 billion people (36% of the world population) lived in extreme poverty; by 2011 this figure had decreased to 1 billion (less than 15%). It should be noted, however, that large groups have an income not much above the extreme low poverty line of USD 1.25.[1]

The reduction was mainly realised by declining poverty in China (Chen and Ravallion, 2008; Fosu 2011). As a result, the prevalence of extreme poverty moved to South-East Asia and Sub-Saharan Africa. In Sub-Saharan Africa, extreme poverty only decreased from 58% in 1990 to 53% in 2005. Low growth rates (until the end of the 1990s), increasing inequality and high fertility rates are important causes (Thorbecke, 2013). Nevertheless, since 2005 the reduction of extreme poverty tended to accelerate in a number of African countries, contributing to a further reduction of the figure to 47% in 2011 for the region as a whole.

High economic growth rates contributed to high expectations of donors on the eradication of poverty. With a few exceptions, such as Ethiopia, Ghana, Rwanda and Senegal, these expectations did not materialise. In many African countries the poorest groups initially didn't benefit much from the economic growth. Examples are Burkina Faso, Kenya, Nigeria and Tanzania. In other countries, such as Benin, Burundi, the Democratic Republic Congo, Malawi and Zambia, poverty remains high, despite high growth rates.

Inequality

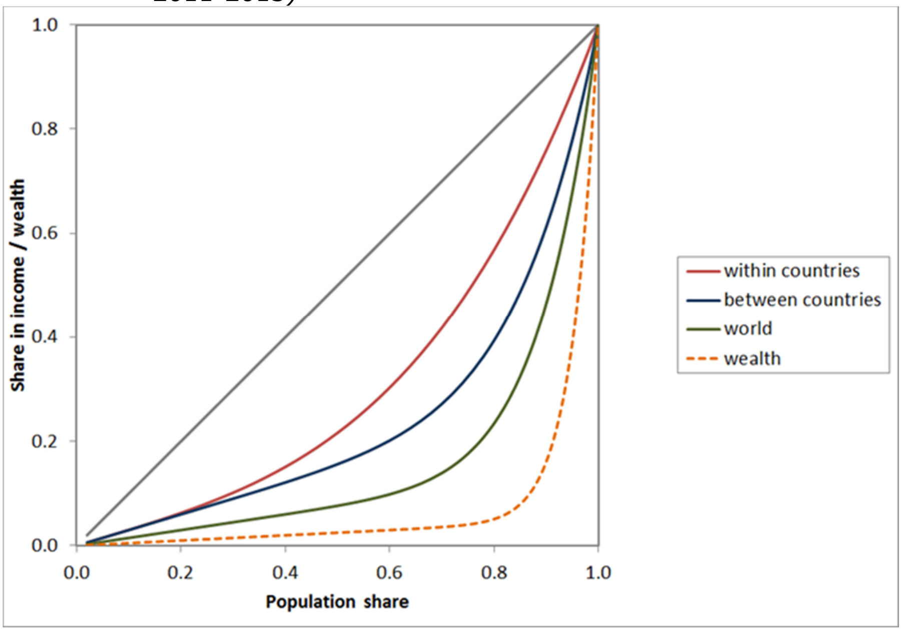
Economic growth coincided with increasing inequality. This phenomenon is not new. Global inequality has increased from the beginning of the industrialisation until around 2000 (Milanovic 2012; Ortiz and Cummins 2011). A main cause was the widening inequality between countries. In 1870, social differences within countries

[1] This poverty line is equal to an income of consumption pattern that corresponds in Purchasing Power Parity terms to an income of USD 1.25 in 2005. The poverty line is based on the average of the national poverty lines of the 15 poorest countries in 2005 (see Chen and Ravallion, 2008).

explained 2/3 of total world inequality; in 2000 world inequality was not only higher, but also dominated by differences between countries (for 2/3) (Milanovic, 2011 and 2012; Lakner and Milanovic, 2013). Since then, differences between countries have diminished because of the high economic growth rates in large countries such as China, India and Indonesia. This does not, however, translate in decreased global inequality because income differences within countries are rising.

While relative disparities between countries diminish, absolute differences are still increasing. Between 2000 and 2013 low income countries had a growth rate of more than 3% per capita, resulting in a per capita income growth of less than USD 240; for the lower middle incomes countries these figures were respectively 4% and USD 800. OECD/DAC countries experienced an economic growth of slightly more than 1% per year, but this was enough for a real income growth of more than USD 5,000.

Figure 1: *Distribution of income and wealth in the world (Lorenz-curve; 2011-2013)*



Source: WDI; Milanovic (2012; Davies et al. 2008)

Inequality is generation related (Corak, 2013). In general, poor countries have much younger populations than the rich countries (see Annex I for a comparison between the EU and Sub-Saharan Africa). In 2007, half of the 3 billion children and younger people (below 25) lived on an income level of less than two dollars per day (Ortiz and Cummins, 2011). They lived in households that had access to nine percent of global income. The distribution of wealth is even more uneven. One percent of the population owns almost half of the global wealth. This is 65 times the total wealth of the bottom half of the population (Dabla-Norris et al., 2015). The world's richest 85 people own as much capital as the poorest half (3.5 billion people) of the global population combined (Oxfam, 2014).

3 Causes and consequences of increasing inequality

According to classical growth theories, the process of globalisation helps to open up economies, fostering (foreign) investments and the transfer of capital. Initially, this growth results in a higher inequality, as entrepreneurs and shareholders will be initially the main beneficiaries. This concentration of the benefits enhances savings for productive investments, which has a positive impact on economic growth. The investments result in a higher demand for labour, leading to higher employment rates and higher wages. For a long time, it has been assumed that the inverse U-shaped *Kuznets curve* provided the empirical expression of this assumed relationship.

The rigour of the evidence and its theoretical underpinning have been questioned by several economists, making it one of the most debated issues in development economics. In a famous paper, Piketty (2006) challenged for the first half of the twentieth century the trickle down hypothesis. He concluded that the historical experience of developed countries shows that high wealth inequality is not necessary for growth, and that it can even be harmful.

Recent economic research for developing countries supports this conclusion. An open trade policy is not a sufficient condition for inclusive growth (Nissanke and Thorbecke, 2010; Thorbecke, 2013). Only the highest incomes benefit from international trade and FDI (Hirano and Otsubu, 2014; Ravallion, 2014). Many poor countries that have opened their economies have not succeeded in reaping the fruits of globalisation, but rather have fallen behind (Nissanke and Thorbecke, 2010). In several African countries economic growth was concentrated in a few sectors, especially oil-industry and mining, caused by higher demand and higher prices on the world market (De Kemp et al., 2011; Bourguignon, 2013; Manda, 2013). Extraction industries resulted in enclave economies, without many benefits for the rest of the country. The resource driven economic growth also means that that development in Africa will remain vulnerable and not sustainable (Bourguignon, 2013).

In Sub-Saharan Africa, trade and investment liberalisation failed to generate employment, resulting in jobless growth and further informalisation of the economy (Loayza and Raddatz, 2010; Narayan et al, 2013). According to the Human Development Report 2014, 77% of total employment in Sub-Saharan Africa is vulnerable employment. Jobs are concentrated in small and not particularly dynamic businesses, often in agriculture or in informal services. Their contribution to growth and productivity improvement is limited (World Bank, 2012). New jobs are just as easily lost again (Sonobe et al., 2012). Sustainable jobs will not be created without investments in in human capital (Hirano and Otsubo, 2014; World Bank, 2015).

Dabla-Norris et al. (2015) have analysed causes of increasing inequality. The authors conclude that the following factors have contributed to widening inequality in emerging markets and developing countries:

- technological progress, disproportionally benefiting high-tech and labour-skilled sectors;
- foreign direct investment through the concentration of foreign assets in higher skill- and more technology intensive sectors;
- financial deepening, because people with higher incomes and assets have a disproportionally larger share of access to finance;
- easing of labour market regulations and the decline of labour market institutions in a number of countries, leading to a widening gap between minimum wage and the median wage. In many developing countries, the combination of rigid hiring and firing regulation and weak income protection encourages the increase informal jobs and fuels inequality (p. 21).

A growing number of researchers conclude that the impact of inequality on economic growth is not positive, but rather negative: countries with a very skewed income distribution have lower and less sustainable growth figures (Bourguignon, 2004; Birdsall, 2005; Easterly, 2006; Ortiz and Cummings, 2011; Ostry et al. 2014; Cingano, 2014). Banerjee (2009) shows that when too much capital is in the hands of a small group, this may lead to overinvestment in capital-intensive technology. This raises the interest rate and thereby reduces the possibility of the poor to invest, which negatively affects GDP growth. The concentration of income and wealth may also lead to rent-seeking through the limitation of competition by regulation, reducing access of new companies. Consumption is concentrated within a small group, which reduces markets. It also leads to the reduction of effective demand in the country because of the import of luxury goods and the export of capital.

Inequality is a significant barrier to prosperity, institutions and schooling (Easterly, 2006) and contributes to social and political instability. It leads to substantially worse health and social outcomes, resulting in lower labour productivity and economic growth (Easterly, 2006; Grimm, 2011; Molina et al. 2011; Stiglitz, 2012). Moreover, inequality undermines the social consensus needed for reform and has a negative impact on investment. Easterly (2006) also finds a negative effect on institutions. Violence, criminality and drug abuse are also higher in more unequal societies (Wilkinson and Pickett, 2010; Ortiz and Cummings, 2011).

An unequal distribution of income and wealth is a symptom of underlying inequalities in access: in access to health, education, the labour market, finance, etc. Inequalities in access and in outcomes are highly correlated. Inequality of opportunities negatively impacts income and the other way round. Moreover, inequality reduces social mobility between generations (Corak, 2013). Perry et al. (2006) pointed to the "vicious circles of poverty" which hamper the achievement of high and sustained growth rates: in a society without a proper economic and social infrastructure and where ethnic conflicts may deter investment, the most vulnerable groups will not have access to the labour market or to finance, they may be unable to borrow or save money for investments or calamities, resulting in poverty and thereby not able to invest in education and health, leading to bad health and a lack of skills, etc. Inequality in opportunities may be caused by social exclusion. Exclusion results from forms of active discrimination, directed against certain people, based on ethnicity, religion, region, culture, gender, age or disabilities. Exclusion from political, social and economic institutions reduces the ability of the people to escape poverty and may make up a significant proportion of overall inequality (Handley et al. 2009). In many Sub-Saharan Africa countries, ethnicity drives discrimination, conflict, politics and economic opportunities. Women are also discriminated, resulting in fewer social, political and economic opportunities (UNDP, 2013). Ensuring equality of opportunity enhances economic dynamism and therefore has positively impacts on the economy as a whole in the long run (World Bank, 2015).

Poverty and inequality are outcomes of economic, social and political processes. Sub-Saharan Africa combined authoritarian regimes with limited administrative capacity and dysfunctional judicial and regulatory systems, clientelism and patron-client relationships, resulting in overstretched and ineffective institutions and the 'vicious circle of an institutional trap' (Nissanke, 2015, p. 12, see also North 2005 and North et al. 2009). Distributive conflicts, exacerbated by the proliferation of patron-client relationships, lead to an urban bias in expenditures and a neglect of rural areas. Nissanke concludes that under these circumstances one cannot expect much progress towards building an effective 'nation state' which could implement an ambitious development agenda. Donor funding and conditionalities have impeded the improvement of domestic resource mobilisation and domestic accountability.

4 Solutions

Hirano and Otsubo (2014) conclude that in order to promote inclusive growth a further in integration of developing countries and emerging economies in the world trade system should be combined with complementary programmes. Aid for trade contributes to higher economic growth, but without complementary policies, the poorest groups will not or only slightly benefit. Job creation is important (World Bank, 2012), but needs to be complemented with policies that promote equality of opportunity, especially in health, education and other social services.

The Global Monitoring Report 2014-2015 shows that investments in health services, child nutrition and the control of child mortality are very cost effective in reducing poverty and inequality and the furthering of the equality of opportunities. In addition, the report recommends investing in the quality of (basic) education and improving access to secondary education. In order to realise education objectives, it is necessary to reduce the cost of education for the parents and to combat cultural barriers to education. In addition, social safety nets should ensure that the poorest groups will also benefit from the increased wealth and to overcome the vicious circle of poverty. Better access to education, improved health outcomes and redistributive policies help raising the income share of the poor and the middle class, irrespective of the level of economic development of a country (Dabla-Norris et al., 2015).

Most studies do not mention the role of taxation as an instrument realising inclusive growth, though research shows that the impact of redistribution on economic growth is not negative, but rather positive (Mosley, 2014; Ostry et al. 2014). While fiscal policy is the primary instrument for governments to affect income distribution, effective and sustainable redistributive policies require a well-designed mix of tax instruments and social expenditure (IMF, 2014). For developing countries the IMF advises:

a) consolidating social assistance programs and improving targeting;
b) introducing and expanding conditional cash transfer programs as administrative capacity improves;
c) expanding non-contributory means-tested social pensions;
d) improving access of low-income families to education and health services; and
e) expanding coverage and increasing the progressivity of the personal income tax.

The IMF notes, however, that not much evidence exists on the overall distributional incidence of fiscal policy in developing countries (with the exception of Latin America). A study on the effects of taxation and cash transfers in reducing poverty and inequality showed mixed results: mainly positive for Argentina, Brazil and Uruguay, but less so for Mexico and not for Bolivia and Peru (Lustig et al, 2013). The study concluded that the redistributive impact of direct taxes was small, because taxes were low as a share of GDP. In Bolivia and Brazil, indirect taxes almost completely offset the poverty reducing impact of cash-transfers. The study concluded that in-kind transfers in education and health are more effective in reducing inequality than cash transfers.

Furthering equality of opportunities requires strengthening the political participation and voice of excluded groups (UNDP, 2013). This may necessitate institutional transformation to address the root causes of inequality (North 2005; North et al.

2009; Acemoglu and Robinson, 2012; Narayan et al. 2013). Nissanke (2015) concludes that inclusive growth demands the building of developmental states, strong governments who represent the interests of their populations and are capable of improving social policies, introducing safety nets and implementing regulations to protect the poor from the risks associated with globalisation. This requires a strong coalition between government and domestic stakeholders, to be achieved by a combination of the provision of high-quality public goods and domestic accountability.

Empirical evidence on the causal relation between institutions, growth and inequality is weak, however (Chang 2002 and 2011; Khan, 2010; IOB, 2012; Dijkstra, 2013). There is no 'one size fits all', and that there is no universally accepted set of institutions, as modelled by today's advanced countries (Nissanke, 2015). In addition, it is not clear how countries could be urged to develop these institutions. While aid is more effective in more equal societies (Tezanos et al., 2013) and while there is evidence of the positive role of aid in mitigating income inequality, the impact of governance and democratisation on inequality is less clear. Policies superimposed by donors may not produce the intended outcomes (IOB, 2012; Nissanke, 2015). Asongu (2015) suggests that donors should focus foreign aid more on inequality to improve the effect of industrialisation on poverty in order to move forward on realising the SDGs. Progress on reducing inequality could be used as a benchmark for aid, rather than the traditional governance conditionalities. This would provide a stimulus to the pro-poor use of disbursed resources.
Ravallion (2013), on the other hand, questions the necessity of prioritising inequality (as part of the SDGs) as the poverty reduction goal already embodies inequality. Poverty and inequality are highly correlated, though a high initial level of inequality can make it harder to reduce poverty.

5 Dutch policies

In general, Dutch policy on development cooperation dovetails closely with the changes in international thinking about aid effectiveness. At the end of the 1990s, these policies were influenced by research at the World Bank, showing that aid could only be effective in countries with good policy. This resulted in the sector wide approach and a focus on programme aid to partner countries with sound macro-economic policies and relatively good governance levels. Adhering to the MDGs of 2000, the Netherlands also increased support to the social sectors.

The emphasis on good policies and good governance had resulted in a relative neglect of fragile countries (including failed states and conflict countries), which were lagging behind in achieving the MDGs (McGillivray, 2006). Concerns with fragility, insecurity and conflict, as well as humanitarian considerations contributed to a renewed attention for these countries. In 2007 Minister Koenders put fragile states high on his agenda. In the policy note "Our Common Concern" Minister Koenders noted that globalisation and global growth had lifted many people out of poverty but this had not reduced disparities in wealth, within and between countries. According to the minister, a broad-ranging, coherent set of measures was needed to promote growth and equity (Our Common Concern, p. 26-27). A separate note on growth, poverty and inequality (TK 2009–2010, 31 250, nr. 72) provided an overview of (academic) insights on growth and distribution. The note concluded that growth does not automatically lead to poverty reduction and that a high inequality may have a negative impact on economic growth. Trade and a favourable investment climate would be key to economic growth and therefore a basis for social policies, which are indispensable for reducing poverty and inequality and for ensuring equality of opportunities.

The installation of the cabinet Rutte I in 2010 meant a watershed for Dutch development cooperation. A centre-conservative government replaced the Christian democrat and labour coalition. The new government reduced the budget for development cooperation from 0.8% to 0.7% of the GDP. In addition, the coalition decided that the costs of peacekeeping operations, international climate policy and asylum seekers had to be paid as much as possible out of the budget for development cooperation. The minister phased out support to the social sectors (education and health), focusing more on economic sectors as it was believed that the value added of the Netherlands in the latter would be higher. Dutch business would get a larger stake in the implementation of development programmes and projects. The minister also reduced the number of partner countries from 33 to 15. This would give the Netherlands a better position for gaining more in-depth knowledge of the political, economic, social and cultural structures of the countries and would help to reduce the costs of operational management. In the long term, the coalition would aim at a further reduction to no more than ten partner countries.

In November 2012 a new coalition of the liberal Party (VVD) and Labour (PvdA) combined foreign trade and development cooperation in the new post of Minister for Foreign Trade and Development Cooperation, confirming the importance of cohesion between these two policy areas. The coalition also introduced new budget cuts for development cooperation, with cutbacks increasing from EUR 520 million in 2014 to EUR 1.04 billion in 2017. For the first time, the Netherlands would no longer adhere to the OECD/DAC target of allocating at least 0.7% of GDP to ODA, reducing expenditure to 0.55% in 2017. In the policy document "A World to Gain: A New Agenda for Aid, Trade and Investment" (TK 2012-2013, 33 625, nr. 1) the minister sketched the outline for aid, trade and investment agenda, focusing more on private sector development and mutual interests. In this document, the minister mentioned three aims:

- to eradicate extreme poverty ('getting to zero') in a single generation;
- sustainable, inclusive growth all over the world;
- success for Dutch companies abroad.

While acknowledging that "growth and equitable distribution do not automatically go hand in hand" (ibid: p. 7) and that "economic growth does not automatically lead to better opportunities and more quality of life for everyone" (ibid: p. 29), the minister assumed that it is possible to combine the three objectives by encouraging "investment and trade activities that are good for both people and planet, create employment opportunities, and, preferably, are accompanied by the transfer of knowledge and skills" (ibid: p. 40).

In 2012, Minister Knapen had asked the Dutch Advisory Council on International Affairs (AIV) to advise on the possible consequences of observed shifting patterns of poverty for the post-2015 agenda and possibly, related changes in inequality within and between countries. In its report (AIV, 2012), the Council concluded that that many countries that have developed into middle-income countries (MICs) have sufficient governance and financial capacity to take on more responsibility, but that this does not mean that aid to these countries could be ended. The Council noted that the dividing line between low- and middle-income countries is arbitrary. Several countries that are just above the line are in conflict and/or fragile states, where aid remains necessary. For other MICs the Council advised a shift from bilateral development policy to a policy of international cooperation, based more on multilateral cooperation and the civil society and private sector channels. The bilateral channel would remain important for low-income countries, though it should be more flexible and less focused on rigid country choices.

In a reaction to the report (TK 2012-2013, 33625, nr. 2), the minister shared the Council's concern that persisting income inequality could endanger poverty reduction. The Netherlands would continue to contribute to reducing the income gap between the poorest and richest countries. The most effective way to do so would be to intensify trade and investment relations on an equal basis.

In a letter to the House of Representatives (TK 2013–2014, 33 625, nr. 87), the minister elaborated on the relationship between trade and inclusive growth. According to this letter, trade has a positive impact on economic growth, in the Netherlands as well as in partner countries. Therefore, the promotion of inclusive growth requires strengthening trade and trade relationships by opening up markets and private sector development. A productive economic environment encourages economic activity, thereby generating jobs and income, allowing people to escape from the vicious circles of poverty. The Netherlands supports programmes for private sector development, focusing on the creation of jobs, the improvement of labour conditions, strengthening the investment climate and improving access to finance in order to promote an equal distribution of opportunities. In addition, the minister mentioned the necessity of supporting civil society organisations (CSOs) to promote democracy, the rule of law and women's empowerment. By strengthening the rule of law and by enhancing economic activity Dutch policies would contribute to a reduction of poverty and inequality. In addition, the minister aimed at contributing to inclusive growth through Dutch support to water, food security, security and the rule of law and women's rights and sexual and reproductive health and rights (SRHR).[2]

In addition, the Netherlands supports Ethiopia, Malawi, Kenya, Zambia and Ghana in improving their tax system, the effectiveness of taxation and the prevention of the evasion of taxation. The Dutch government aims at including ant-abuse provisions in tax treaties with other countries as well. This helps combatting tax evasion and improving domestic resource mobilisation. The Netherlands also supports the *Addis Tax Initiative*. This initiative aims at supporting technical cooperation in the area of taxation and domestic revenue mobilisation.

Recently, the minister has proposed, together with her French and German colleagues, to set up a fund of EUR 500 million for employment of the youth in Africa. According to the letter to the High Representative of the Union for Foreign Affairs and Security Policy and the Commissioner in charge of International Cooperation and Development, Europe needs to invest in structural solutions in (Sub-Saharan) Africa that tackle the root causes of migration. The attached 'non-paper' concludes that it is crucial to support programmes that enhance young people's access to education and health care, promote women's rights, help create decent work, and increase young people's representation in social, economic and political institutions. The resources for the fund should be allocated from the EUR 19.7 billion of the Development Cooperation Instrument for 2014-2020.

Towards a theory of change?

It is difficult to reconstruct the *theory of change* that's looming behind the new Dutch policies. Minister Koenders noted that global growth had not reduced

[2] The minister is preparing a letter on poverty and inequality on request of the House of Representatives.

disparities in income and wealth between and within countries. A broad-ranging set of measures was needed to realise the objective of inclusive growth. While trade and favourable investment would be key for economic growth, this growth would not automatically trickle down to the poorest groups in society. Minister Knapen focused on the realisation of budget cuts and the reduction of partner countries, though he asked the AIV to advise on the consequences of shifting patterns of poverty and inequality for the post-2015 agenda. Minister Ploumen tried to reconcile the objective of reducing poverty and inequality with the trade and investment agenda by assuming that they coincide.

Internationally, the agenda of the Minister on inclusive growth dovetails with the development of the sustainable development goals (SDGs). Of these especially SDG 10 on reducing inequality within and among countries is of interest, with the first target: "by 2030 progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average". However, Dutch policy changes and IMF and World Bank analyses on poverty and inequality do not form a perfect match. While recognising explicitly that results of trade and economic growth do not automatically trickle down, the aid, trade, and investment agenda relies on productive sectors and the middle classes, thereby implicitly banking on these same mechanisms. Trade and international investments may widen rather than reduce existing inequalities, which may impact in turn negatively on poverty reduction and economic growth. Improving governance and enhancing democratisation are not necessarily correlated with reducing poverty and inequality (Chang 2002, 2007 and 2011; Asongu, 2015). Financial deepening may widen income inequality and increase poverty if not accompanied by stronger property rights (Dabla-Norris et al. 2015; Singh and Huang, 2015). While food security and water are important areas in the policy descriptions of the World Bank and the IMF, the Netherlands has reduced its support to health and education.

There also seems to be a gap between the high ambitions and the modest means allocated for the promotion of inclusive growth. In 2014, an intergovernmental Committee of Experts on Sustainable Development Financing concluded that the eradication of poverty requires sustained and inclusive growth and job creation, which demands and annual investment in infrastructure of USD 5-7 trillion globally (p. 10). According to the Committee, ODA remains an important source of external public financing for developing countries, particularly LDCs (p. 31). Therefore, UN member states should remain committed to the internationally agreed target of 0.7 percent of GNI. ODA is needed especially for investing in poverty and basic social needs in low income countries and lower middle income countries. The Open Working Group on Sustainable Development Goals reiterated this conclusion in its report (UN, 2014).

In the Netherlands, budgets have gone down and the proposed fund of EUR 500 million for the African youth should come from the existing EU budget. The three countries proposed to earmark less than 2.6% of the funds for the youth in Sub-Saharan Africa, already more than 50% of the population of the region. Moreover, this fund is not in proportion to the 330 million young people entering the Sub-Saharan labour market in the next 15 years.

The minister aims at bridging the gap between ambitions and resources – in line with the conclusions of the Dutch Scientific Council for Government Policy – by "taking catalysing initiatives".

6 Research questions

For the Minister for Foreign Trade and Development Cooperation the eradication of poverty and inclusive growth are policy priorities. The *central question* for the proposed study is: "what instruments donors have for helping to reduce income inequalities within countries and what seem to be the effective areas of action?".

An effective approach requires a good understanding of the determinants and development of poverty and inequality.[3] The study will provide an overview of the (academic) body of knowledge on the concepts of poverty, inequality and inclusive growth as well of potential instruments for policy makers for contributing to the objectives. The report may help to develop a coherent theory of change as basis for policies, aiming at reducing inequality.

The study will focus on Sub-Saharan Africa. The continent was less successful in reducing poverty than other continents and is one of the most unequal regions in the world. Moreover, Sub-Saharan Africa has a young and fast growing population, with many new entrants not being able to find a decent job and not being able to escape from the vicious circles of poverty.

Main research questions:

1. What do we know about the development of growth, poverty and inequality in Sub-Saharan Africa?
2. What do we know about the relationship between growth, poverty and inequality, especially in Sub-Saharan Africa?
3. What are the main causes of increasing inequality in the SSA region?
4. What can we learn from countries that were successful in reducing inequality and realising inclusive growth?
5. What kind of instruments do donors have for helping to reduce poverty and income inequalities in Sub-Saharan countries and what are effective areas of action?
6. Which instruments would be relevant for the Dutch policy on inclusive growth?[4]

7 Methodology

The methodological approach for this study mainly consists of a literature review.

The first three questions focus on the actual development of poverty and inequality as well as the causes and consequences. The analysis includes a (descriptive) comparison of countries on economic growth, poverty and inequality. The analysis is important for developing a theory of change as basis for (donor) intervention. This part of the evaluation will be based on an expert literature review. Detailed academic expertise on the subject is required for an assessment of data on and the measurement of poverty and inequality and an assessment of the literature on poverty and inequality in Sub-Saharan Africa. The researchers must have proven expertise, as shown by publications in high quality journals in the areas of:
- poverty and inequality measurement and estimation

[3] This is in line with the advice of the AIV to provide a thorough analysis of the multidimensional character of poverty as basis for the development of a policy instruments that aim at contributing to "inclusive growth" in developing countries and emerging economies.
[4] The study will try to take into account the coherence of Dutch policies. It must be noted, however, that while incoherencies sometimes seem obvious, the quantitative effects are not necessarily large and that effects even may be counterintuitive (See IOB, 2014).

- analysis of poverty and inequality
- poverty mapping
- (conditional) cash transfers.

Next, questions 4 and 5 aim at understanding the impact of interventions. The analysis will be based on results of country studies and evaluations as well as more general reports (like World Bank and IMF reports) on inclusive growth. The study will not use the methodology of a systematic review, but will rather rely on existing systematic reviews (where possible), such as in the field of microfinance, health, education, and energy. In addition, the study will summarise existing (IOB) evaluations and policy reviews, such as on infrastructure, education, energy, water and sanitation, SRHR, and gender.

In addition, IOB evaluators will focus on potential instruments for reducing poverty and inequality. This assessment will be based on:
a) a review of the literature on the determinants of the successes of selected countries;
b) a more detailed (i.e. more detailed than in these ToR) review of World Bank, IMF and other reports on reducing poverty and inequality;
c) evaluations of donor interventions.

For the (desk) analysis of (relatively) successful countries, the study will analyse policies in countries that managed to:
- reduce extreme poverty
- reduce inequality
- raise the HDI
- realise a relatively high inequality adjusted HDI.

The country selection for question 4 is based on:
- poverty reduction (WDI data)
- reduction of inequality (as measured by the GINI, WDI data)
- improvement in HDI (UNDP)
- conclusions from the literature (especially McKay, 2013 and Radelet, 2010).

This analysis resulted in the following selection:
- Rwanda: scores well on reducing poverty and improving the HDI;
- Uganda: scores well on reducing poverty and improving the HDI;
- Burkina Faso: has reduced poverty and inequality and improved the HDI;
- Ethiopia: combines low inequality with an improvement of the HDI;
- Senegal: scores well on reducing poverty and improving the HDI;
- Tanzania: scores well on improving the HDI and reducing poverty (more recently).

Questions six provides recommendations. These recommendations will be based on the results on the analyses for the questions 1-5.

The selection of specific topics will depend on a) findings for the questions 1-3 as well as b) results from the country studies. The literature review for these ToR point to the following topics:
- infrastructure investment
- social investments
- domestic resource mobilisation
- conditional and unconditional cash transfers
- microfinance

8 Organisation and planning

IOB is responsible for the study. IOB will commission the research and reporting on the first three evaluation questions to an academic institute with high qualified expertise on and at least ten years of experience with the analysis of poverty and inequality, as shown by publications in leading international journals.

IOB evaluators Antonie de Kemp, Caspar Lobbrecht and Rafaela Feddes will carry out the research for the three remaining questions.

Deputy Director Geert Geut will supervise the evaluation for IOB management. The internal reviewers are Nico van Niekerk, and Jan Bade.

External review will be carried out by a Reference group consisting of officials from the Ministry of Foreign Affairs (BIS and DAF) and an external referee (André Leliveld, African Studies Centre).

Table 2 gives an overview of the planning.

Table 2: *Planning*

Activity	Date
Draft terms of reference	August 2015
Hiring consultants	September 2015
Final terms of reference	September 2015
Draft report	January 2016
Reference group Meeting	February 2016
Final report	March 2016

References

- AIV (2012), *Unequal worlds: Poverty, growth, inequality and the role of international cooperation*, The Hague: AIV, Advisory report nr. 80.
- Alkire, S. and J. Foster, (2011a). 'Counting and Multidimensional Poverty Measurement'. *Journal of Public Economics*, 95(7–8): 476–487.
- Alkire, S., J. Roche, M. Santos and S. Seth, *Multidimensional Poverty Index*, Oxford Poverty and Human Development Initiative, 2011.
- Alkire, S. and M. Santos (2014). 'Measuring Acute Poverty in the Developing World: Robustness and Scope of the Multidimensional Poverty Index', *World Development*, vol. 59(C), pages 251-274.
- Alkire, S., J. Foster, S. Seth, J. Roche and P. Ballón (2015), *Multidimensional Poverty Measurement and Analysis,* Oxford: Oxford University Press.
- Andersen, L. (2008), 'Fragile States on the International Agenda', in: L. Engberg-Pedersen, L.R. Andersen, L. Andersen, F. Stepputat and D. Jung, *Fragile Situations*, Copenhagen: Danish Institute for International Studies, Background Papers.
- Asongu, S. (2015), 'Reinventing Foreign Aid for Inclusive and Sustainable Development: Kuznets, Piketty and the great policy reversal', *Journal of Economic Surveys*. doi:10.1111/joes.12109.
- Banerjee, A.V. (2009), *Investment Efficiency and the Distribution of Wealth*, Washington DC: The World Bank, Commission on growth and Development, Working Paper no. 53.
- Birdsall, Nancy (2005). *Why Inequality Matters in a Globalizing World,* Helsinki: UNU-WIDER,
- UNU-WIDER Annual Lecture.
- Bourguignon, Francois (2004), *The Poverty-growth-inequality triangle*, New Delhi: Indian Council for Research on International Economic Relations, New Delhi Working Papers.
- Bourguignon, François (2013), *The Globalisation of Inequality,* European University Institute, Max Weber Lecture No. 2013/02.
- Chandy, L. and G. Gertz (2011), *Poverty in Numbers: The Changing State of Global Poverty from 2005 to 2015*, Washington DC, The Brookings Institution, Policy Brief 201101.
- Chang, H-J. (2002). *Kicking Away the Ladder: Development Strategy in Historical Perspective*. London: Anthem Press.
- Chang, H-J. (2007). *Bad Samaritans: Rich Nations, Poor Policies & the Threat to the Developing World*. London: Random House Business Books.
- Chang, H-J. (2011). 'Institutions and Economic Development: Theory, Policy and History', *Journal of Institutional Economics* 7(4): 473-498.
- Chen, Shaohua and Martin Ravallion (2010), "The Developing World Is Poorer Than We Thought, but No Less Successful in the Fight Against Poverty", *The Quarterly Journal of Economics*, MIT Press, vol. 125(4), pages 1577-1625, November.
- Cingano, F. (2014), Trends in Income Inequality and its Impact on Economic Growth, Paris: OECD. OECD, Social, Employment and Migration Working Papers, No. 163.
- Cobham, A. and A. Sumner (2013). *Putting the Gini back in the bottle? The Palma as a Policy relevant measure of Inequality*. London: King's College London.
- Cobham, A. and Sumner, A. (2013). *Is It All About the Tails? The Palma Measure of Income Inequality*. Working Paper 343. Washington: Center for Global Development.
- Coudouel, A., J.S. Hentschel, and Q.T. Wodon (2002), *Poverty Measurement and Analysis*, Washington DC: the World Bank.

- Corak, Miles. 2013. "Income Inequality, Equality of Opportunity, and Intergenerational Mobility." *Journal of Economic Perspectives*, 27(3): 79-102.
- Davies, J., S. Sandström, A. Shorrocks and E. Wolff (2008), *The World Distribution of Household Wealth,* Helsinki: UNU-WIDER, Discussion Paper No. 2008/03.
- Debla-Norris, E., K. Kochhar, N. Suphaphiphat, F. Ricka and E. Tsounta (2015), *Causes and Consequences of Income Inequality: A Global Perspective*, Washington DC: IMF, IMF Staff Discussion note.
- De Kemp, A., Faust, J., and Leiderer, S. (2011). *Between high expectations and reality: an evaluation of budget support in Zambia*. Bonn/Den Haag/Stockholm: BMZ/IOB/Sida.
- Dijkstra, G. (2013). Paradoxes around good governance. Rotterdam: Erasmus University (Inaugural lecture).
- Dollar, D., T. Kleineberg and A. Kraay (2013), *Growth Still Is Good for the Poor,* Washington DC: The World Bank, Policy Research Working Paper No. 6568.
- Easterly, William (2007), "Inequality Does Cause Underdevelopment: Insights from a New Instrument", *Journal of Development Economics*, Vol. 84(2), pp. 755–76.
- Foster, J., S. Seth, M. Lokshin, and S. Zurab (2011), *A Unified Approach to Measuring Poverty and Inequality*, Washington DC: the World Bank.
- Fosu, Augustin Kwasi (2011), Growth, *Inequality, and Poverty Reduction in Developing Countries: Recent Global Evidence*, Helsinki: UNU-WIDER, Working Paper Series.
- Fosu, Augustin Kwasi (2012), *Growth of African Economies: Productivity, Policy Syndromes and the Importance of Institutions*, Oxford: Centre for the Study of African Economies, CSAE Working Paper Series 2012-11.
- Fosu, Augustin Kwasi (2015), 'Growth, Inequality and Poverty in Sub-Saharan Africa: Recent Progress in Global Context', *Oxford Development Studies*, Vol. 43, No. 1, 44-59.
- Grimm, M. (2011), "Does inequality in health impede growth?", *Oxford Economic Papers*, 63 (3), 448-474.
- G. Handley, G., K. Higgins and B. Sharma (2009), *Poverty and poverty reduction in Sub-Saharan Africa: An overview of the issues*, London: ODI, Working Paper 299.
- Holland, D. and D.W. Te Velde (2012). *The effects of EU aid on receiving and sending countries: A modelling approach*. London: ODI/National Institute of Economic and Social Research.
- IMF (2014), *Fiscal policy and income inequality*, Washington DC: IMF, IMF Policy Paper.
- IOB (2012), *Budget support: Conditional results*, The Hague: Ministry of Foreign Affairs, IOB report nr. 369.
- IOB (2014), *Autonomy, partnership and beyond: A counterfactual analysis of policy coherence for Ghana*, The Hague: Ministry of Foreign Affairs, IOB report nr. 394.
- Khan, M. (2007). 'Governance, Economic Growth and Development since the 1960s.' In: Ocampo, José Antonio and Jomo, Kwame S. and Vos, Rob, (eds.), Growth Divergences: *Explaining Differences in Economic Performance*. Hyderabad, London and Penang: Orient Longman, Zed Books and Third World Network, pp. 285-323.
- Krozer, A. (2015), The inequality we want: How much is too much? Helsinki: UNU-Wider Working Paper 2015/015.
- Lakner, C., and B. Milanovic (2013), *Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession*. WB Policy Research Working Paper 6719, World Bank, Washington.

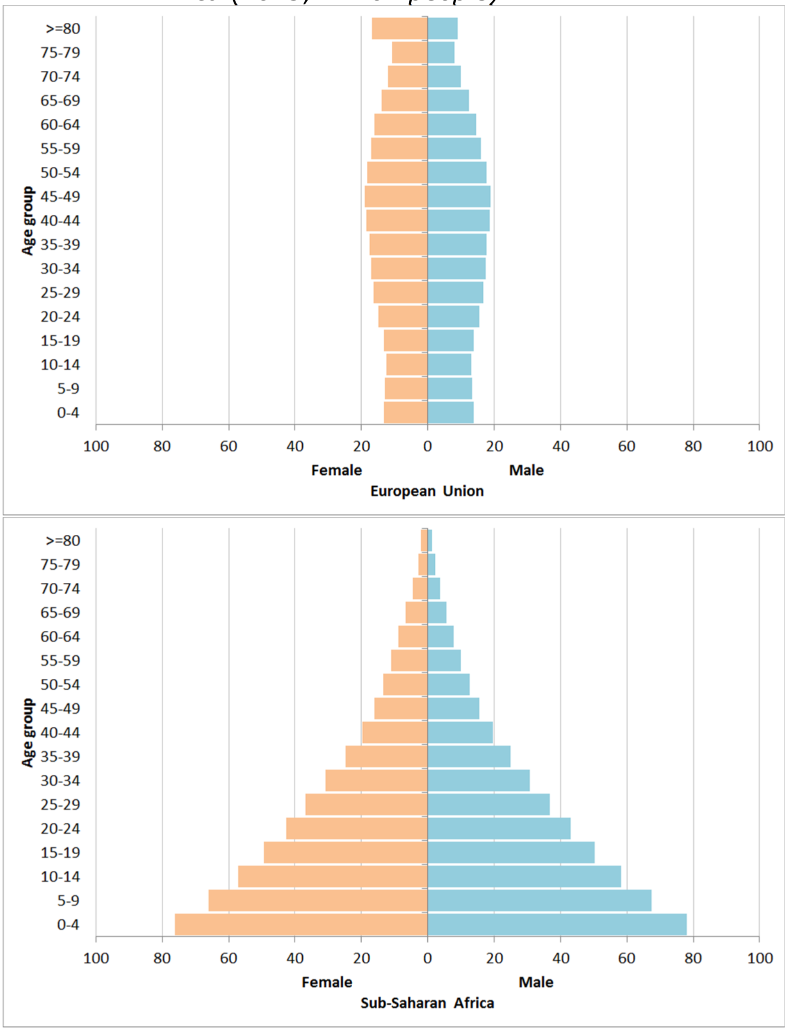
- Loayza, N.V, and C. Raddatz (2010), 'The composition of growth matters for poverty alleviation', *Journal of Development Economics*, Vol. 93, Nr. 1, pp. 137–151.
- Lustig, N., C. Pessino and J.Scott (2013), *The impact of taxes and social spending on inequality and poverty in Argentina, Bolivia, Brazil, Mexico, Peru and Uruguay: An overview*, New Orleans: Tulane University, Tulane Economics Working Paper.
- Manda, Damiano Kulundu (2013), "Revisiting the Growth, Inequality and Poverty Nexus: An Overview", *Journal of African economies,* Vol. 22.2013, Suppl.1, p. 4-14.
- Marrero, Gustavo A. Marrero and Juan G. Rodríguez (2013). "Inequality of Opportunity and Growth", *Journal of Development Economics*, 104, 107–122.
- McGillivray, M. (2006), *Aid Allocation and Fragile States*, Helsinki: UNU-wider, Discussion Paper No. 2006/01.
- McGillivray, M. and S. Feeny (2007) *Aid Allocation to Fragile States: Absorptive Capacity and Volatility*, Helsinki: United Nations University, World Institute for Development Economics Research
- McKay, A. and E. Thorbecke (eds., 2015) *Economic Growth and Poverty Reduction in Sub-Saharan Africa*, Oxford: Oxford University Press.
- Milanovic, Branko, (2011), *The haves and the have-nots, A brief and idiosyncratic history of global inequality*, New York: Basic Books.
- Milanovic, Branko (2012), Global income inequality by the numbers : in history and now -an overview", Washington DC: The World Bank, Policy Research Working Paper Series 6259.
- Ministerie van Buitenlandse Zaken, *Wat de Wereld Verdient*, *Een nieuwe agenda voor hulp, handel en investeringen*, Tweede Kamer, Vergaderjaar 2012-2013, 33 625, nr. 1.
- Ministerie van Buitenlandse Zaken, Hulp, handel en investeringen, Brief van de Minister voor Buitenlande Handel en ontwikkelingssamenwerking, Tweede Kamer, Vergaderjaar 2013-2014, 33 625, nr. 87.
- Molina, Ezequiel Molina, Ambar Narayan and Jaime Saavedra-Chanduví (2013), *Outcomes, Opportunity and Development, Why Unequal Opportunities and Not Outcomes Hinder Economic Development*, Washington DC: The World Bank, Policy Research Working Paper 6735.
- Mosley, P. (2014), "Fiscal Composition and Aid Effectiveness: A Political Economy Model", *World Development* Vol. 69, May 2015, Pages 106–115.
- Narayan, A., J. Saavedra-Chanduvi, S. Tiwari (2013), *Shared prosperity: links to growth, inequality and inequality of opportunity*. Washington, DC: World Bank, Policy Research working paper; no. WPS 6649.
- Nissanke, M. (2015), *A quest for institutional foundations towards inclusive development in Sub-Saharan Africa*, Helsinki, UNU-Wider, Wider working Paper 2015/049.
- Nissanke, M., and E. Thorbecke (2010). The Poor under Globalization in Asia, Africa and Latin America. Oxford: Oxford University Press.
- North D. (2005). *Understanding the process of economic change*. Princeton: Princeton University Press.
- North, D., Wallis, J. and Weingast, B. (2009). *Violence and Social Orders*. Cambridge: Cambridge University Press.
- Ostry, Jonathan D., Andrew Berg, and Charalambos G. Tsangarides (2014), *Redistribution, Inequality, and Growth*, Washington DC: I M F, SDN/14/02.
- Ortiz, I. and M. Cummins (2011), Global Inequality: Beyond the Bottom Billion, A Rapid Economic Policy Working Paper.
- Oxfam (2014) Working for the Few; Political Capture and Economic Inequality. 178 Oxfam Briefing Paper**.**

- Palma, J. G. (2011). 'Homogeneous middles vs. heterogeneous tails, and the end of the "Inverted-U": the share of the rich is what it's all about', Development and Change 42(1). Cambridge: University of Cambridge.
- Perry, Guillermo E., Omar S. Arias, J. Humberto López, William F. Maloney en Luis Servén (2006), *Poverty Reduction and Growth: Virtuous and Vicious Circles*, Washington DC: The World Bank.
- Piketty, T. (2006), "The Kuznets' Curve, Yesterday and Tomorrow." In A. Banerjee, R. Benabou, and D. Mookherjee (eds.), *Understanding Poverty*. Oxford: Oxford University Press.
- Radelet, S. (2010), *Emerging Africa: How 17 Countries Are Leading the Way*, Washington D.C.: Center for Global Development.
- Ravallion, M. (2005), *Inequality is Bad for the Poor*, Washington DC: The World Bank, Policy Research Working Paper No. 3677.
- Ravallion, M. (2013), 'Let's avoid creating a dog's breakfast of MDGs', in: *The Broker Online*, 28 February 2013.
- Ravallion, M. (2014), "Are the World's Poorest Being Left Behind?", *NBER Working Papers* 20791, National Bureau of Economic Research, Inc.
- Sonobe, T., Higuchi, Y., & Otsuka, K. (2012), *Productivity Growth and Job Creation in the Development Process of Industrial Clusters*. Washington, D.C.: World Bank.
- Stiglitz, J.E., *The price of inequality*, London: Penguin Books.
- Sumner, A. (2010), *Global Poverty and the New Bottom billion: what if Three-quarters of the world's Poor Live in Middle-income countries*, Brighton: IDS, Working Paper Nr. 349.
- Sumner, A. (2012), Where do the poor live? *World Development*, Vol. 40, No. 5, pp. 865-877.
- Tezanos, S., Quinones, A., and Guijarro, M. (2013) 'Inequality, aid and growth: Macroeconomic impact of aid grants and loans in Latin America and the Caribbean', *Journal of Applied Economics* 16(1): 153–177.
- Thorbecke, Erik (2013), "The Interrelationship Linking Growth, Inequality and Poverty in Sub-Saharan Africa", *Journal of African economies,* Vol. 22.2013, Suppl.1, p. 15-48.
- UN (2014), *Report of the Open Working Group on Sustainable Development Goals established pursuant to General Assembly resolution*, New York: UN, A/68/L.61.
- UNDP (2013), *Humanity Divided: confronting Inequality in Developing Countries*. New York: United Nations Development Programme.
- UNDP (2014), *Human Development Report, 2014*. New York: United Nations Development Programme.
- World Bank (2012), *Jobs. World Development Report 2013*, Washington DC: The World Bank.
- World Bank (2015a), *Global Monitoring Report 2014/2015, Ending Poverty and*
- *Sharing Prosperity* Washington DC: The World Bank.
- World Bank (2015b), *Purchasing Power Parities and the Real Size of World Economies, A comprehensive Report of the 2011 International Comparison Program,* Washington DC: The World Bank.
- Wilkinson, R. and K. Pickett (2010). *The Spirit Level: Why Equality Is Better for Everyone*. London: Penguin Group.
- Yumeka, H. and O. Shigeru (2014), *Aid is good for the poor*. Washington DC: The World Bank, Policy Research Working Paper Series.

Annex I: Population pyramids of EU and Sub-Saharan Africa

Figure I.1 shows the population pyramids of the European Union and Sub-Saharan Africa. The age distribution of the population in the European Union no longer follows a pyramid: the population groups at the age between 40 and 60 are larger than younger age groups. In Sub-Saharan-Africa, on the other hand, the population pyramid has a large base. This is not only the result of a higher mortality, but also of high fertility rates.

Figure I.1: *Population by age group in the European Union and in Sub-Saharan Africa (2013; million people)*



Source: WDI

Annex II: Measuring poverty and inequality

The definition of poverty

Poverty is not a simple concept, but includes many dimensions and may be absolute and relative. While in practice it is often measured in terms of (lack of) income and resources to meet basic needs, the concept is much broader. The nutritional status of children, incidence of specific diseases (diarrhoea, malaria, and respiratory diseases), life expectancy or the level of literacy are important elements of well-being and therefore closely related to the concept of poverty. The World Bank defines poverty as pronounced deprivation in wellbeing, where well-being can be measured by an individual's possession of income, health, nutrition, education, assets, housing, and certain rights in a society such as freedom of speech. As such it is related to a lack of opportunities, powerlessness, deficient social relations and vulnerability.

A common method for measuring poverty is based on *income or consumption levels*. The *poverty line* defines the minimum level, below which people are conserved poor. Each country may define its own poverty line, but for a comparison between countries, the poverty lines of the World Bank, set at $1.25 and $2 per day (2005 Purchasing Power Parity terms) are being used. In general consumption levels are a better indicator if households consume their own production. The poverty line is then based on a basket of goods, a nutritional basket to which non-food needs are added. These baskets may be different for separate groups and may change over time. This complicates the measurement of poverty. Moreover, the use of PPPs for poverty measurement has been criticized as well (World Bank, 2015b). People have different consumption patterns and uniform PPS may not necessarily reflect prices of goods and services consumed by the poor.

A disadvantage of measuring poverty by income levels is that it is an indirect way of measuring deprivation (Alkire and Santos, 2014). A limitation is that consumption patterns may not be uniform and may change over time. Moreover, an equal income is not the same as equal access to goods and services. Specific goods and services may not be available are not accessible, for instance because of disabilities or distance. Important services, such as education, health, water and sanitation and energy, are frequently not provided through the market. In addition, people who consider themselves poor not only describe their state as a lack of income, but in terms of deprivations. These kind of considerations have contributed to the development of methods for measuring *multidimensional poverty*.

The *Human Development Index* not only includes income and consumption, but also education and health. The Inequality adjusted HDI and the Gender Inequality control for receptively general and gender inequality. As a result, countries with high levels of inequality on the measured dimensions get lower scores. Examples of countries with much lower scores are countries like Angola, Guatemala, Haiti, Rwanda, Yemen and Zambia.

Another measure is the *Multidimensional Poverty Index* (MPI), developed by Alkine and Foster (Alkine and Foster 2011; Alkine 2015). This index combines 3 dimensions (education, health and living standards) and uses ten indicators (years of schooling, school attendance, child mortality, nutrition, electricity, drinking water, sanitation, flooring, cooking fuel, and assets). A person is defined a 'multidimensional poor' if he or she is deprived in one or more dimensions. In comparison with the poverty headcount index for extreme poverty, the MPI leads in general to a larger number of poor households, especially in fragile states, but also in Ethiopia, Burkina Faso, Uganda and India.

It has to be noted that multidimensional indices may suffer from the same disadvantages as income methods (the concept of deprivation may be context and time-bound), while data problems seems to be even greater. Alkire and foster have tried to tackle the latter problem by relying on rather standardized surveys, the Demographic and Health surveys (DHS), the Multiple Indicators Cluster Surveys and the world Health Surveys (WHS). A risk of using these standardized surveys seems to be that deprivation is defined by what is available in the surveys.

Measurement

Even when there is agreement about the definition of poverty, an analysis may focus on different aspects, such as the incidence or the severity of poverty.

The most widely used measure is the *poverty headcount ratio* or the *incidence of poverty* (p_0). It denotes the number of people whose incomes are below the *poverty line* divided by the total population. The ratio is simple and intuitive, but also a crude measure of poverty. The ratio may be sensitive to small changes in the poverty line. Changes in the income level do not have an impact on the indicator as long as people do not cross the poverty line. As a result it may not be able to measure important changes in poverty.

The *poverty gap* (p_1), defined as the product of the headcount ratio and the average income shortfall among the poor, gives an estimation of the *depth* of poverty by considering how far, on average, the poor are from that poverty line. The indicator measures what it would cost to end poverty. While the poverty gap is sensitive to changes in the (average) income levels of the poor, it does not capture differences in the severity of poverty and ignores differences among the poor.

A measure that takes into account the *severity of poverty* and inequality among the poor is the squared poverty gap (P_2). It may be interpreted as a weighted poverty gap, where the gap for every individual (or household) is weighted by this gap itself. As a result severe poverty gets a greater weight. As a consequence, a reduction of inequality among the poor reduces the severity of poverty.

There are many other poverty measures as well, such as the Watts index, the Sen index or the Foster-Greer-Thorbecke index. The *Watts index* is the average difference between the logarithm of the poverty line and the logarithm of incomes:

$$P_w = \Sigma (\ln z - \ln x)/N$$

Where z= the poverty line, x the income below the poverty line and N= the population. In a society without poor, P_w would be 0. Like P_2, P_w falls when income is transferred from a richer (poor) person to a poorer person.

Related to the Watts index is the *Foster-Greer-Thorbecke index*. The index is defined by:

$$P_{FGT} = \Sigma ((z - x)/z)^{\alpha}/N$$

where $\alpha \geq 0$.

A higher value of α puts higher weight on the lowest incomes, thereby stressing the impact of inequality among the poor. With $\alpha = 0$, the formula reduces to the headcount ratio and with $\alpha = 1$, the formula is identical to the poverty gap index. The most commonly used value for α=2.

The *Sen index* also combines the effects of the number of poor, the depth of their poverty, and the distribution of poverty within the group. The index can be written as the average of the headcount and poverty gap measures weighted by the Gini coefficient of the poor, giving:

$$P_s = P_0 G^p + P_1(1-G^p)$$

where P_0 is the headcount index P_1 the poverty gap and G^P is the Gini coefficient of inequality among the poor. While the index takes the income distribution into account, it cannot be decomposed satisfactorily, and therefore it is rarely used in practice (PAI 2000, p. 45).

Inequality

As is the case for poverty, it is also difficult to capture different dimensions of inequality in one measure. The most commonly used measures are quantile ratios, partial mean ratios, and the Gini ratio.

A simple way to express inequality is using quantile ratios or partial mean ratios. A *quantile ratio* compares incomes of higher and lower income quintiles, for instance the highest 20% and the lowest 20%, by measuring the income difference between the lowest income of the highest quintile with highest income of the lowest quintile, divided by former income:

$$Ineq = (Inc_{l,h} - Inc_{h,l}) / Inc_{l,h}$$

A disadvantage of using of quantile ratios is that they only describe part of the distribution, leaving aside a large part of it. Moreover, if there is a transfer from the lowest incomes in the lowest quintile to the highest income in the highest quintile, the ratio goes down, while actually inequality decreases.

A *partial mean ratio* compares an upper partial mean and a lower partial mean. A well-known example is the *Kuznets ratio*, the share of total income received by the richest 20% divided by the share of total income received by the poorest 40%. Like quantile ratios, this ratio only describes part of the (income) distribution. As a result, some regressive and progressive transfers do not have an impact on the value of the ratio.

A more recent example of a quantile ratio is the *Palma ratio* defined as the ratio of the income share of the top 10% by the income share of the bottom 40% (see Cobham and Sumner 2013). The ratio is based on research by Gabriel Palma (2011) showing that the income share of the 5^{nd} to 9^{th} income deciles tends to remain fairly stable. The authors conclude from this that it makes more sense to focus on the top 10% and the bottom 40%. By definition, the ratio is sensitive to the extremes in the income distribution. Moreover, the ratio is simple and has an intuitive meaning. However, it ignores part of the distribution, not only because of leaving out the incomes of the 5^{th} to 9^{th} deciles, but also by ignoring the income distribution with the highest 10% and the lowest 40%.

The most commonly used measure is the *Gini coefficient*. It measures the inequality among values of a frequency distribution (for example, levels of income). The *Lorenz curve* (see figure 1) gives a graphical representation of a distribution. The x-axis represents the cumulative population share and the y-axis gives total share in the indicator of interest (often income, consumption or wealth). The more skewed the curve is, the more unequal the distribution. The Gini coefficient measures the ratio of the area between the diagonal (measuring perfect equality) and the curve and the total area below the curve. Therefore, a Gini coefficient of zero expresses perfect equality and a value of one maximal inequality. For many countries the coefficient ranges between 0.26 (for Scandinavian countries) and 0.65 (for South Africa).

A critique of the Gini coefficient is that it is sensitive to changes in the middle of the income distribution and less sensitive to changes at the extreme ends of the distribution. The *Theil index* is more sensitive to changes at the extreme ends, as it weights for all households (or subgroups) the relative income with the logarithm of that income:

$$T = \Sigma \left((x/\mu) \cdot \ln (x/\mu) \right) / N$$

Where x is the income of individual or household i, μ is the mean income and N the population. If the Theil index T is divided by ln N, the result ranges from 0 (perfect equal distribution) to 1 (one person has all the income).

The Theil-index has the advantage of being additive across different subgroups: for a specific population the Theil is equal to the weighted sum of the Theil indices of subgroups. The interpretation, however, is less straightforward than the Gini coefficient.