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Graduating and Graduated Countries: Lessons Learned in Developing Productive Capacity

Expert group meeting on Lessons learned in developing productive capacity in graduated and graduating countries

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I. Introduction

The lack of productive capacity is generally seen as a major constraint for least developed countries (LDCs), and developing countries in general, to overcome their development challenges. The issue is the first priority area in the Istanbul Programme of Action for the Least Developed Countries 2011-2020[1] and is the subject of various reports by international organizations dedicated to LDCs.[2] The United Nations Committee for Development Policy (CDP) considered the topic "Expanding productive capacity for achieving the sustainable development goals" at its 18th session in 2016, highlighting the need for comprehensive strategies by LDCs that aim to expand productive capacities within the context of sustainable development as well as the need for international support. At the 18th session, the CDP decided that, in preparation for the 19th CDP session in 2017, it would work on the theme of "lessons learned in developing productive capacity in graduating and graduated countries", as a continuation of its earlier work, "with a focus on factors advancing the development progress of least developed countries towards graduation from the least developed country category". This work is intended to function as a CDP contribution to the annual theme of the Economic and Social Council (ECOSOC) and to serve as main basis for the CDP input to the 2017 High Level Political Forum (HLPF). The HLPF theme for 2017 is "Eradicating poverty and promoting prosperity in a changing world"; whereas the ECOSOC theme has not been established, it will be aligned with the HLPF theme.

This report aims at facilitating the deliberations at the 2017 CDP Plenary session, analysing country experiences in building productive capacities and progressing towards graduation from the LDC category. Whereas the 2016 work by the CDP focused on delineating elements of the strategies that would be beneficial for LDCs to expand their productive capacities for sustainable development, the 2017 work is intended to identify concrete policies and strategies that have actual been chosen by countries. In this regard, the 2017 report is more positive than normative in nature. Emphasis will be put on successful achievements which have manifested themselves in improvements in aggregate measures on productive capacity and LDC graduation. The report covers not only policies that moved countries towards graduation, but also those that helped former LDCs to manage the transition away from the category. At the same, the report will be cautious in establishing causal relationships between policies and results. In select cases lessons are also drawn from policy failures, or from successful smaller scale initiatives with potential to be scaled up. Moreover, the report will give due attention to country characteristics and external conditions that played a role in determining the suitability of chosen policies and strategies. Incorporating the development environment in the analysis of policies and strategies, the report also attempts to shed light on the question to which extent identified policies are replicable in other countries. While some policies and strategies are universal or cover many LDCs, other policies and strategies are contingent on country specific characteristics. This is of particular importance in the context of LDCs, which form a very heterogeneous group. In fact, the CDP has stressed the need to take LDC heterogeneity into account in its 2016 work on productive capacity as well as in its previous work on LDCs.[3]

[1] United Nations Fourth International Conference on the Least Developed Countries , A/Conf.219/3/Rev.1
[2] See, for example, UNCTAD, OHRLLS and ESCAP
[3] See, e.g., CDP 2010.

The report is organized as follows. Chapter II summarizes the framework for building productive capacity for achieving the sustainable development goals that has been developed by the CDP in 2016. The framework consists of four main elements: development governance capacity; creating positive synergies between social outcomes and productive capacity; macroeconomic and financial policies that support productive capacity expansion and increase resilience to external shocks; and industrial and sectoral policies. The chapter also contains a discussion on the similarities and differences between expanding productive capacity and graduation from the LDC category. The discussion clarifies that expanding productive capacity for sustainable development is very important for LDCs to make progress towards graduation, but that (at least) three alternative pathways to graduation exist. The first pathway is characterized by a structural transformation that leads to more diversified economies and results in progress towards all three criteria used for identifying LDCs: increased per capita income, expanded human assets and reduced economic and environmental vulnerability. A second pathway is characterized by structural transformation characterized by economic specialization coupled with human capital investments, which increases income and human assets, but faces constraints in reducing vulnerabilities. A third pathway is characterized by rapid economic growth through natural resource exploitation, which ensures fast income growth but does not contribute to greater human assets and reduced vulnerabilities. The chapter also explains the selection of countries for the case studies, which covers all three basic graduation pathways, and presents their status with regard to graduation criteria and select indicators relevant for expanding productive capacities. Chapter III contains the 12 country cases. For each country (or pair of countries in case of very similar countries), the relevant subsections briefly describe the development trends with regard to the LDC graduation criteria and structural transformation. Then, it discusses the lessons learnt, focusing for each country on those aspects of building productive capacity that appear most relevant and interesting. The concluding chapter IV summarizes the main lessons learnt, organized around issues identified in the 2016 work. Two annexes further illustrate the graduation pathways as well as progress towards structural transformation and graduation from the LDC category.

II. Analytical framework

A. Expanding productive capacity for achieving the sustainable development goals

The framework on expanding productive capacity for achieving the sustainable development goals, developed by the CDP in 2016[4], emphasizes the interlinkages between goals directly associated with productive capacity (SDGs 8 and 9[5]) and other SDGs and, consequently, stresses the need for an integrated approach. The framework understands productive capacity as the productive resources (natural, human, physical and financial), entrepreneurial and institutional capabilities, and production linkages which together determine the capacity of a country to increase production and

[4] See Report of the CDP on the eighteenth session, Official Records of the Economic and Social Council, 2016, Supplement No. 13 (E/2016/33), chapter II.

[5] SDGs 8 is 'Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all'; SDG 9 calls to 'Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation'.

to diversify its economy into higher productivity sectors for faster growth and sustainable development. However, the framework does not equate expanding productive capacity with an increase of these three elements nor with an increase in production. Rather, the framework identifies four different domestic areas in which certain policies will result in expanded productive capacity. These areas are: development governance, social policy, macroeconomic and financial policies, industrial and sectoral policies. The framework also identifies a fifth area, namely international support, primarily related to trade but also to tax policies. Beyond direct measures such as preferential market access or official development assistance (ODA), international support is framed by the global governance of monetary, financial and trading systems, tax cooperation frameworks as well as by the international economic context, in particular macroeconomic stability in major global economies. Policies in all five areas need to be pursued in an integrated manner to expand productive capacities in a way that signifies progress towards sustainable development. Hence, the framework focuses more the process (the 'expanding') rather than the level of productive capacity. Moreover, the framework emphasizes that enhanced productive capacity is not a stand-alone goal but rather a component of broader progress towards sustainable development.

Building development governance capability requires that the State is able to promote development, to facilitate a sustainable dynamic transformation of the economy and to ensure a fair distribution of costs and benefits. A successful developmental State depends on political leadership, powerful and accountable planning institutions, and meritocratic bureaucracies with broad education and knowledge. Effective institutional setups cannot simply be transferred from other countries (in particular not from advanced countries with very different development status and conditions). Instead, experiences made by other developing countries need to be adapted to national conditions.

Social policies are needed to ensure positive synergies between social outcomes and increases in productive capacities. Progress towards poverty eradication, health and well-being, quality education for all, reduced inequality, gender equality and full and productive employment and decent work is necessary for expanding productive capacity, rather than objectives to be addressed after structural transformation has happened. This requires not only sufficient investments in services such as health and education, but also close attention to quality and access. Special attention is needed to increase employment prospects of youth, women and disadvantages groups. Moreover, structural transformation can also incur costs for sub-groups of the population, requiring social protection policies for mitigation. Benefit-sharing approaches can ensure that potential trade-offs (e.g. between large scale infrastructure and displacement of local populations) can be addressed at the more local level, whereas proceeds from increased production can also be used to finance social protection schemes and further investments in social sectors.

Macroeconomic and financial policies need to support the expansion of productive capacities. Macroeconomic policies (both fiscal and monetary) should support capacity expansion and increase the resilience to external shocks and internal crisis. For countries with access to exchange rates as policy tool, maintaining stable and competitive real exchange rate becomes an important objective. However, many LDCs have no control over exchange rates, due to membership in currency unions or long-standing, quasi-irrevocable pegs. Often, the lack of access to exchange rate and sometimes even monetary policy is not a choice but rather the consequence of the small size of the economies. Fiscal rules and stabilization funds can help to ensure that fiscal policy is

counter-cyclical. By broadening tax bases and increasing the progressivity of tax regimes, many LDCs can increase financial resources for capacity expansion. Both fiscal and financial policies should aim to strengthen indigenous savings and banking institutions, thereby reducing dependence of foreign savings and lowering external indebtness. For a number of LDCs, large diasporas constitute a potential source of financing to be tapped. In the area of financial policies, access to finance by the poor and marginalized, agricultural finance, small medium enterprise financing and infrastructure financing are most pressing. Hence, improving financial regulation and supervision as well enhancing the role of inclusive finance vehicles and integrating them in the financial sector are critical policy interventions for most LDCs.

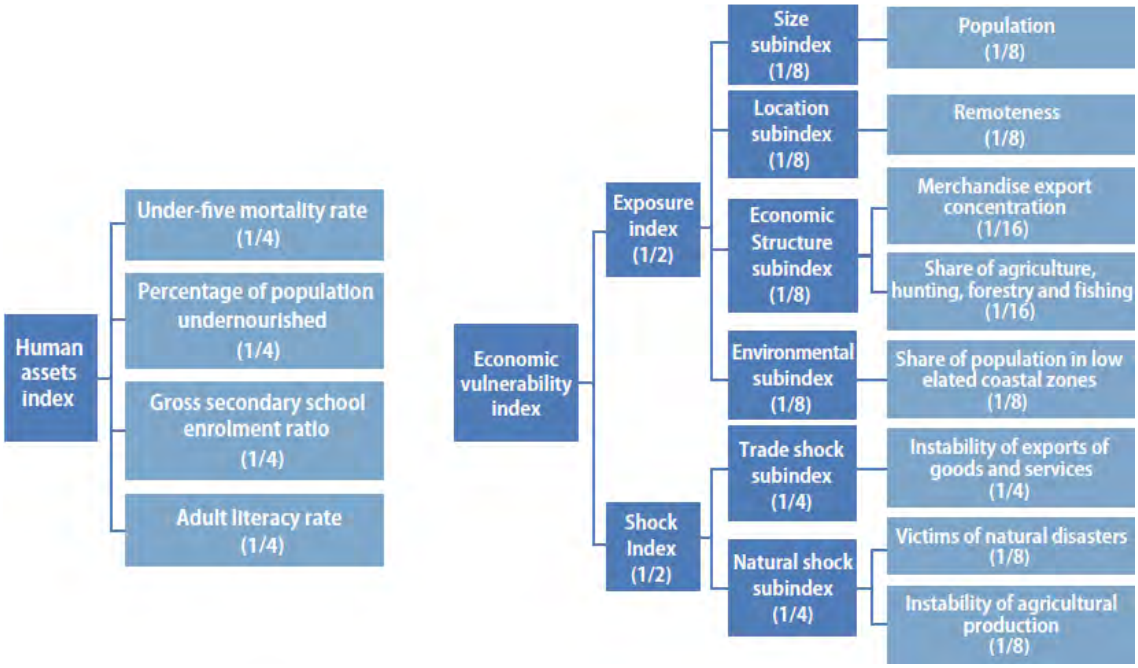
Industrial policies can be important instruments for promoting diversification and technological upgrading, but they need to be tailored to national conditions and potential comparative advantages. In many LDCs, small domestic markets, scarcity of financial resources and lack of institutional and human capacities are serious constraints in this regard. Both horizontal industrial policies (such as support for research and development and regulations of standards) and more traditional vertical industrial policies (such as infrastructure provision or tax holidays) targeting specific industries and sectors are feasible. Foreign direct investment is a key vehicle for structural transformation, but investment promotion policies need to ensure that investments generate technology transfer and employment. Generally, industrial policies need to be part of a broader effort to achieve industrial and technological upgrading, while ensuring social and environmental protection. Sectors to be targeted will vary across LDCs. Agriculture has been neglected in many countries, so improving agricultural productivity by increasing investments in sustainable agriculture, scaling up research and removing gendered constraints. Light manufacturing remains a promising sector for a number of LDCs, not least due to preferential market access in many developed and major developing countries. For others natural-resource-based industries are important entry points for structural transformation that goes beyond simple extraction and export of mineral products. Among services, tourism has been critical for many LDCs in expanding economic activities, but often with very limited backward and forward linkages to other sectors.

Building productive capacities in LDCs depends not only on domestic, but to a large extent also on international policies. The main thrust of international support to LDCs in this regard has been to increase the demand for products from LDCs through preferential market access and, more recently, to increase supply capacity under the aid-for-trade initiative through infrastructure-building, enhancing firm productivity and trade policy reform in LDCs. Preferential market access has been successful, but benefits are concentrated in low-productivity manufacturing in a few Asian LDCs. Aid-for-trade has strong potential to become aid for innovation, but needs to be better targeted to LDCs and to consider their impact on trade as well as on inequality. As a third element, international support is also needed in the area of tax cooperation, as illicit flows and tax evasion is often linked to trade and investment flows, in particular related to natural resources.

B. Similarities and differences between expanding productive capacity and graduation from the LDC category

As this paper focuses on LDCs and on graduation from the LDC category, it is important to briefly explore the relation between LDC graduation and building productive capacity. As the CDP defines LDCs as low income countries facing the most severe impediments to sustainable development, countries become graduation candidates if their structural impediments are becoming significantly less severe and/or income increases sufficiently. Income is measured by gross national income (GNI) per capita, whereas the CDP considers a low human asset base (in the human asset index) and high vulnerability to economic and environmental shocks (subsumed in the economic vulnerability index) as structural impediments. These impediments are measured through two composite indices, the human asset index (HAI) and the economic vulnerability index (EVI) shown in figure 1.

Figure 1: Composition of HAI and EVI



Source: CDP 2015

Countries may be recommended for graduation by the CDP if a country passes the graduation thresholds for at least two criteria in two consecutive triennial reviews. As an alternative, a country may also be recommended if its income passes the far higher 'income only' threshold in two consecutive reviews, even if its human assets remain low and its vulnerability to economic and environmental shocks high. In view of the CDP, such countries could overcome their impediments primarily by relying on their own means.

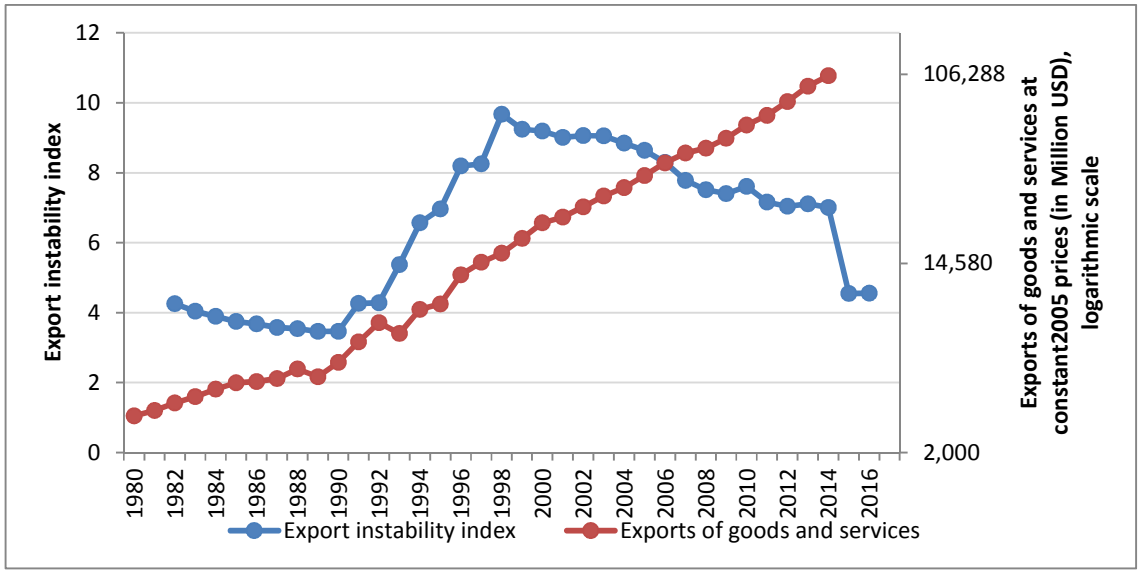
There are strong linkages between expanding productive capacity and making progress towards graduation, but also notable differences. First, increased productive capacity for sustainable development leads to increased production, which in turn increases income. However, production can be increased without expanding productive capacity for sustainable development as defined by

the CDP, in particular by exploiting natural resources through mining activities. Moreover, income can increase without production, for example by increasing proceeds from licenses granted to other countries to exploit natural resources such as fish stocks.[6]

In addition, there are clear linkages between productive capacity and the other two LDC criteria. Building productive capacity in a way that harnesses positive synergies with social outcomes directly increases the human assets, moving a country closer to graduation. In principle, increased human assets may not necessarily imply higher productive capacity, if these assets are not harnessed for economic activities, for example due to the lack of complementary physical capital or institutional failure. Generally, though, the link between productive capacity for sustainable development and human assets is clearly positive and two-directional.

The link between expanding productive capacity and reducing the economic vulnerability as measured by the EVI, however, is more complex. Effective industrial and trade policies, supportive macroeconomic and financial policies and international support through preferential market access and other means will lead to increased exports, overall economic diversification and a better integration into the world economy. By reducing export concentration and export instability, this will result in an improved EVI score. However, as the instability component of the EVI is measured over a twenty year period, a sudden increase in exports could initially result in a higher instability measures, before leading to a marked decline. Moreover, a decline in export instability can be caused not only by current progress in structural transformation and economic transformation, but also simply by the fact the past economic shocks begin to fall outside the twenty year timeframe used to calculate the export instability measure. To illustrate this point, figure 2 considers export instability of Viet Nam.

Figure 2: Exports and export instability of Viet Nam



Source: United Nations Statistics Division (exports) and CDP Secretariat (export instability)

[6] Production can also increase without raising income, for example if proceeds from productive activities are fully appropriated by foreign investors. However, this is probably most relevant in cases of natural resource exploitation that do not contribute to expanding productive capacity for sustainable development.

Whereas Viet Nam's exports in the 1980s grew rather steadily at around 4.7 per cent annually, they started to surge in the early 1990s, associated with high volatility. Since 1996, exports grew again steadily at 12.3 per cent annually, much higher than in the 1980s. Export instability scores increased between 1992 and 1998 (when exports from 1990 and 1996 where incorporated in the calculations), before starting to fall. They started to drop markedly in 2015 when the intermediate drop in exports that occurred in 1993 is no longer taken into account.

Raising agricultural productivity, a key ingredient of expanding productive capacity in many LDCs, ultimately reduces economic vulnerability as the share of agriculture in GDP would decline (as labour formerly active in agriculture could move to more productive manufacturing or services sectors) and agricultural instability would fall. However, as in the case of export instability, this may be achieved only after an initial overshooting.

For countries exposed to natural disasters, building productive capacities without increasing resilience to disasters, could actually increase vulnerability as it could lead to higher victim rates if productive capacity is particularly increased in disaster prone areas (such as coastal areas). However, it could be argued that expanding productive capacities without reducing disaster risks would not constitute progress towards sustainable development. Hence, even if the present CDP framework may not explicitly stress disaster risk, the building productive capacity for achieving the sustainable development goals may require simultaneous disaster risk reduction.

Generally, and after time lags, enhancing productive capacity will in most cases lead to lower EVI scores and move countries closer to graduation. However, it should be taken into account that several components of the EVI reflect structural constraints that are policy-invariant exogenous factors, at least from the perspective of an LDC. Changes in population only marginally change the EVI score (moreover, in most LDCs increasing population growth would not be seen as progress towards sustainable development); remoteness changes over time due to shifts in world trade patterns rather than trade performance of individual LDCs; and the share of people living in low elevated coastal zones reacts only slowly to changes in land planning policies such as zoning. Consequently, a large part of the EVI score is rather fixed even in the medium term. This also explains why even many non-LDCs have EVI scores above the LDC graduation threshold. This includes all four countries that already graduated from the LDC category.

C. Graduation pathways

Based on the discussion in the previous section, we can distinguish at least three different pathways towards graduation from the LDC category with different forms of expanding productive capacity for sustainable development. The first pathway involves investing in human assets and in a structural transformation away from agriculture into manufacturing and modern services, leading to more diversified economies. In terms of the LDC criteria, this pathway manifests in (gradually) increasing GNI per capita and HAI score and, possibly after a transitional stage, in decreasing EVI scores. This can be seen as the preferable path to graduation, as it ensures a sustainable transformation as well as progress towards sustainable development. In this sense, building productive capacity for sustainable development is a sufficient condition for graduation from the LDC category, even though the process can be lengthy. A second pathway shares with the first one the investment in human

assets and a structural transformation, but leads to economic specialization in a single or very few sectors. Structural transformation is more reflected in changes in sectoral contribution to GDP than in changes in employment patterns. This pathway will lead to increasing GNI per capita and HAI, while EVI scores will remain elevated. A third pathway is through rapid economic growth through exploitation of natural resources, which does not require broad investments in human assets. This path entails structural transformation away from agriculture, but mostly into other primary activities. In terms of the LDC criteria, this path will be reflected in rapidly increasing GNI per capita, very limited progress in terms of HAI and increasing or constantly high EVI scores.

The pathways are also likely to differ with regard to graduation timeframes, though obviously starting positions and exogenous country characteristics play an important role. Graduation through rapid natural resource exploitation is normally the fastest route to graduation, whereas the first pathway with economic diversification and sustainable transformation is the slowest. Most importantly, for most LDCs the graduation path is not a choice variable. Small, remote countries may lack the opportunities to build productive capacities for economic diversification, so specialization may be the only viable option. The discovery of natural resources almost always will lead to their exploitation, so the key question is how to manage the proceeds in order to use them in a way that supports a sustainable transformation of the economy that harnesses social synergies, safeguards the environment and leads to economic diversification.

D. Selection of focus countries

The report looks more closely at the experiences of 14 countries in varying depth. The selection of countries tries to reflect the heterogeneity of LDCs and the different pathways towards graduation. It contains all four countries that already graduated, the three countries currently graduating as well five additional LDCs that have made notable progress towards graduation and two non-LDCs that shared many characteristics with LDCs in the past.

Angola and Equatorial Guinea are both scheduled for graduation (in 2017 and 2021 respectively). They represent a graduation pathway of rapid economic growth through natural resource exploitation and only limited progress towards harnessing synergies with the social outcomes and reducing economic vulnerabilities. The former LDCs Botswana, Cabo Verde, Maldives and Samoa, the current graduating country Vanuatu as well as Bhutan and Solomon Islands, which will be considered for graduation in 2018, all represent pathways of economic specialization coupled with human capital investment. Whereas Botswana, Bhutan and to some extent Solomon Islands specialized in natural resources, tourism has been a main driver in the other three countries. Finally, Bangladesh, Rwanda, Ethiopia and the non-LDCs Ghana and Viet Nam are characterized by a more traditional structural transformation through improving agricultural productivity and establishing (basic) manufacturing and modern services while building human assets.

Appendix A visually illustrates the pathways towards graduation of the focus countries. Table 1 presents key indicators on LDC graduation and productive capacity of the focus countries.

[Components to be decided]

Table 1: Key indicators on LDC graduation and expanding productive capacity

		Angola	Bangladesh	Bhutan	Botswana	Cabo Verde	Equatorial Guinea	Ethiopia	Ghana
LDC criteria	Per capita GNI (in US Dollar)	4,518	926	2,277	7,410	3,595	16,089	395	1,572
	HAI	41.9	63.8	67.9	75.9	88.6	54.8	39.2	72.0
	EVI	39.7	25.1	40.2	43.4	38.8	39.3	31.8	35.2
Health	Under-five mortality rate	156.9	37.6	32.9	43.6	24.5	94.1	59.2	61.6
Education	Gross secondary school enrolment								
Inequality	Access to water	49.0	86.9	100.0	96.2	91.7	47.9	57.3	88.7
	Access to sanitation								
	Access to electricity								
	Female labour participation								
	Secondary school enrolment, gender parity index								
Governance	Government effectiveness								
Diaspora	Outmigrants (% of population)								
	Remittances (% of GNI)	2.3	4.5	6.9	2.5	31.7	9.8	0.8	2.9
Investment	Gross fixed capital formation (% of GDP)	24.3	28.6	45.4	29.7	32.8	35.7	39.3	24.3
Energy	Per capita energy use								
	Renewables shares								
Agriculture	Cereal yield								
	Agricultural labour productivity	837	485	972	1,293	1,911	1,882	296	1,523
Structural development	Share of agriculture in GDP								
	Share of mining and quarrying in GDP	42.4	1.6	2.5	25.3	0.5	87.3	1.0	8.0
	Share of manufacturing in GDP								
	GDP growth rate								
Globalisation	FDI inflows (% of GDP)	-2.1	1.6	1.6	4.0	5.6	3.2	3.1	8.0
	Share of exports in GDP								

Sources: CDP Secretariat, Data value is latest available year

Table 1: Key indicators on LDC graduation and expanding productive capacity

Maldives	Rwanda	Samoa	Solomon Islands	Vanuatu	Vietnam	LDCs - median	Developing countries - median		
6,645	592	3,319	1,402	2,997	1,510	684	3323	Per capita GNI in US Dollar	LDC criteria
91.3	51.5	94.4	71.7	81.3	86.1	52.7	84.3	HAI	
49.9	40.7	44.0	50.8	47.7	31.1	39.3	33.1	EVI	
8.6	41.7	17.5	28.1	27.5	21.7	69.0	28.1	Under-five mortality rate	Health
								Gross secondary school enrolment	Education
98.6	76.1	99.0	80.8	94.5	97.6	75.7	91.4	Access to water	Inequality
								Access to sanitation	
								Access to electricity	
								Female labour participation	
								Secondary school enrolment, GPI	
								Government effectiveness	Governance
								Outmigrants (% of population)	Diaspora
0.8	2.8	58.0	0.7	3.3	2.7	4.7	5.6	Remittances (% of GNI)	
24.1	25.2	9.0	10.4	24.8	23.8	24.6	23.8	Gross fixed capital formation (% of GDP)	Investment
								Per capita energy use	Energy
								Renewables shares	
								Cereal yield	Agriculture
3461	333	n/a	1,333	n/a	579	512	1,835	Agricultural labour productivity	
								Share of agriculture in GDP	Structural development
0.0	1.9	0.0	3.0	0.0	11.3			Share of mining and quarrying in GDP	
								Share of manufacturing in GDP	
								GDP growth rate	
11.4	3.7	2.6	2.9	4.5	5.4			FDI inflows (% of GDP)	Globalisation
								Share of exports in GDP	

III. Case Studies

A. Pathway I: Rapid growth through natural resource exploitation

Both Angola and Equatorial Guinea can be seen as examples of a 'non-virtuous' path towards graduation, as rapid economic growth is coupled with very limited progress towards attaining positive social outcomes and heightened economic vulnerability. The cases show signs of a 'natural resource curse', through challenging impacts of resource revenue on effective governance as well as through 'Dutch disease' impacts on the competitiveness of potentially competitive sectors with stronger positive sustainable development spillovers. Given the important role of oil and mining activities in a number of (though typically at a smaller scale) LDCs, experiences by both countries should be of broader interest.

1. Angola and Equatorial Guinea

Background, structural transformation and progress toward graduation

Angola and Equatorial Guinea are major oil exporters which have experienced massive and rapid increases in national income. As is typical for many oil exporters, governance structures in both countries tend to be characterized by low transparency, which in turn contributes to high inequality and concentration of power and resources by few individuals and groups. In case of Angola, the civil war that plagued the country until 2002 has been a major development constraint. In terms of planning capacity, Angola has shown its ability to develop coherent plans geared towards sustainable development of the country. Whereas Equatorial Guinea also has a comprehensive development plan, coherence with sectoral plans are difficult to assess due to the opacity of information.

While oil has been the main driver for economic growth in both countries, there are nevertheless important differences between Angola and Equatorial Guinea. As can be seen from the figures on sectoral composition and economic growth in appendix B, Equatorial Guinea can almost be seen as an 'oil-only' economy. Angola, on the other hand, does have a relatively sizeable non-oil economy. While the oil and gas industry accounted for almost all Angolan exports (96 per cent in 1994), the share of the whole mining sector was only 30 per cent of total value added, less than in most traditional major oil producers. However, the contribution of oil and mining to employment is estimated to be less than 1 per cent (AfDB and others, 2014), further illustrating that oil exploration by itself is not well suited for making progress towards full and productive employment and decent work for all. In Equatorial Guinea, the corresponding shares in 2014 were 93 per cent (exports), 88 per cent (total value added) and 4 per cent (employment). Moreover, while GDP growth in volatile in both countries, growth rates fluctuate more in Equatorial Guinea (in line with the much larger role of oil for GDP), with growth rates ranging between 95 per cent (in 1997) and -12 per cent (in 2014).

As it is typical under this graduation pathway, both countries have been recommended based on the 'income-only' rule, while still not reaching the human asset and economic vulnerability thresholds. Equatorial Guinea met the 'income' only threshold in the 2006 and 2009 triennial review and was recommended for graduation in 2009. While the recommendation was endorsed by ECOSOC the same year, it was taken note of by the General Assembly only in 2013. The country is scheduled to graduate in June 2017. Angola met the 'income threshold' criteria in the 2012 and 2015

triennial reviews and as per the relevant General Assembly resolution adopted in early 2016, the country will graduate in 2021.

The figures in appendix B on progress towards LDC criteria and the individual components of HAI and EVI further highlight how unbalanced sustainable development progress in these countries has been. For example, it is striking that despite some recent progress, Angola still has the highest under-five mortality rate in the World, though this can be partially explained by the fact that most health facilities were destroyed during the civil war that afflicted the country since its independence in 1975. At the same time, however, Angola had been successful in reducing prevalence of undernourishment, while only limited progress has been achieved in expanding education. Progress in Equatorial Guinea in HAI has generally been conspicuously slow, given the strong economic growth over two decades.

Angola's economic vulnerability increased over time, mainly due to an increase in export and agricultural instability. The increase in export instability is mainly caused by the particular turbulent phase of the mid 1990s, so it can be expected to decrease in the future. The increase in agricultural instability, though, is mostly explained by recent droughts and might therefore have a long lasting effect, which could even become more severe unless resilience to climate change in the agricultural sector can be significantly improved. Equatorial Guinea's EVI, while high, has recently decreased, but this is mainly due to the fact that exports and agricultural production shocks in the early 1990s are no longer considered. Hence, reaching the EVI graduation threshold even in the distant future seems very unlikely for Equatorial Guinea.

Channelling natural resource revenues to building productive capacities

A precondition for using natural resource revenues is that these are appropriated by the State, rather than flowing exclusively to foreign and domestic investors or other interested entities. In fact, an assessment of Angola's tax regime in the mid-2000s showed that relatively little of the oil revenue was appropriated by the state (OECD/IEA, 2006). However, reforms introduced in the mid-2000s have increased the share of revenues channelled to the state, in large part through a change in the nature of partnerships of Sonangol, the state-owned company, with private operators. Through production sharing agreements, it now receives compensation in oil, which it commercializes directly, and the share of that compensation rises based as profits rise, in addition to other forms of taxation and compensation. Angola's oil revenue regime is now considered among the most effective in channelling funds to the state (Bain & Company and Tozzini Freire Advogados, 2009; Pérez Niño and Le Billon, 2013). **Hence, Angola's production sharing agreements could be an arrangement of interest to other minerals exporting LDCs where proceeds largely fall to foreign investors.**

The provision of resources to the State, however, does not make them automatically available for the budget, as they may be appropriated by other State agencies or groups that effectively control these entities. The fact that Sonangol acts simultaneously as producer and regulator, and has quasi-fiscal attributions, coupled with a lack of transparency may, among other problems have limited, or at least delayed, the volume of resources that effectively reached the

budget over time (OECD/IEA, 2006).[7] In Equatorial Guinea, the oil sector is partially excluded from the reach of the tax law, as tax and royalty provisions for production-sharing contracts with the government can be negotiated, and are not made public (Goldman, 2011).

Next, given the poor status of human assets in both economies, investments in social sectors are obvious priorities. In fact, development planning documents in both countries give high prominence to health and education.[8] **However, low transparency in budgetary processes contributes to misalignments between priorities and expenditures**, even though health and education expenditures in Angola have recently increased. In Equatorial Guinea, despite social priorities, the first stage of implementation of the NESDP which ran until 2012, focused on large-scale infrastructure projects, and social spending remained low (IMF, 2015).

In both economies, economic diversification is understandably an important policy objective; though the evidence discussed above indicated only Angola had some limited success in this regard. It should be stressed, though, that diversification takes time, because it involves the development of multiple, complex, factors, including entrepreneurial capacity, skills, legal aspects of doing business and infrastructure development. Hence, the effectiveness of current efforts in both countries cannot be assessed yet. Investment in infrastructure is a key element of efforts to promote diversification. **The experiences in both countries show that such investments are indeed facilitated by the existence of natural resources, indicating that infrastructure investments are less constrained by lack of transparency.**

In Angola, one of the main projects was recovering and further developing the "Lobito Corridor", which connects the port of Lobito to Angola's interior and to the Democratic Republic of the Congo and Zambia, and includes road, rail and port infrastructure. The main source of funding for the investments made, mainly between 2004 and 2014, were oil revenues. International assistance, particularly from China and Brazil, played a smaller part. The Chinese contribution has been in many forms, including grants, concessional loans, and others, and has sometimes been conditioned to Chinese companies being awarded construction contracts or access to long-term oil supply contracts, as has been China's policy in other places. Brazil has provided export credits and, like China, its companies are prominent in the country, particularly in construction, mining and oil (Duarte et al, 2015). According to the latest African Economic Outlook (AfDB, OECD, UNDP, 2016), there have already been significant investments in rehabilitating roads, railways and ports. The challenge faced now is to put equivalent effort in running and maintaining this infrastructure and avoiding the creation of white elephants (in parallel to addressing persisting deficits) (AfDB, OECD, UNDP, 2016; Duarte et al., 2015).

Equatorial Guinea is implementing an ambitious spatial-development policy. The strategy under development aims at developing growth hubs throughout the country, connected by major roads. The construction of Oyala, the new capital on the mainland, is a part of that strategy (AfDB/OECD/UNDP, 2015). Generally, implementation of the first phase of the NESDP enabled

[7] However, Sonangol is recognized as a well-functioning company that has had a significant, and largely positive, role in Angola's development, though issues of transparency and governance are often highlighted. See Stephens (2015).

[8] Angola's Vision 2025 and its National Development Plan 2013-2017; Equatorial Guinea's national Economic and Social Development Plan (NESDP) 2008-2020.

advances in the development of transport infrastructure, electricity networks, housing and public buildings, thanks to oil revenues. In 2013, however, investment slowed, partly in accordance with the investment calendar and partly due to the contraction in oil resources. However, sizable resources were still necessary to fulfil the financial requirements of ongoing project, leading the country to use accumulated reserves and presenting new challenges for operation and maintenance of the new infrastructure. **While infrastructure needs are undeniably large, there is also a risk of overinvestment in infrastructure, which in turn can suppress necessary social spending in times of sudden revenue slumps caused by commodity price decreases or other factors.**

Interestingly, the low social spending in Equatorial Guinea discussed above can be explained not only by misaligning priorities with public spending caused by low transparency, but also by a misguided application of commonly advocated fiscal rules. Equatorial Guinea aims to apply the so-called non-resource current balance rule, under which capital spending and resource revenues are excluded from fiscal targets (Baunsgaard et al, 2012). Such rules are in line with recommendations to use resource wealth to invest in physical assets with high yields in terms of non-resource productivity, thereby contributing to economic diversification (see, e.g., Collier 2011). However, in a case like Equatorial Guinea, where almost all fiscal revenue is resource revenue, such rule automatically induces underinvestment in social sectors. In addition, it also reduces the transparency of the budget process (which, however, is in any case low in the country) and contributes to pro-cyclicity of fiscal policy. **This reminds us that fiscal rules cannot simply be copied and implemented, but need to be assessed in light of the country specific situation.**

Overall, the experience of both countries indicates that low transparency is a key constraint to effectively harnessing natural resource revenues for building productive capacity. First, low transparency reduces the amount available, though a substantial amount of investments can still be undertaken. Second, low transparency skews the allocation away from social sector investments; this effect can get exacerbated by misplaced fiscal rules.

Fiscal stabilisation

Avoiding Dutch disease effects (i.e., a suppression of alternative economic activities with potentially higher long-term productivity due to currency appreciation and competition for scarce local resources such as skilled worker) and stabilizing the economy in the presence of highly volatile commodity markets are key challenges for all commodity exporters. Generally, the establishment of sovereign wealth funds and fiscal rules are effective policy responses to these challenges. However, although both countries have formally established mechanisms for fiscal stabilisation and accumulation of reserves, these have not been effective so far.

In Angola, two stabilisation instruments exist. The Oil Price Differential Account (Fundo do Diferencial do Preço do Petróleo - FDPP) is managed by the National Bank of Angola on behalf of the Treasury and receives the difference between the actual oil revenues received and those that had been calculated using the oil price the government has used as a reference to calculate the budget. When that difference is negative, the OPDA should provide a fiscal buffer. However, as of mid-2014, the size of the OPDA was only about 1% of government revenue, and in 2015 there were still no legal documents giving it a formal stabilisation function and it was not operational. The Strategic Financial Oil Reserve for Infrastructure (Reserva Estratégica Financeira Petrolífera para Infraestruturas – REFP), also managed by the National Bank on behalf of the Treasury, receives funds from the selling

of 100'000 barrels per day of crude oil. By 2014 it had accumulated funds equivalent to under 4% of the government budget (World Bank, 2015). An Oil-for-Infrastructure Fund (Fundo Petrolífero de Angola) was created in 2011 and soon replaced by the Angola Sovereign Wealth Fund (FSDEA), which does not have stabilisation as a core function. Its investment strategy is focused on non-oil assets, partly in Angola and partly in other countries in Sub-Saharan Africa. The latter only received the last part of its 5 billion dollar endowment in 2014. Late and slow implementation of these instruments, a lack of clarity in their vocation, lack of transparency, lack of clear rules on deposits and withdrawals and other governance issues limited their effectiveness and they were not sufficient to protect Angola's fiscal capacity when oil revenue fell after 2013 (as previous instruments had failed to ensure sufficient fiscal revenues in 2009). The IMF has observed that, because the FSDEA was not conceived as part of an integrated asset-liability management strategy, the way it is structured means that the fund can continue to accumulate resources and invest in potentially low-yield enterprises, while the government resorts to debt to meet budget needs, the service of which is more expensive than the rate of return on public assets (IMF, 2014a, 2015a; Euromoney, 2012; World Bank, 2015). In the case of Equatorial Guinea, a Fund for Future Generations (Fonds de Reserves pour Generations Futures) was established in 2002. It was to receive 0.5% of oil revenues, but information on the fund's rules, assets, transactions, investments and effective implementation is scarce. Moreover, it is structured for a savings, more than a stabilisation, function (Goldman, 2011).

As a consequence, neither government was adequately equipped to face the effects of a prolonged reduction in oil prices, including fiscal and current account deficits, which began in 2013 and had not been significantly reversed since. Declining production as oil and gas fields matured in Equatorial Guinea aggravated this, as did temporary drops in production in Angola due to non-scheduled maintenance operations in 2014. In Angola, there have been severe budget cuts, curtailing much needed public expenditure in education, health and infrastructure (Observador, 2016). As the country remains highly dependent on imports for both consumer and capital goods, restrictions on imports and on access to foreign currency have had a dampening effect on other industries, in addition to the welfare loss of reduced consumption (Paulo, 2016).[9] Equatorial Guinea has had to use a considerable part of accumulated reserves, which are abundant, but not unlimited, to meet financing demands of infrastructure projects that were already under way and could not be cut back by the contraction in oil revenues after 2013. Fiscal space has been limited since (AfDB/OECD/UNDP, 2016).

In synthesis, current oil and gas revenues are still by far the largest source of revenue for the governments of both Angola and Equatorial Guinea, so that both countries are highly vulnerable to the volatility of international prices as well as to the consequences of short term slumps and long term declines in production. Late implementation and significant governance and other shortcomings made stabilisation mechanisms ineffective to address this. **This highlights that implementing generally valid recommendations (such as establishing wealth funds and fiscal rules)**

[9] In March 2016, Angola made a formal request to the IMF for a 3-year programme under the Extended Fund Facility (IMF, Transcript of African Department Press Briefing, Washington, D.C., April 15, 2016), but declared later to request only technical assistance from the IMF. Equatorial Guinea has likewise faced a prolonged recession and both fiscal and current account deficits due to both the decline in oil prices and a decline in production (IMF Executive Board Concludes 2015 Article IV Consultation with the Republic of Equatorial Guinea, http://www.imf.org/external/pubs/ft/scr/2015/cr15260.pdf)(update)

for ensuring fiscal stabilization requires effective governance systems, which in turn are difficult to develop in contexts of significant resource booms.

B. Pathway II: Economic specialization and investment in human capital

A significant number of countries has graduated from the LDC category or made progress towards graduation by specializing in a few economic activities, while at the same time investing in human capital. The seven countries considered here specialized in natural resource based activities (mining, hydropower generation or forestry) or in tourism. Notably, none of these countries has a sizeable manufacturing sector. Essentially all of them are small countries with less than 1 million inhabitants, with the exception of Botswana with a population of more than 2.2 million.

1. Botswana

Background, structural transformation and progress toward graduation

As a country whose political borders were established during eighty-five years of colonial administration, Botswana's economic and social conditions in 1966 did not seem to have high prospects of supporting meaningful transformation of this polity into a viable independent sovereign entity. Its structural constraints and the overwhelming odds against its economic and social development therefore earned it immediate qualification into the LDC list in 1971. Against these odds, Botswana was the first country to graduate from the list in 1994 due to significant economic growth and the development of human assets, which happened in line with a rapid progress in home-grown development governance structures (see below). In terms of economic structure, mining activities, in particular diamonds, had been the main driver, in particular in the late 1970s and 1980s, whereas services have also increased importance since the 1990s (see appendix B).

Botswana met the graduation thresholds for income and human asset when the possibility of graduation from the LDC category was introduced in 1991. It was recommended for graduation when it met the criteria in 1994 again and graduated the same year, as the current transition periods of normally three years were introduced only in 2004.[10] Appendix B shows Botswana's impressive progress in providing secondary education (see below) as well as problems in improving child mortality, largely due to the impact of the HIV/AID epidemics. Economic and environmental vulnerability remains high, as 'fixed factors' such as small size and remoteness are particularly relevant and exports are concentrated due to the continued dominance of diamonds. Moreover, progress in reducing the impacts of natural disasters have been outweighed by an increase in export instability caused by the sudden drop in diamond exports during the global economic crisis on 2009.

Development Governance

In recognition of the myriad institutional, economic, human, environmental, financial, and infrastructural constraints that the country faced on the eve of independence, Botswana's leaders took a calculated decision to make the state the main driver of the nation building and socio-economic development agenda that would modernize the new state nation. State building had to be done in its entirety, from institutions and procedures to physical infrastructure, human resources,

[10] Figure B.3.2 shows Botswana meeting the current HAI threshold only in 2006, but actual thresholds were much lower in 1991 and 1994 in line with lower human assets across all developing countries. It should also be noted that the 'income only' rule for graduation was introduced only in 2005.

and financial resource mobilization. The colonial power had not only excluded the native majority until the run up to independence, but had itself only a very skeletal administration that was not even seated in the country. In addition, at time of independence Botswana had basically no modern economic activities and agriculture was affected by serious drought. In a predominantly hunter-gathering agro-pastoralist society, it fell to the state to drive the modernization agenda and map how the transformation to modernity and higher levels of productivity would proceed under limited resources.

The governance model adopted by the state centred around a strategic five year social and economic development plan and annual budget allocation processes which depended on rapidly building key areas of state capacity to enhance planning, policy/law making, enforcement of rules and resource mobilization to create investible resources in key sectors that would give the country rapid and sustained growth. Development planning meant setting national priorities within which the donor community could select areas they wished to finance: thus ensuring that the projects remained largely owned by Botswana and not donor driven. And to maintain the flow of such donor finance, Botswana sought to build a reputation for accountable management of these scarce resources and to ensure that implementation was strongly aligned to clearly identified projects and measurable expected outcomes that could be monitored.

A key element in building development governance was the rapid development of local expertise and competencies. In 1965, 90 per cent of the senior posts in the public service were occupied by white expatriates, but in 1975 already 65 per cent were locals and by the turn of the 21st century over 98 per cent (Selolwane, 2004). Professional capacity was centred particularly on the Ministry of Finance and Development Planning which was responsible for all macro-economic planning, budgetary allocations and oversight of policy implementation and monitoring.

Another element was developing negotiation skills within the bureaucracy to ensure that the proceeds of natural resources exploitation accrue to the State rather than foreign investors. A copper-nickel mining project as joint venture between the State and two foreign mining companies served as a training ground. Even though that project failed due to commodity price changes, it prepared government negotiators well for another major mining deal with the giant diamond mining company of De Beers. That deal lead not only to double-digit growth, it also ensured sufficient revenue for the State to achieve its broad based developmental goals. Agreements were limited to five years, allowing Botswana to successively use its enhanced negotiation skills to increasingly get better deals. Consequently, Botswana managed that downstream value added activities took place within the country to broaden the portfolio of benefits accruing to the country.

The foundations of state regulatory capacity were also an integral part of state building and developmental interventions. The State developed rule of law over time, for example by transferring the power to allocate tribal land and unwritten traditional legal systems to the power of central government and the modern set of rule of law, which became institutionalized over time though practice and testing. This highlights the benefits of developing institutions tailored to local conditions, rather than implementing blueprints prepared elsewhere. Botswana also managed to establish effective separation of powers, particularly between the executive and the judiciary. Together with rapidly improved education and awareness of international human rights protocols

among the populace, this lead to testing independence of judiciary in court and, consequently, building confidence in the rule of law.

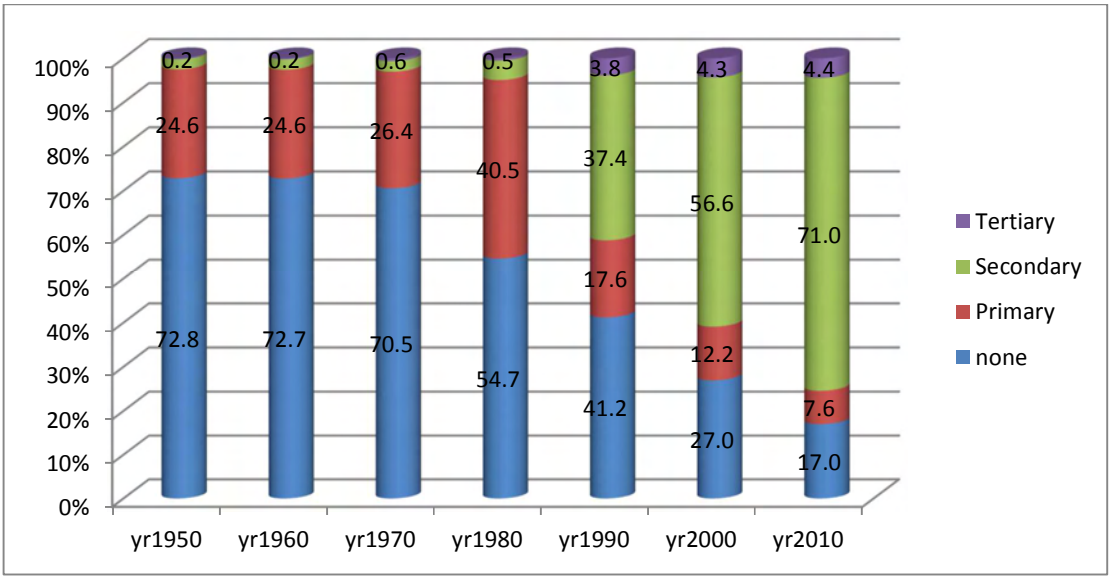
In the state-controlled development governance approach, public expenditure (for infrastructure, provision of basic services, subsidies and provision of credit) has been the single major driver of growth in all other sectors outside mining. While supporting the rapid transformation of Botswana, it also had the effect of crowding out private activities. Hence, whereas the approach was unavoidable and very successful in the early transformation, the establishment of myriad of institutions that facilitate private sector development (such as state-owned agencies for training, production support, market creation, trade support and development finance institutions) has not been able to operate efficiently in those increasingly important areas of resource allocation that required localized decision making and quick reading of changing market conditions

Social Policy and its Role in Channelling Resource Revenue to Social Sectors

From its beginning, Botswana placed great emphasis on social policy, rather than subordinating it to economic policy. Social policy was intertwined with economic policy, e.g. distribution of food aid was tied to using labour of recipients for community development projects. Social policy had multiple interlocking objectives, beyond the objective of providing social protection. One such objective was to build national cohesiveness, stability and peace by distributing wealth as even handed as possible across the domiciles of ethnic and racial groups in the context of historical legacies of racial and ethnic discrimination. Another key objective of social policy was to give elected public authority and the electoral process of legitimizing government power, moral authority and legitimacy: transferring the allegiance of tribal communities from a multiple of traditional authorities to the unitary state. In addition to equity across locations and groups, transparency increased acceptance of the State. This underscores the critical role of social policy for State building.

Another key objective of social policy was facilitating economic growth and employment. The 1966 Transitional Plan for national development stated clearly that the primary aim of social policy was at one level to develop the education system so that it would “create in the shortest possible time, within such financial means as possible, a stock of trained local manpower capable of servicing the country’s economy” (Republic of Botswana, 1966: 33) and at another level that rural education would facilitate the “breakdown of local prejudices and prepare a favourable social climate for development” (Republic of Botswana, 1966: 40). Investments in education through both the school system and lifelong extension services was thus a critical component of transforming the attitudinal and skills base of the population to engineer higher levels of productivity in traditional and modern production sectors. Figure x shows the spectacular effect of investing in education on education levels in the overall population that ensured that Botswana is the African country with the highest share of people with at least some secondary school education. To achieve this, Botswana used a number of strategies that included rapid provision of schools, increased number of secondary and tertiary education bursaries, and the introduction free education at primary school in 1980 and at secondary level in 1989. These were buttressed by an accelerated construction of schools as well as training institutions for teachers.

Figure 3: Trends in Educational Attainment x Botswana Population 25 years and above

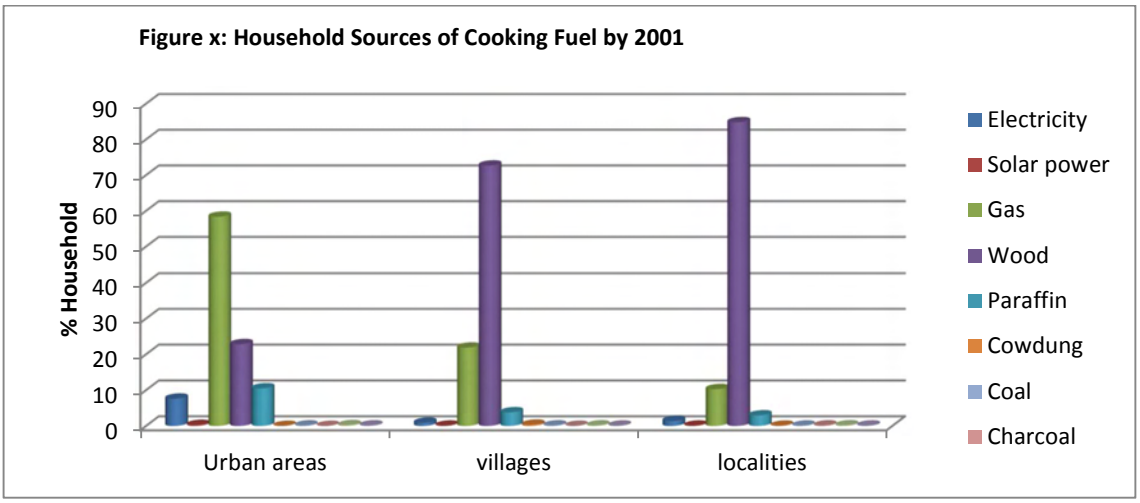


Source: Selolwane, based on Barro and Lee 2011

However, Botswana had difficulties in building upon these achievements in developing critical skills to support its economic diversification and production enhancement among small scale rural producers and other small enterprises. A key problem had been adopting the Million Development Goal of achieving universal primary education at a time when the country was already far ahead of other countries in basic education.

The impact of social policies on inequality has been mixed. Education clearly had an effect on reducing ethnic inequality, as can be seen from data compiled by Selolwane (2004) showing a progressively more equal ethnic composition of senior bureaucrats in Botswana. Until the economic liberalization, inequality and unemployment in Botswana was reduced, but that appears to be the effect of price controls rather than from investments in social sectors and the establishment of programmes to increase agriculture productivity, which had only limited impact. Botswana has extensive social policies that include social insurance, labour regulations, targeted programs against hunger and malnutrition, employment schemes, input subsidies for small farmers and entrepreneurs and provision of basic social services. Together with a stable macroeconomic environment, these policies they have served to reduce extreme poverty and deprivation. Nevertheless, inequality in income and quality of life remains high, suggesting that the citizens of Botswana are not enjoying the quality of life that corresponds to the upper-middle income status of the country. This is also reflected in low quality of housing and inadequate access to water, sanitation and clean and modern energy for cooking and heating. For example, figure y shows that wood was the dominating cooking fuel in 2001 and played an important role in urban areas, too. Even in 2011, only 54 per cent of household used electricity for lighting and 42 per cent used wood as cooking fuel (Botswana 2011 Population and Housing Census); in 2015 only 63 per cent of the population had access to improved sanitation facilitation and 74 per cent access to piped water[11] (WHO/UNICEF JMP 2015).

[11] An additional 22 per cent has access to other improved water sources.



Source: Botswana 2001 Housing and Population Census

Fiscal institutions for macroeconomic stability

For ensuring macroeconomic stability, Botswana has relied on two main institutions: the Ministry of Finance and Development Planning and the central bank (Bank of Botswana). Jointly, they have been successful in ensuring that public expenditure remained fairly stable over time despite the ups and downs in national revenues and that the value of the national currency remained fairly steady and predictable. The success has been demonstrated during the 2008/9 global financial crisis, when diamond revenues dropped dramatically, but Botswana could draw on its accumulated reserves to cover its government expenditures and maintaining relatively high ratings from international rating agencies (A2/A2 from Moody's and A-/A-2 from Standard and Poor).

The Ministry Finance and Development Planning, in particular the Development and Budget Division (DBD) and Economic and Financial Policy Division, have been able not only to formulate public expenditure and revenue strategies fully aligned with development objectives, but also to implement them. It also manages the vast range of public enterprises, taxes and levies (including recently a VAT) and aid inflows. Again, transparency has been an important element in ensuring effectiveness. This again demonstrates the importance of development governance and effective bureaucracy.

The introduction of a national currency and the establishment of an independent central bank in 1975 benefited the country, showing that with appropriate governance structures, independent monetary policy can be successful even for small economies. The central bank has grown in institutional capacity over time, enabling it to replace administrative measures to control interest rates with modern instruments such as central bank certificates (as well as overnight lending rates) and assuming additional responsibility for financial regulation. As in case of fiscal policy, transparency appears to be success factor. In case of Botswana, following orthodox macroeconomic policy recommendation such as liberalizing capital account has actually been working. The country has also established a successful sovereign wealth fund (Pula fund).

Economic diversification challenges and elusive manufacturing

Botswana has had a long standing struggle with economic diversification, but is certainly not due to policy neglect. Since the 1980s, there have been concerted efforts to induce economic diversification through reducing the role of the State in production, stimulate the private sector and target non-mining economic growth. To reduce state dominance, Botswana established a privatization agency in 2001 to drive the reform and privatization of parastatal enterprises that accounted for 5% of GDP at the time. However, progress has been slow. From seven enterprises identified as being ready for privatization in 2005, only the telecommunication has been partially privatized. Hence, in Botswana the State has also greatly overstayed in its direct involvement in production processes. After eighteen years of public discussions with the private sector and a clear awareness of its stifling role as a monopolistic entrepreneur across practically all areas of production and service delivery, the state still retains a huge number of parastatals whose inefficiencies would have been more apparent had it not been for the papering by generous rents from diamond revenues.

The outsourcing of the pension fund from the regular budget to the private Botswana Public Officers Pension Fund had some positive impact on structural transformation, as it lead to the rapid development of the non-banking financial sector. However, the sector itself remains small and has not made any significant dent on employment creation and further diversification of the economy into other sectors. An exception has been the property development sector, mainly focusing on upmarket office buildings and medium to large shopping malls. Generally, the private sector has managed to provide higher quality infrastructure than the public sector before privatization, mainly due to better planning and management practices (Gubago, 2011).

By and large Botswana's economic diversification strategy was premised on overcoming the constraints of the small domestic market by focusing on an export led manufacturing capacity. But that has not materialized despite special incentives in the form of tax concessions and subsidies (Jefferis and Nemaorani, 2014). A key constraint appears to be mismatch in the labour market. Despite the enormous success in education, businesses are persistently constrained by lack of skilled labour. Hence, Botswana appears to be faced with the contradiction of having an educated but unskilled workforce. Therefore, the country often relies on neighbouring countries like Zimbabwe to provide its industry with requisite skills while young Batswana endure high rates of unemployment.

Environment and development

Like most African countries, Botswana's economy is overwhelmingly dependent on its natural resources. But given its harsh physical environment, Botswana's development strategy was initially premised on the perception of the natural environment as limiting to economic growth and social development: particularly in relation to scarcity of water and poor quality of soils given the initial dependence on agriculture. So the physical environment was seen as a threat to overcome rather than a resource that needed protecting long term.

However, since the 1980s Botswana recognized recognition that environmental health is critically important to the overall national development strategy. Consequently, the country developed and implemented a series of national policies and strategies on environmental issues.[12]

[12] These include the Wildlife Conservation Policy (1986), the National Conservation Strategy (1990), Botswana National Water Master Plan (1992), National Policy on Disaster Management (1996), Botswana Waste

The importance of environmental sustainability was first encapsulated in Botswana's seventh National Development Plan (1991/2 – 1996/97). Hence, Botswana can be seen as a global frontrunner in following a sustainable development approach to national planning, which is also reflected in its active role in global and regional processes (for example, Botswana is very active in the WAVES initiative on natural capital accounting and hosts the Secretariat of the Gaborone Declaration for Sustainability in Africa (GDSA) adopted in 2012). At the same time, Botswana's initial efforts still assigned responsibility for environmental issues to a line ministry, lacking the needed integrative approach. Consequently, Botswana completed a new draft national sustainable development framework in 2015, building on past experience to change towards a more inclusive and integrated sustainable development pathway (Selolwane et al, 2015; UNDP 2016).

2. Cabo Verde

Background, structural transformation and progress toward graduation

Cabo Verde is a small island developing State in Western Africa with around half a million inhabitants that is frequently regarded as a 'development success story'[13], with effective governance often seen as a major factor (see below). Cabo Verde indeed underwent a structural transformation from away from primary activities (though these never were particularly high for a LDC), as can also be seen from figure B.3.1 in annex B. The services sector, in particular tourism, has become a main driver of the economy. This transformation was especially pronounced during the high growth period of the 1990s. Manufacturing, on the other hand, has never played a major role in Cabo Verde. There had been some garment and footwear sector activities, but the sector ceased to be competitive after the Multi Fibre Arrangement with its quota system was phased out in 2004, despite being eligible for duty free quota free treatment in major markets. In recent years, economic growth has decelerated, which is typically explained with the economic slowdown in the European Union, the main export market of Cabo Verde, and other major economies (Cortez et al. 2014).

Cabo Verde managed to graduate in 2007 after the CDP found it eligible in 2000 and 2003 and the CDP recommendation for graduation was endorsed by ECOSOC and the General Assembly in 2004. Before and after graduation, Cabo Verde has made significant progress in terms of human assets (in particular in education) and GNI per capita. On the other hand, progress in reducing economic and environmental vulnerability has been limited, as a reduction in agricultural instability has been partly offset by an increase in natural disasters. Whereas Cabo Verde remains vulnerable, its EVI score is lower (meaning that it is less vulnerable) than for most of the Pacific SIDS, because the quasi-fixed elements of the EVI (population, remoteness, population in LECZ) are less important.

Development Governance

From very early in Cabo Verde's post-independence period, the government recognized the need to build both the trust of its own people and, importantly for a country of scarce domestic resources and productive capacity, the trust of its large diaspora, of donors and of foreign investors. **A peaceful transition to independence and later to a consolidated multiparty democracy, and sound**

Management Strategy (1998), the Community Based Natural Resource Management Policy (2007), Botswana Energy Master Plan (2008), and the Environmental Assessment Act of 2011.

[13] As evidenced, e.g., in the title of a recent study of the African Development Bank on the country, see AfDB/AFD (2012).

macroeconomic policy (including stable monetary policy and prudent fiscal policy) were pillars for Cabo Verde's stability. There seems to have been a circular relation between these and a combination of i) governance solutions that ensured openness, opportunities for participation in strategy formulation and implementation, transparency, and effective institutions; and ii) development strategy that included an emphasis on inclusiveness, human capital development and poverty reduction, a pragmatic and realistic approach to the country's potential, making the most of partnerships (with donor countries, international organizations, the diaspora, and foreign investors), and forward-looking strategies to adapt to a changing global context.

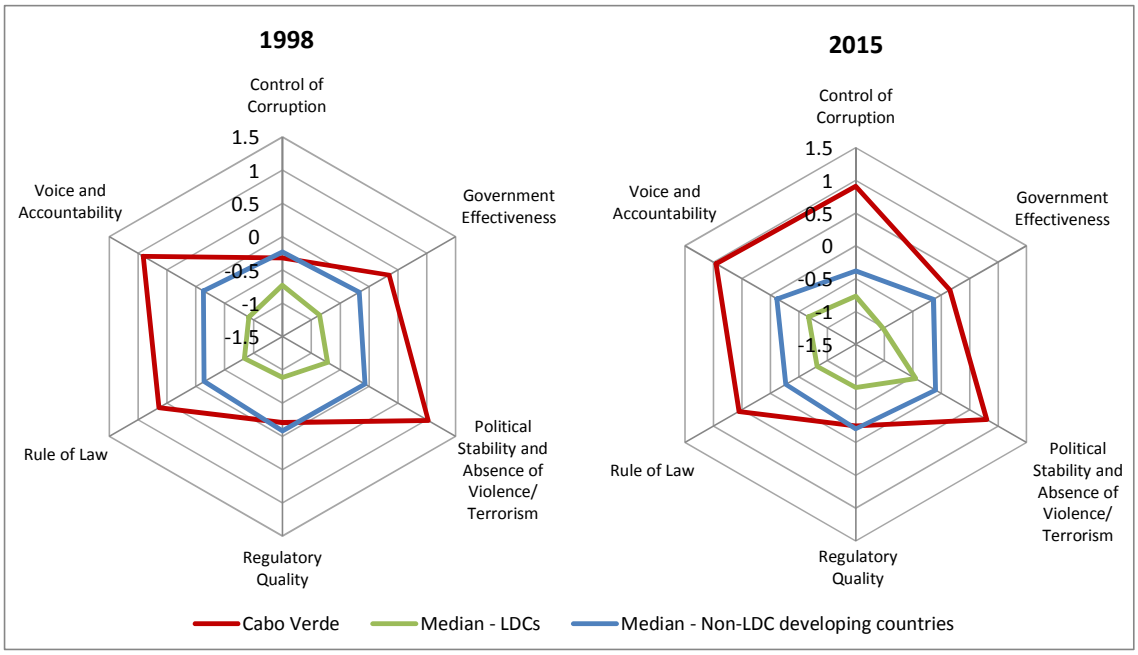
Participation and representation contributed to formulating a shared vision of development that has been carried across changes in government: since independence in 1975, and until the reforms that ensured multiparty democracy in 1991, although the country functioned under the command of a single party, government and party activities were clearly separated; debate was encouraged in parliament; representation was ensured for each of the inhabited islands; and there were opportunities for public participation at the local and national level. In an arrangement that the AfDB/AfDF (2012) have likened to the Economic Planning Bureau in South Korea, **a group of cadres, initially housed within the Prime Minister's office, were entrusted with translating a political vision into concrete measures**. A succession of national development plans and strategies have maintained the essence of this vision while adapting policies and institutions to changes in the global economy and maintaining partnerships with a variety of countries and institutions (Republic of Cabo Verde Ministry of Finance and Planning, 2004). **While adjustments have been made to development strategies and the role of government in the economy over time, consensus on core issues such as the importance of social investment have been carried on despite changes in government between the two leading political parties** (AfDB/AfDF, 2012; World Bank, 2016).

Important elements in institutional development and public sector management have been the **separation of legislative, executive and judiciary branches; independence of the Central Bank; decentralization and autonomy for local government** (AfDB/AfDF, 2012). As for the latter, municipalities acquired a relatively high degree of autonomy after the democratic reforms of 1991 (República de Cabo Verde, 2002). The Tribunal de Contas, an **autonomous audit oversight body,** created in 1993, **has an important role in ensuring accountability in the use of public resources** (AfDB/AfDF, 2012; Delgado, 2010). Cabo Verde has also been recognized to have a greater degree of corruption control than the regional average[14]. **Corruption, in its various forms, is a criminal offense and is addressed both in the criminal code and in specific laws on responsibility crimes by holders of public office and on public control of the wealth of those holding political appointments**. When it also involves financial responsibilities associated to corruption, the Tribunal de Contas may step in (Delgado, 2010).

Overall, the achievements by Cabo Verde in governance are also reflected in its score in the Worldwide Governance Indicators (WGI), though the WGI are able to capture only certain elements relevant for development governance for achieving the sustainable development. Figure 2 shows the performance of Cabo Verde in the six components for 1998 and 2015, demonstrating that Cabo Verde is typically ahead not only of LDCs but also many non-LDC developing countries. It also shows the remarkable progress in controlling corruption.

[14] http://info.worldbank.org/governance/wgi/index.aspx#reports

Figure 3: Worldwide Governance Indicators for Cabo Verde



Source: CDP Secretariat based on Worldwide Governance Indicators, 2016 update.

Cabo Verde is also leading in the use of **electronic governance tools to ensure transparency and efficiency in public administration**, for example through:

- An Integrated System of Budget and Financial Management (SIGOF) tracks all government revenues and expenditures and integrates tax revenue, the federal government budget, the Tribunal de Contas and the Treasury. The time needed for approval of budgets has been shortened. The system makes it easier to provide timely information to donors, under different formats, improving confidence and increasing efficiency in the use of donor funds.
- A one-stop-shop for administrative procedures of citizens and companies. This has reduced the time necessary to register a business, an important element for investment attraction, and provided the sizable (and economically crucial – see below) diaspora with access to documents such as birth certificates (AfDB/AfDF, 2012).

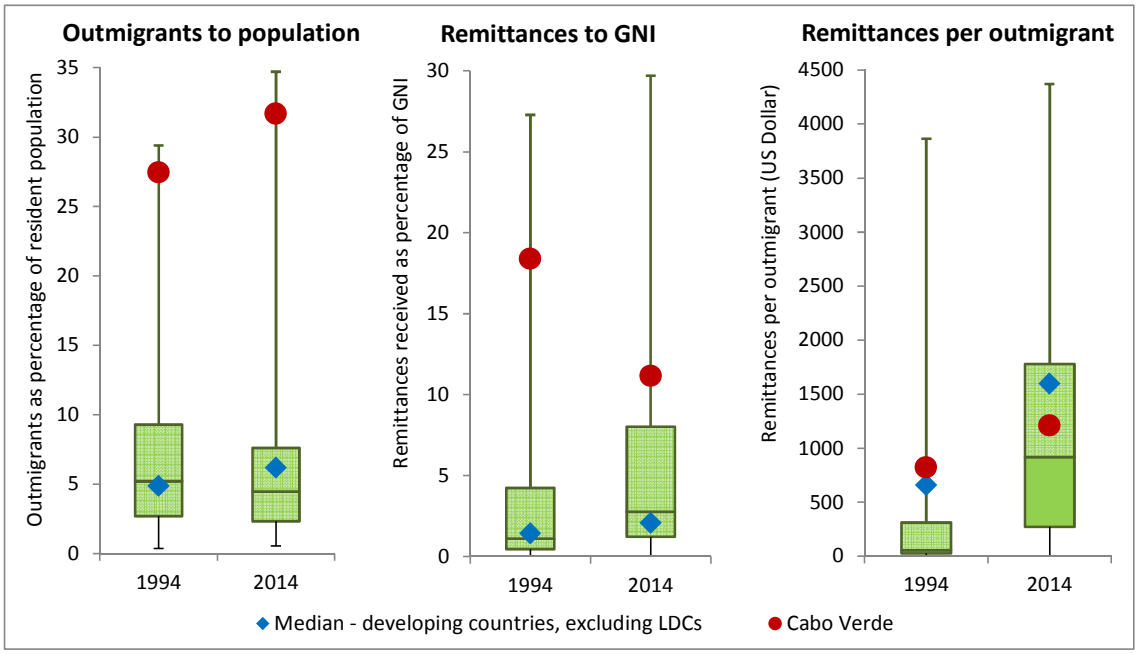
Remittances

Cabo Verde has a very large diaspora, in particular compared to other current and former LDCs, but smaller than in many Caribbean and Pacific SIDS. Remittances from the diaspora have been a stable and sizeable source of external financing (AfDB/AfDF, 2012). Figure 4 shows the outmigrants to resident population ratio (as measure of the size of the diaspora), the ratio of remittances to GNI and the average amount of remittances received per outmigrant in 1990 and 2014.[15] It demonstrates the importance of remittances for Cabo Verde, which appear to have fallen over time.

[15] For interpreting these figures it should be taken into account that remittances as published by the World Bank includes not only private transfers (which are typically from migrants) but also compensation of employees working abroad (which remain resident in their home country and are, thus, not included in the outmigrant figures). Compensation of employees is included in GNI, whereas private transfers are not.

While this could indicate a slow transition to a more domestically driven development, it should be noted that remittances data excludes investments by outmigrants, which are increasingly targeted by the government. Similarly, while Cabo Verde seems to lose advantages in the remittances per outmigrant figures, this could partly be explained by the shift in policies towards harnessing the diaspora discussed below.

Figure 4: Diaspora indicators for Cabo Verde and for LDCs



Source: CDP Secretariat based on outmigrant and population data from the United Nations Population Division and remittances data from World Bank. The Box-Whisker plots show the distribution of the indicators for the current set of LDCs.

While remittances are mainly used for consumption, much of it goes actually into education and health of family members and could be considered investment in human capital. Moreover, there has been a slow trend towards investment, the main recipient sector being the construction of acquisition of homes and agricultural properties, restaurants, hotels and transportation (Tolentino et al., 2008).

Initially, **remittances** to Cabo Verde were driven by family connections. Later, they **were also influenced by policy measures to engage the diaspora**. Cabo Verde was, in fact, among the first countries to act upon the potential of remittances and the diaspora, including through the **establishment of a Ministry of Diaspora Affairs** (AfDB/AfDF, 2012). There have been three main cumulative stages in these efforts (Rocha, 2013). Starting in the 1980s, the government established measures to attract remittances. These include **Central Bank legislation that enable emigrants to have accounts in escudos or foreign currency**, and benefit from **favourable interest rates for savings accounts dedicated to construction, acquisition of real estate for housing or productive activities, or the establishment of industrial activities**. **Special accounts have also been implemented for returning retirees and physical presence in Cabo Verde is not required in order to open a bank account** (Banco de Cabo Verde, 2011).

In a second step during the 2000s, an effort was made to tap into competencies and knowledge within the diaspora. Two programs, financed by Portugal, Spain and the EU, and executed in partnership with local institutions and the OIM, were established to that effect: DIAS de Cabo Verde and Diaspora Contributo. The former **mapped competency development needs and identified competencies within the diaspora**, and the latter **financed travel for members of the diaspora to conduct short capacity building activities in sectors such as health, education, infrastructure and tourism to individuals and institutions**.[16]

During a third stage, greater efforts were made to attract investment in Cabo Verde and facilitate the permanent return of emigrants. As for the latter, efforts were made to provide information to returning Cabo Verdeans through consulates and embassies in major destinations. Customs tax exemptions for returnees had been put into place since the 1990s. Specific support programmes for returnees to invest in the country were put into place. Support is given, in collaboration with some of the main host countries and through the Agency for Entrepreneurial Development and Innovation (ADEI), for **returnees to develop business plans, acquire relevant skills before returning, facilitate contacts with banks in order to obtain credit and obtain access to tax exemptions for investment**. A 2013 law reforms the incentive structure for private investment and equated foreign and local investors. Access to treasury bonds has also been facilitated (Léonard and Rodrigues, 2015). Other measures that have helped maintain attachment of the diaspora to the home country include access to **bureaucratic procedures and issuance of documents through an online system** (mentioned above) and the right for residents abroad to vote in Presidential and legislative elections. In 2014, the government proposed a National Strategy on Emigration and Development (ENED) that includes measures to prepare for emigration, strengthen and foster integration into Cabo Verdean communities abroad, enhance knowledge on migration patterns, strengthen links to and dialogues with the diaspora, facilitate remittances, encourage investment, mobilize diaspora competencies and assist in return and reintegration (Ministério das Cidades de Cabo Verde, 2014).

Education

Since independence in 1975 there has been an explicit political commitment to invest in the country's human capital and particularly education (AfDB/AfDF, 2012), following a gradual approach. An **initial push was made to raise literacy levels, increase the capacity of, and access to, the educational system, and strengthen primary education**. From the 1980s and particularly after the political transition in the 1990s, continuous reforms took place with the purpose **of improving quality and expanding secondary and technical education**. Training of teachers was a priority in Cabo Verde's early education strategy. In 1975, 13% of the 1274 teachers in the country were trained, a little more than half of which for primary instruction only. Today 86% of teachers are trained (Ministério da Educação de Cabo Verde, 2015). **Tertiary education institutes were established beginning in the mid-90s, followed by private universities**. The public University of Cabo Verde was founded in 2006. The country is now exploring the potential of distance learning, which can be particularly important given the country´s geographic characteristics (Ministério da Educação de Cabo Verde, 2015). One factor that has helped **Cabo Verde's advance in education has been a relatively low population growth rate**, which has led to a reduction of the number of school

[16] http://www.diasporacontributo.com.cv/index.php?paginas=37

age children since the beginning of the 2000s, a trend is set to continue (Ministério da Educação e Desporto/UNESCO/Pole de Dakar, 2011).

Remaining challenges include addressing the drop-out rate in secondary education and improving the quality of education. There is very little gender inequality in access to education, but important geographic and income-based inequalities persist. Cabo Verde's new education law progressively removes registration fees, aiming for universal 8, then 10, years of schooling (UNESCO/Pole de Dakar, 2011).

Managing graduation

Cabo Verde was the first country to prepare a smooth transition strategy to facilitate its graduation. **A Transition Support Group, supported by the UNDP country office, was effective in developing a transition strategy**, demonstrating the potential of United Nations support. At the same time, the Group has not been effective in implementing the strategy. **There was lack of coordination between ministries and the partnership framework whereby donors have coordinated aid with the government since 2005 did not pay special attention to the graduation process** (Dionizio, 2012). However, it should be acknowledged that the need to manage graduation was limited as Cabo Verde did not benefit from LDC specific international support measures, even though external support in general was and continues to be important. After graduation, some partners changed the nature of their financial assistance, but it is not known whether the loss of LDC status played any role in it. Overall, volumes were not significantly affected and, in fact, some donors, notably the USA, increased assistance after graduation (Cortez et al., 2014). Merchandise exports were minimal before graduation, so that preferential market access was of minor importance. Moreover, in the main export market, the European Union, Cabo Verde continues to benefit from preferential market access conditions. Whereas duty-free quota-free access under the Everything but Arms initiative ended in 2011, Cabo Verde benefits from GSP-plus preferences, which are only slightly less generous.

3. Maldives

Background, structural transformation and progress toward graduation

Maldives is a small island developing State in South Asia with around 360,000 inhabitants and consisting of more than 1,000 coral islands. It had the third highest economic growth rate in the world over the last four decades (the GDP growth rate between 1974 and 2014 was 8.5 per cent on an annualized basis), lower only than Equatorial Guinea and China), even though economic growth has been highly volatile. The growth has been mainly achieved by a rapid structural transformation away from primary activities to services, in particular tourism. Whereas economic policy initially was characterized by free market approach with only limited involvement of the Government, the State took a more active role since the late 1970s by adopting specific laws, institutions such as the national planning agency, regulations and sectoral plans. Spatial inequality remains a major issue in the country, so that the development is occasionally characterised as unbalanced (Rasheed, 2015). It should be noted, though, that recent development plans (the 7th National Development Plan 2006-2010 and the Strategic Action Plan 2009-2013) put high emphasis on developing outer atolls, including through moving towards a more decentralized governance system.

With regard to progress towards graduation, Maldives has experienced remarkable progress in increasing GNI per capita and expanding human assets, with respect to both health and education.

Economic and environmental vulnerability, to the contrary, have remained elevated see also Annex B). Whereas the country has become less remote due to the shift in global trade towards Asia, the vulnerability caused by the small size and the extreme exposure to climate and climate change impact such as sea level rise and storm surges will also remain extremely high. The major Tsunami from December 2004 further eradicated the progress in reducing the EVI score achieved in the 1990s. The Maldives finally graduated from the LDC category in 2011, though it was first recommended by CDP for graduation in 2000. The renewed CDP recommendation from 2003 had been endorsed by ECOSOC and the General Assembly in 2004; the transition period had subsequently been extended from three to six years due to the 2004 Tsunami.

Tourism

Tourism has been the main driver of economic growth in the Maldives, with tourism receipt to GDP ratio of more than 70 per cent in 2014 (IMF, 2016). Whereas initially tourism developed in the absence of State intervention, the sector became a top priority for the Government in the late 1970s and early 1980s and the **Government has developed specific tourism policies and strategies such as tourism master plans** ever since (Rasheed, 2015). In this endeavour, the Government targets a specific sub-segment of the international tourism market, luxury resorts, though recently mid-market resorts are also promoted. Maldives continues to design **industrial policies for the sector, including targeted import tariff reductions, loan guarantees, developing training facilities and public investment into transportation infrastructure** (Government of the Maldives, 2016). While the **Government thereby sets an institutional framework for the sector, tourism remains a private sector activity**, typically involving partnerships between domestic firms and foreign investors, with minimal Governance interference to resort businesses (Rasheed, 2015.)

Health

As noted above, the Maldives have also made rapid progress in the health sector. **This has been achieved by implementing 'standard' recommendations, like introducing and maintaining universal vaccination programs, Malaria eradication programmes and establishing primary healthcare services at the local (atoll) level** (Rasheed, 2015). Since 2008, the Government has introduced national health insurance schemes to address affordability of social protection. Despite this remarkable progress, though, regional disparities, in particular between the capital and outer atolls, remain a challenge (ADB, 2015).

Managing graduation

The potential impact of graduation on the fishing industry (mainly tuna) has been a major concern for the Maldives. Whereas share of sector in total value added has been shrinking, it remains important in terms of employment, accounting for 11 per cent of total employment in 2009 (FAO, 2009). Fisheries are particularly important in outer atoll regions, where an estimated 65 per cent of the population depends on fisheries. As the margin of preference for fisheries is high and Maldives is not a beneficiary of other trading arrangements in major markets (with the exception in South Asia), there were fears of significant negative impacts of graduation (see, e.g., UNCTAD, 2003, and Campling, 2015). After a three year transition period, the country lost duty-free quota-free access on 1 January 2014 in the European Union as well as in China, after having lost preferences in Japan already in 2011. Moreover, in 2015 the Maldives lost access to the General System of Preference

tariff rates in the EU due to its upper middle income status, further increasing the tariffs.[17] Despite the initial fears, production and exports to Japan and the European Union have been relatively stable, indicating that negative impacts have been limited (UN CDP 2014, 2015; Government of Maldives, 2016). The Government attributes this to **export promotion activities by the Government and the private sector that enabled the country to enter new markets and to position Maldives fish as a niche premium product** (for example through Marine Stewardship Council certification). Hence, the **loss of preferences might have a positive effect on product innovation and moving towards higher value-added activities**.

The Maldives have also been very proactive on the international policy arena to garner support for a smooth transition. In fact, despite its small size the country has been a very active and effective negotiator, leading to the adoptions of the two major smooth transition resolutions by the United Nations General Assembly. The country also successfully pushed for **specific transition support measures available that are now available in principle for all graduating countries**. Examples include the extension of travel benefits to attend United Nations General Assembly meetings for up to three years and the extended eligibility under the Enhances Integrated Framework for trade capacity building. Regionally, the Maldives have secured a **special status in the South Asian Free Trade Agreement**, ensuring that the country receives no less favourable treatment than that accorded to LDC member states (currently, Bangladesh, Bhutan and Nepal).

Whereas it is very difficult to generalize, the finding indicates that active policies can help countries to manage potentially negative graduation impacts. However, these policies in turn require sufficient levels of development governance and institutional capacity.

4. Samoa

Background, structural transformation and progress toward graduation

Samoa is a SIDS in Polynesia with less than 200,000 inhabitants, whose population inhabit two main and several smaller islands. Similar to other Pacific island States, its governance structure combines a national government based on parliamentary democracy with the traditional, village based governance system (fa'amatai in Samoa). The latter is based on a hierarchical system built on customary relationships and social orders (Huffer and So'o, 2011). In particular, the village based governance is responsible for land use (80 per cent of the land in Samoa is customary rather than individually held) and provides social protection. Whereas the relationship between these structures is not without conflict, such tensions appear to be smaller than in other Pacific countries. Samoa has also undertaken steps to integrate formal and traditional governance structures through formal laws assigning villages the right to adopt bylaws (Village Fono Act from 1990) and through including strengthening village governance and promoting community development in the most recent national development strategy, the Strategy for the Development of Samoa 2012-2016 (Agaiava, 2014).

Samoa's economy is characterized by a structural change away from primary activities to services, in particular tourism, while also experiencing a decline in manufacturing from an already low level (see also Annex B). Whereas the structural transformation is thus similar to Cabo Verde

[17] Tariffs for fresh-chilled fish fillets increased further from 14.5 to 15 per cent, for frozen fillets from 14.5 to 18 per cent, and for prepared (loined or canned) from 20.5 to 24 per cent (Campling, 2015).

and the Maldives, Samoa has had much slower economic growth. In fact, the favourable economic development status of Samoa can to a large extent be explained with the relatively high starting level. The lower growth also partly explains why Samoa graduated later than Cabo Verde and the Maldives, even though it first met the graduation threshold in 1991.[18] The country finally graduated in 2014; the CDP recommendation from 2006 was endorsed by ECOSOC and the General Assembly in 2007, but the transition period was subsequently been extended from three to six years due to a Tsunami that hit the country in September 2009.

Compared to other LDCs, Samoa had not only a better starting position with regard to GNI, but also with regard to human assets, which were already high in the 1970s.[19] Hence, Samoa's experience is more one of maintaining rather than building human assets. As typical for a Pacific SIDS, Samoa's EVI remains high, largely due to the impact of the 'policy-invariant' factors population, remoteness and population in low elevated coastal zones. However, the decrease in export instability and victims (despite frequent occurrence of natural disasters) could indicate that the country has become more resilient to economic and environmental shocks.

Remittances

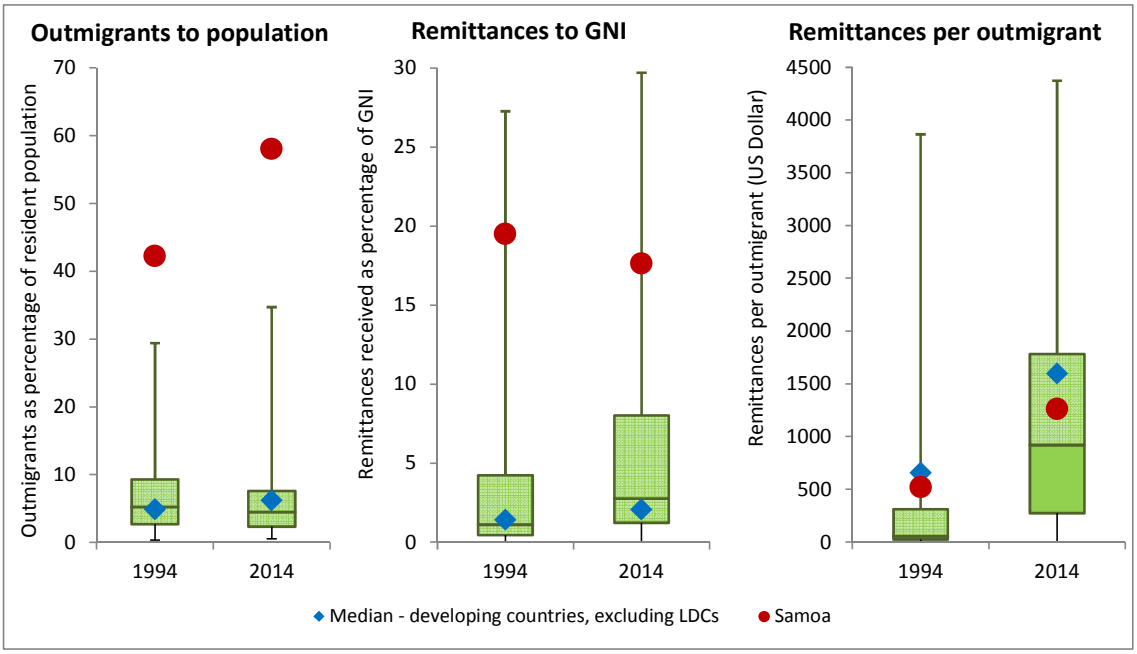
Samoa has a very large diaspora, the highest among Pacific SIDS and smaller only than some Caribbean SIDS. Figure x shows the outmigrants to resident population ratio (as measure of the size of the diaspora), the ratio of remittances to GNI and the average amount of remittances received per outmigrant in 1994 and 2014. It demonstrates the continuing importance of remittances for Samoa, even though the remittance to GNI ratio is no longer the third highest in the World.[20] However, Samoa might provide fewer lessons to other countries than Cabo Verde discussed above. **Samoa's high share of migrants and remittances can largely be explained with the special relationship between Samoa and its former colonial power, New Zealand**. Under this relationship, partly governed by the so called Treaty of Friendship between the two countries signed upon Samoa's independence in 1962, Samoans originally had easier access to temporary work permits and till today there are significantly higher quotas for permanent residency visas and less strict rules for obtaining New Zealand citizenship than for other immigrants.

[18] It met the criteria again in 1997, but failed in the actual reviews of 1994 and 2000 to reach the graduation threshold for GDP per capita that was used by the CDP as measure for income before 2003. Actually, the choice of indicator explains the failure in 1994, as Samoa's GNI is higher than the GDP. However, the failure in 2000 is more due to data revisions. Whereas the CDP in 2000 used a figure of $1,021 GDP per capita, currently available data shows that Samoa's GDP per capita in the 1996-1998 period was actually $1,327, far above the then threshold of $1,035.

[19] Interestingly, Samoa (along with the Maldives, Bhutan and Sikkim) was admitted to the CDP category in 1971 because "there is reason to believe that they merit inclusion", even though relevant data were not available at that time (CDP, 1971, p. 18). Currently available estimates point to a literacy rate in Samoa in 1968 of 81 per cent, far above the then inclusion threshold of 20 per cent. Moreover, even though 1968 data on GDP per capita are not available, it is unlikely that the GDP per capita of Samoa was below $120 at that time, given that in 1970 it was already $ 328 based on currently available data.

[20] In 1994, the LDCs Yemen and Lesotho had a higher remittances-to-GNI ratio than Samoa; in 2014 eleven countries (five LDCs and six non-LDCs) had a higher ratio.

Figure x: Diaspora indicators for Samoa and for LDCs



Source: CDP Secretariat based on outmigrant and population data from the United Nations Population Division and remittances data from World Bank. The Box-Whisker plots show the distribution of the indicators for the current set of LDCs.

Managing graduation

As Samoa graduated only recently, it is difficult to fully assess the experiences it made in managing the graduation. In particular, the country is still benefiting from the transition period in which many benefits (such as duty free quota free access in the European Union and other developed countries, access to specific multilateral funds such as the EIF and the LDC Fund under the United Nations Framework Convention on Climate Change, and the United Nations travel benefits) are still accessible. The graduation challenge is arguably eased by the fact that Samoa did not particularly benefit from LDC specific support measures, as its merchandise exports are small and mostly directed at Australia and New Zealand where Samoa has preferential access through other schemes. Similarly, most donors indicated that graduation does not affect their bilateral aid to the country. This highlight the importance of acquiring specific information about LDC benefits for managing transition.[21]

The overall approach by **Samoa has been to mainstream graduation into the overall national development strategy, rather than preparing a separate comprehensive transition strategy**. This approach is facilitated by the fact that Samoa uses a wide consultative process in developing national development strategies, including civil society, private sector, parliamentarians as well as development partners. Samoa also engaged in negotiations to extend specific trade preferences with China and achieved that it continues to have duty free access for 95 per cent of tariff lines for a three year transition period. However, negotiations with Japan to extend preferences for limited list of products apparently did not succeed. Internationally, **Samoa is**

[21] It should be noted that Samoa did not benefit from an impact assessment prepared by United Nations Department of Economic and Social Affairs, as these wre introduced only in 2007.

increasingly active in putting SIDS specific issues on the global policy agenda (evidenced, for example, by hosting the Third International SIDS Conference in 2014).

5. Vanuatu and Solomon Islands

Background, structural transformation and progress toward graduation

Both Vanuatu and Solomon Islands are archipelagos in the Melanesian subregion of the western Pacific. While both are SIDS, Solomon Islands is considerably larger in terms of population (584 thousand compared to 265 thousand) and number of islands (more than 900 compared to 83). Despite many similarities, the countries also differ with respect to governance experiences (see below) and progress towards structural transformation and graduation from the LDC category. Both countries experienced relatively low but volatile economic growth rates until the early 2000s, as can be seen from Appendix B. In Vanuatu, the low growth period after independence in 1979 culminated in an economic crisis in the late 1990s, which led to the intervention of the Asian Development Bank (ADB), a failed structural adjustment programme, recession and increased external indebtedness.[22] Negative experiences in the Solomon Islands, however, were much more severe. Per capita gross domestic product (GDP) shrank by a third in constant Solomon Islands dollars from 1995 to 2002 and only recovered its 1990 level by 2007. During the period, the Solomon Islands featured a civil war leading to the arguable failure of the state. A period from 1999 to 2002 known as "the Tensions" was partly linked to control of logging revenues and the gains from dwindling economic growth by a particular group perceived as having an ethnic identity. The military conflict ended through deploying an Australian-led Regional Assistance Mission to the Solomon Islands (RAMSI) assembled by regional neighbours and donors aimed at stabilising security and the political and economic situation. RAMSI still exists today, though it has recently been scaled down.

Vanuatu is now scheduled to graduate in 2020. The CDP recommended the county for graduation in 2012, after Vanuatu passed the graduation threshold for the third consecutive time.[23] That recommendation was endorsed in 2013, but the transition period had been extended in 2015 after Vanuatu was hit by the devastating cyclone Pam. While relatively high starting values compared to other LDCs should be acknowledged, GNI per capita has increased rapidly over the last decade and progress in education has led to high HAI scores, as can be seen from appendix B. A main driver for higher income has been the tourism sector. To a large extent, the sector's growth can be explained with sudden positive external environment. Whereas regional tourism demand from Australia and New Zealand increased in the early 2000s, effective regional supply (from the perspective of many tourists) decreased due to the 2002 Bali bombing and a succession of coups in Fiji. Vulnerability as measured by the EVI, though, remains high. Moderate gains on account of reduced export instability are expected to erode once the 2015 cyclone will be reflected in the EVI. Solomon Islands met the graduation criteria for the first time in 2015 and will be considered for graduation by the CDP in 2018. The graduation progress is due to recent increase in GNI per capita and improvement in education, while EVI remains even higher than in the case of Vanuatu. Logging

[22] Gay, D. (2004) 'The Emperor's Tailor: An Assessment of Vanuatu's Comprehensive Reform Programme', Pacific Economic Bulletin, November: 22-39

[23] The CDP actually recommended Vanuatu for graduation already once in 1997. Whereas that recommendation was endorsed by ECOSOC, the General Assembly postponed consideration of the question and in 2000 Vanuatu no longer met the graduation criteria. It should be noted, though, that this can be explained with data uncertainty. Based on currently available data, Vanuatu would have qualified for graduation in 2000, even if subsequent changes in the LDC criteria are taken into consideration.

continues to be a main driver of economic activities, though other primary activities such as fisheries also remain important and the country has a food processing industry, which is a main component of the manufacturing sector that contributes around 8 per cent to total value added. Tourism has also been growing recently.

Development governance

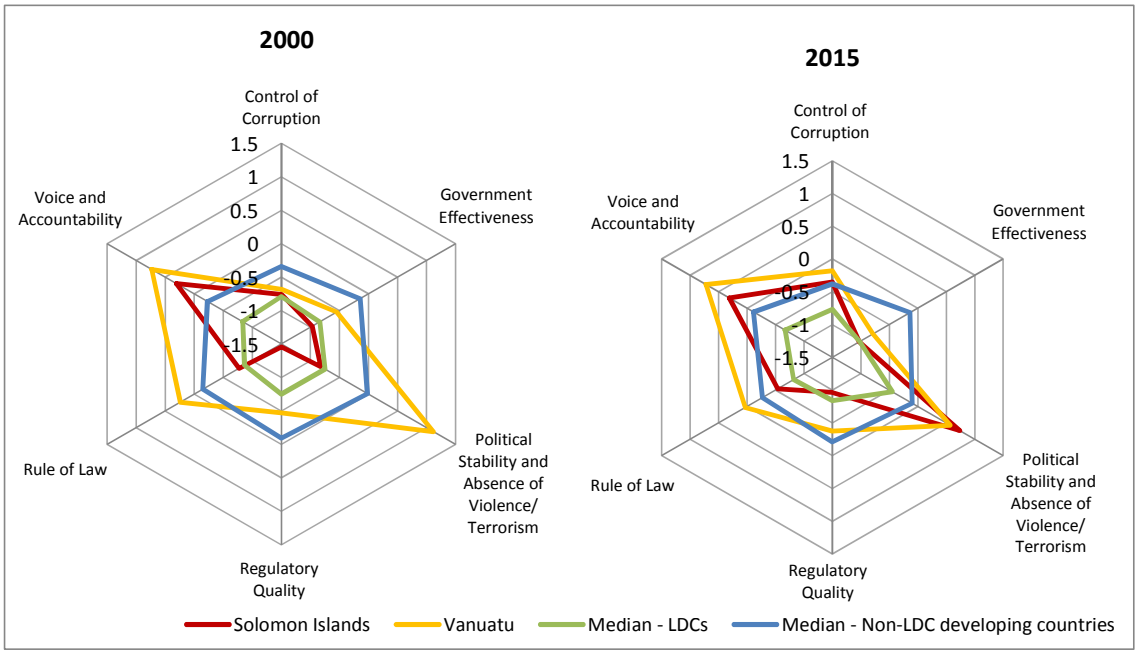
Whereas local identities play an important role in both countries (as in other Pacific islands), Vanuatu made relatively stronger progress towards developing national identity after independence. Following the failed late-1990s attempt at externally-led structural adjustment, this sense of national identity prompted government policymakers to attempt to mould policy to Vanuatu's specific social values, norms and institutions.[24] This included emphasis on the non-material goals that characterised traditional society, such as communalism, egalitarianism (among males) and mutuality. For instance, Vanuatu's second chamber of parliament is comprised of tribal chiefs, many of whom advocate a return to the custom, pre-monetary economy. Whilst the ability to prioritise culture, custom and equality should be seen as an end of development in itself, the cultivation of a sense of self-belief seemed also to foster development by allowing policymakers to tailor policy to national ends.

In the Solomon Islands, on the other hand, problems of state legitimation are more pervasive, which are partly a result of the country's fragmentation and the separation of linguistic/cultural groups (known as wantoks in both countries), as well as a relatively weak sense of national identity. Governance problems are exacerbated by the nature of the main economic activity, logging, by facilitating corruption and decentralising economic activity (logs are often exported directly from the island where they are cut) so that the various island communities – already traditionally very strong – do not see the central state as representing their interests or as a source of economic security. **One of the main lessons, therefore, is that governance needs to improve and that in small LDCs, particularly those which are geographically or culturally fragmented, more needs to be done to explicitly buttress the legitimacy of the state.**

Figure x on world governance indicators further illustrates commonalities and differences between these countries. During the tensions, Solomon Islands fared poorly even in relative to most LDCs, with the exception of voice and accountability. In 2015, however, the country has regained political stability and absence of violence. Regulatory quality and rule of law, however, have only marginally rebounded. Interestingly, both countries fare relatively poorly in government effectiveness, which appeared not to have major impacts in terms of economic performance. **The figure underscores the importance of political stability and peace as essential ingredient for progress towards sustainable development**.

[24] Gay, D. (2009) Reflexivity and Development Economics (London: Palgrave Macmillan): 108-145

Figure x: Worldwide Governance Indicators for Solomon Islands and Vanuatu



Source: CDP Secretariat based on Worldwide Governance Indicators, 2016 update.

Logging as development constraint

Lessons from the Solomon Islands largely concern the risks of the resource curse. The main difference with neighbouring Vanuatu is that Solomon Islands at independence had a large and profitable supply of natural tropical hardwood, something which shaped the long-term political economy of the country. Logging comprises 60 percent of Solomon Island exports, 15 percent of government revenue and 32 percent of foreign exchange earnings, and employs more people than any other industry. Solomon Islands is also mineral- and fisheries-rich, unlike Vanuatu. During the 2000s, when Vanuatu was experiencing a tourism boom, trade in Solomon Islands became even more undiversified both by sector and destination, with the Herfindahl-Hirschman index rising from 0.12 in 2002 to 0.51 in 2014, signalling high and increasing export concentration, largely a result of China's increasing demand for wood.

Whilst logging did not lead to Dutch disease via currency appreciation, as a readily-available source of economic activity the industry reduced the incentives for diversification and value-addition. Taxes on log exports (currently 2.5 percent) remain reliable fiscal revenue independent of direct and indirect taxes on citizens. Rather than reform and diversify, it was easier for the Government to persist with a readily available fiscal revenue stream.

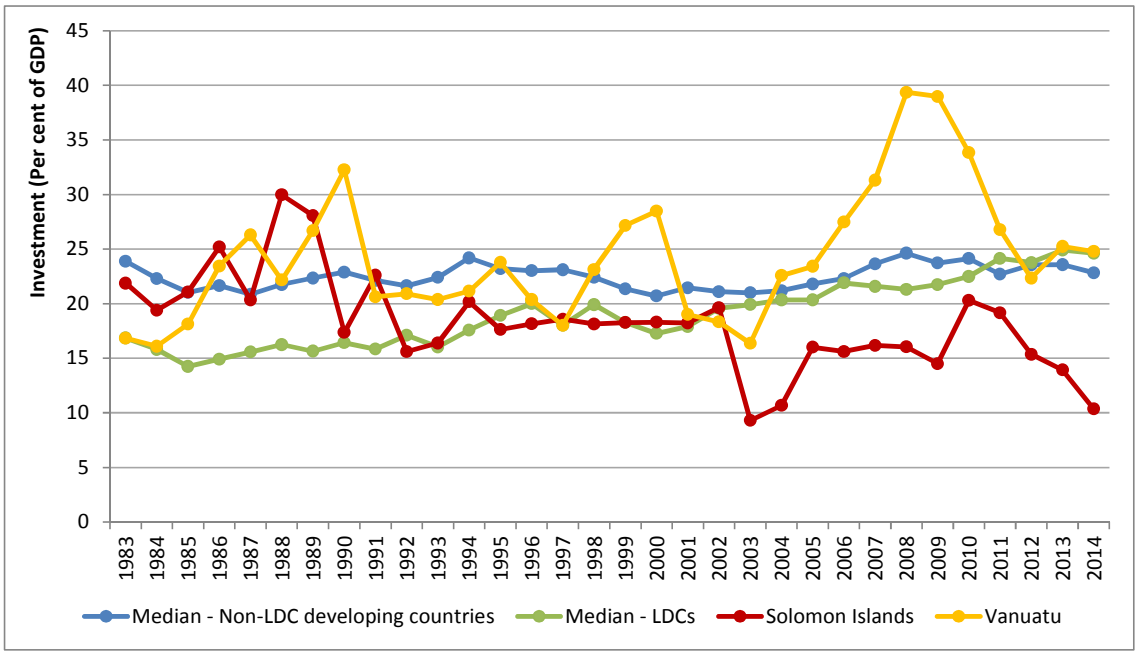
In addition, allegations of a lack of transparency, illegality, abuse and a lack of environmental controls have long surrounded the industry. Backward and forward linkages remain minimal, and most logs are exported unprocessed. Weak political accountability meant that government funds were often misspent or misappropriated rather than used to build infrastructure or to invest in the productive sectors. **These observations indicate that the impact of natural resource revenues on**

governance may be more detrimental than impact on competitiveness of alternative sectors transmitted through prices. Moreover, there have been reports of the exploitation of women and girls on logging camps. According to the Pacific Islands Millennium Development Goals (MDG) progress report: "Environmental degradation [is a] very significant problem due to rapidly accelerating land use, logging and the effects of global environmental change on seascapes and terrestrial landscapes. Logging activities [are] unsustainable, [and] cause siltation problems for reefs in coastal areas downstream of them." In effect, natural forest resources are now close to exhaustion after being logged almost unchecked since independence. Some estimates suggest that logging will cease entirely within the next 5-10 years. **This highlights that unsustainable resource use undermines not only the environment, but ultimately also economic growth.**

Mobilizing resources

In Vanuatu, **economic transformation was underpinned by a high rate of investment**, particularly in services – **in the form of FDI, aid and domestic public and private financing**. The mobilisation of resources has been an outstanding feature of Vanuatu's economic transformation rather than any particular shift toward a more 'efficient' or competitive domestic environment; something which would anyway be particularly difficult in such a tiny economy. It has been the attraction and usage of capital that has proved the lynchpin of economic development, not exposure to international prices or the liberalisation of the domestic economic environment, corporatisation or privatisation (although the latter have taken place in some areas, with varying success). Figure x on gross fixed capital formation shows the role of investment in Vanuatu's boom in the mid-2000s, though investment as share of GDP has recently played a smaller role. In contrast, Solomon Islands observed a lower and for many years declining investment share.

Figure x: Gross fixed capital formation in Solomon Islands and Vanuatu



Source: UNSD National Accounts Main Aggregates Database, accessed 31 October 2016.

Although the savings rate in Vanuatu is relatively low, financial intermediation has been high compared to neighbouring and comparable countries. This fact is due to the relatively large size of the financial system. There are four banks, three of which are foreign-owned branches and subsidiaries, and four insurance companies, two of which are local. Lending to indigenous locals, however, has tended to significantly lag that to expatriates. This underscores that **improved financial intermediation does not necessarily improve financial inclusion**. The large financial sector is due to Vanuatu's status as tax haven and off shore financial center. Interestingly, due to OECD transparency initiatives, the importance of the financial sector for economic output has declined over time, contributed a progressively smaller share of economic output, having shrunk from approximately 20 per cent of GDP at its height to around 5 per cent. However, the country appears to be benefiting now from infrastructure, human capital and networks and knowledge developed during its time as financial offshore center, as they facilitate now channeling financial resources into productive activities. Solomon Islands, on the other hand, have a relatively poor financial services development with very limited competition. Overall, liquidity in Solomon Islands has been as high as or even higher than in Vanuatu, but in the Solomon Islands savings are not being converted into productive private investment.

As domestic savings are relatively low, FDI has played a major role in transforming the Vanuatu economy. Of approximately $800 million of proposed FDI projects submitted from 2007 to 2012, some 85 per cent by value of were in the services sector, notably in tourism services, retail, finance and construction. This compares with 8 per cent of proposed FDI flowing to manufacturing projects, and less than 5 per cent to agricultural projects. **Tourism FDI has brought with it associated entrepreneurial know-how, although linkages with other sectors remain low**.

Government investment in Vanuatu has also contributed strongly to the development of productive capacity and economic transformation.[25] Tax revenues rose steadily from 2003 onwards, around the start of the economic upturn, reaching 27 per cent of GDP in 2008 before falling for the next five years then increasing rapidly to over 31 per cent of GDP in 2015 following cyclone Pam. This is a high rate for an LDC, particularly one reliant on trade and consumer tax revenues. A total of seven major debt-financed infrastructure projects are planned from 2016-21, worth US$397 million, or around half of 2014 GDP.[26] In the Solomon Islands, however, fiscal policy has progressively tightened. The government budget was in surplus from 2009 onwards, recording large surpluses of 8.3 percent of GDP in 2010 and 6.4 percent of GDP in 2011. Public debt had declined to the very low level of 13.6 percent of GDP by 2015 according to the International Monetary Fund (IMF), one of the lowest rates in the world. **This underscores that overly restrictive fiscal policy can be an important constraint to expanding productive capacity.**

Another difference between Vanuatu and the Solomon Islands has been the use of official development assistance. Both countries receive high amounts of ODA compared to their size, with Vanuatu receiving $380 per capita in 2014 and Solomon Islands $ 347. However, in Solomon Islands ODA was not used primarily for investment purposes or for the development of productive capacity.

[25] Thus confirming Nicholas Kaldor's well-known 1963 statement that: "It is shortage of resources, and not inadequate incentives, which limits the pace of economic development. Indeed the importance of public revenue from the point of view of accelerated economic development could hardly be exaggerated."
[26] IMF article IV mission report, 2015, http://www.imf.org/external/pubs/ft/scr/2015/cr15149.pdf

Tourism, one of the most promising areas for economic development, has received only a negligible share of Aid for Trade, and less than mining, which tends to receive large sums of incoming foreign investment. Energy appears to have received limited investment despite the continued problem of black-outs and high electricity prices. Of the A$2.6 billion in expenditure under the Regional Assistance to the Solomon Islands (RAMSI) in the decade following the Tensions, A$2.2 billion was spent on law and order, ten times the outlays on economic development. In fact, the RAMSI expenditures could have met every Solomon Islanders' basic needs during the decade (officially calculated as 5900 Solomon dollars per capita per year, or approximately $760). To the contrary, **grant-funded infrastructure investments have proven particularly successful** in Vanuatu, including the $65 million US Millennium Challenge Corporation completed in 2011 which financed the rehabilitation and sealing of the two most important roads in the country as well as supporting the Department of Public Works. These infrastructure projects have not only facilitated a variety of economic activities but in themselves supported demand during economic volatility, such as during the global financial crisis from 2008 onwards. Whilst industrial policy was not explicit, and the 'hard' import-substitution industrial policy attempted during the 1980s and 1990s fell short of its objectives, these **high rates of domestic investment and targeted international support in specific areas – wharves, roads and trade-related infrastructure -- can be seen as a form of soft industrial policy in that they were highly selective, consciously articulated and implemented by donors and government**.

Trade policy

Other useful lessons from Vanuatu relate to the focus of trade policy. Whilst trade liberalisation was being urged on the country in the late 1990s, which ultimately led to Vanuatu joining the World Trade Organisation in 2011, neither external nor internal market access for either goods or services were the primary obstacles to trade growth. The main challenges lay on the side of supply rather than demand, including the many well-document barriers to business – smallness, fragmentation, access and security of land tenure, the high domestic cost structure, standards, infrastructure and financing. Access to the major markets, Australia and New Zealand for the principal goods and services exports other than labour has long been very open. Inward access for other imports is often generally unregulated and liberal, as might be expected in a small, relatively young economy. The large number of bilateral and regional agreements in existence or under negotiation has thus proved of relatively lesser consequence alongside bigger structural changes at the global and domestic level. This suggests that for other countries of a similar size and with similar characteristics, **comparatively more emphasis might be placed on fostering the ingredients of sustainable productive capacity – human assets, physical assets and linkages – than on domestic or international liberalisation**; or at least that trade liberalisation should be assessed in part on the basis of its impact on productive capacity. **Given the limited pool of human resources, the considerable time, travel costs and emphasis devoted to trade negotiations detract from efforts to raise productive capacity**.

Difficulties in harnessing social synergies

Despite the remarkable progress made by Vanuatu in raising income and human assets, the country also illustrates the difficulties in harnessing synergies between structural transformation and social outcomes. On most measures the country remains highly unequal, with an increasing gap between the urban cash economy and the mostly subsistence outer islands which do not all benefit from tourism. In fact, subsistence activities (facilitated by high land fertility) and traditional social organization provide the safety net for large part of the country. Most gains of high GDP growth

accrue to people living in the main towns or with some connection to the tourism economy. Urban drift and landlessness (in some cases caused by the sale of land for tourism development) are increasing, and several large slum areas have developed in the capital, Port Vila. Formal joblessness is high, and many tourism enterprises remain foreign-owned enclaves with limited employment or linkages. Given limited domestic production of manufactured, processed or even agricultural products, most goods for the tourism sector are imported. **This underscores the risks of services-based structural transformation, with its inevitably low levels of productivity and the associated difficulties of creating large-scale employment.** Moreover, the lack of mechanisms for transfers or redistribution has exacerbated inequalities caused by structural transformation.

6. Bhutan

Background, structural transformation and progress toward graduation

Bhutan is a small mountainous LDC in South-Asia with 775,000 inhabitants. Economically and politically, the country is closely aligned with India, which provides significant financial contributions to the Bhutanese budget and which is the main trading partner, accounting for more than 85 percent of Bhutan's merchandise exports and almost 80 per cent of imports. Trade between the countries is mainly governed by an extremely liberal bilateral trade agreement. Since opening to trade and investment in the 1990s, the country has experienced rapid economic growth. As can be seen from appendix B, the main driver of economic growth has been the production (and export) of electricity through hydropower. In addition, economic growth is also due to tourism, mining and basic manufacturing of ferroalloys, alongside the commercialisation of some rural agricultural activities. The development of Bhutan has to be seen in the context of the Bhutanese vision of gross national happiness (GNH) that is discussed below.

In line with economic growth and significant investments in social sectors, Bhutan has made rapid progress towards graduation, as can been from appendix B. The country first met the graduation criteria in 2015 and will be considered by the CDP for graduation in 2018. Per capita income has been rising rapidly since the 2000s, reaching almost the 'income only' threshold. HAI score have also rapidly improved and passed the current threshold in 2013, mainly on account of rapid improvement in child mortality and expansion of secondary education.[27] Generally, Bhutan's progress in improving assets is routed in the government's active efforts to reduce poverty and maintain equality: the promotion of universal education and the shift of workers into the cash economy has expanded the potential workforce and stimulated demand. Poverty reduction has been faster than in south Asian countries and has fallen to lower levels, whilst equality is higher than in comparable countries (the income Gini coefficient is 38.1, which is low by LDC standards). Economic vulnerability, however, remains high. While the shift of global economic activity towards Asia has reduced the remoteness score and agriculture as lost its role as dominant economic activity, the country remains vulnerable to natural disasters despite undertaking disaster risk reduction measures and export instability is high, largely because each new hydropower plant leads to a sudden increase in export earnings. Agricultural instability has actually worsened, as the increase in production over the last decade has been accompanied with higher volatility.

[27] The lack of progress in reducing undernourishment can be explained with data quality, as the only available figures are based on relatively old informal estimates.

Gross national happiness as development governance

The national vision, Gross National Happiness (GNH), aims to "maximize the happiness of all Bhutanese and to enable them to achieve their full and innate potential as human beings". The development strategy advocates "a harmonious balance between the material and non-material dimensions of development". The four main pillars of GNH are sustainable development; the preservation and promotion of cultural values; conservation of the natural environment; and good governance.

All government policies are vetted by the GNH Commission, a powerful cross-ministerial body that reports directly to the prime minister and establishes each five-year plan. GNH has intrinsic benefits. **Economic growth is seen as a means to an end rather than an end in itself, and growth is sacrificed if it harms the worst-off or damages the natural environment. This means that human development is in effect the highest priority rather than aggregate economic expansion**, which is often a misleading indicator of development.

Although the GNH process can be time-consuming and bureaucratic, it means that policies are centralized and legitimized; and tailored to the national context with minimal potential dissent. In Nepal, for example, one of the key obstacles to infrastructure development has been the unwillingness of some communities to allow the building of roads and electricity networks, in part due to their perception that Kathmandu does not represent their interests. The Bhutanese emphasis on GNH promotes a **national vision around which much of the population can coalesce even if some may lose out in the short-run. This strong process of state legitimation plays an important role in facilitating active measures to promote productive capacity**, such as the construction of infrastructure and investment in education and training.

Hydropower as driver of economic growth and access to sustainable energy

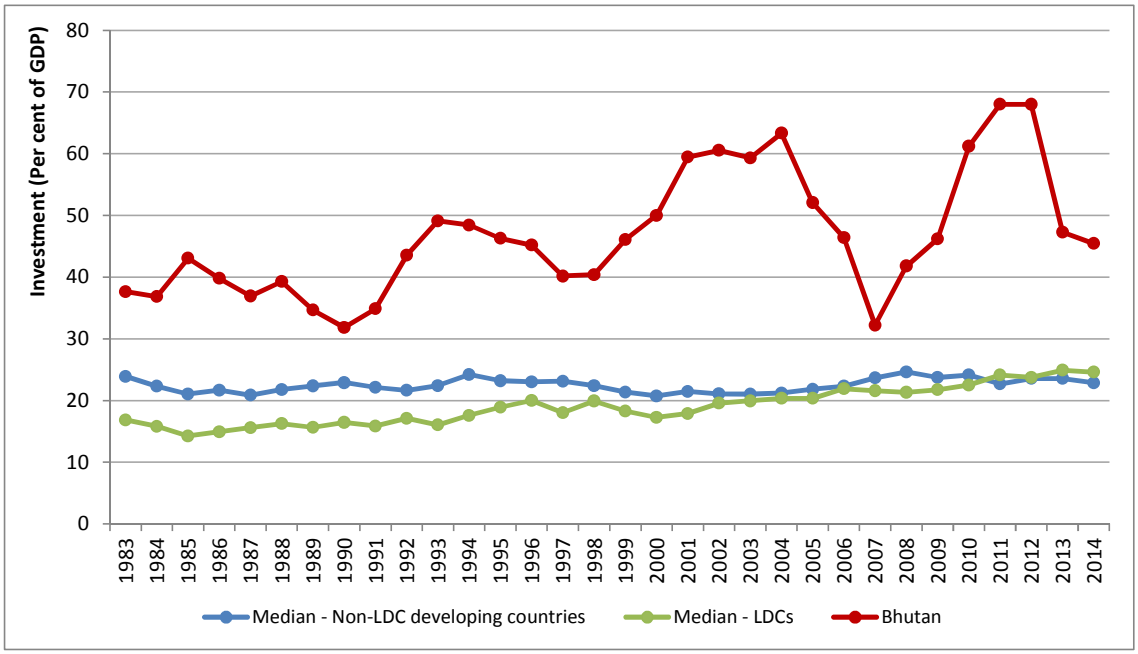
The Government of Bhutan actively chose hydropower as an engine of development. Due to its location in the Himalaya, Bhutan has huge potential for hydropower. Installed capacity stands at around 1,500 MW, just a small share of the estimated technical feasible capacity of 24,000 MW. Hydropower is the biggest source of government income, with two government companies contributing two-fifths of state revenues, a third of exports and a fifth of GDP. The construction of several major hydro projects in coming years will increase the contribution of hydropower even further. Under an agreement with the Government of India it is planned to develop an additional capacity of 10,000 MW by 2020. However, whereas three plants with a combined capacity of 3,000 MW are currently under construction, others are still in the planning stage or preliminary construction stage.

The fact that hydropower is very capital intensive is a major factor for the very high and volatile share of investment in GDP (see figure x), which in 2011 and 2012 was the highest in the World and in 2014 still the sixth largest, though government infrastructure investment is also important. The massive investments also explain the high and volatile share of construction in GDP visible from figure B.9.1 in appendix B. Most hydropower plants are undertaken under a special arrangement between Bhutan and India.[28] This arrangement reduces the financial risk of these massive investment while maintaining domestic control. Whereas the arrangement also reflects the

[28] One smaller plant only for the domestic market had been financed through development cooperation with Austria; two plants have been co-financed by ADB.

close political relationship between the two countries, it may still provide useful lessons for other countries where natural resource exploitation plays a dominant economic role. **Current hydropower plants are governed by an intergovernmental agreement, under which projects are owned by the Government of Bhutan, but financed by the Government of India through grants and loans**. Electricity not used domestically is sold to India at price determined when the projects get commissioned (and periodically reviewed thereafter) on basis of a "cost plus" (covering construction, financing, operation and maintenance costs as well depreciation and capital return) approach (IMF, 2014), so that cost risk is effectively born by India.[29] However, hydrological risks affecting electricity production, including glacial lake outburst floods, may still be borne by Bhutan.

Figure x: Gross fixed capital formation in Bhutan



Source: UNSD National Accounts Main Aggregates Database, accessed 31 October 2016.

The **massive hydropower investments do not only serve as source revenue, but also to achieve Bhutan's energy goals**. Whereas around 75 per cent of electricity is exported to India, the projects also enable the country to improve availability, accessibility and affordability of electricity. While in 2003 only 40 per cent of Bhutanese households had electricity access (NSB, 2003), the rate increased to 99.6 per cent for urban and 87.3 per cent for rural households (BLSS 2012). Now, under a rural electrification project, the rural electrification rate stands at 95.5 per cent (GHC 2015), which is a very remarkable achievement. **Part of the proceeds from exporting electricity are used to finance a progressive tariff schedule for domestic household consumers**, under which larger consumer pay higher per unit charges; for rural consumer basic electricity consumption is free of charge in support of pro-rural development goals.

The sector is guided by the Sustainable Hydropower Policy 2008, aligning hydropower development with the overall development vision. Whereas hydropower development, in particular

[29] Several projects under development will be joint ventures between Bhutan and (public) Indian power companies, with Bhutan maintaining the majority and financing still to be provided by India.

large scale projects, unavoidable lead to trade-offs between economic, social and environmental objectives, the GNH vision and its derivative policies provide a framework to effectively address these trade-offs. For example, Bhutanese policies demand consultation with affected communities, compensation for affected landowners, and afforesting twice the area deforested due to hydropower development. It should be noted, however, that larger projects currently under construction or development are raising more concern among communities and NGOs, in particular due to environmental impacts (Vasudha-Foundation, 2016).

Nascent economic diversification

Hydropower projects have only limited employment effects. For example, three of the currently operating five plants employ together only 1400 persons. While almost 95 per cent of the employees are Bhutanese, very few are from affected communities (Vasudha-Foundation, 2016). Whereas construction generates huge employment, most construction is undertaken by Indian companies with Indian workers. This **shows limited upstream linkages of hydropower projects in Bhutan**. These are partly due to lack of sufficient productive capacity in Bhutan for undertaking large scale projects, but could to some extent also be explained with the large influence of India in developing the hydropower projects.

Bhutan, however, has been more successful in harnessing downstream linkages. The country has an established sector of basic manufacturing of ferroalloys, which is electricity intensive and requires locally available ores. Ferro-alloys, ferrous-silicone, calcium carbide, manganese and silicon carbide together have in recent years comprised half of exports (the destination being India) and over a tenth of GDP, although the contribution is declining as a result of a fall in world prices. Industrial activities are concentrated in two industrial estates, Pasakha and Phuentsholing on the Indian border.

A nascent sector in Bhutan is ICT services, which constitute a small but growing part of economic activity. Thimphu Techpark, launched in 2012, and located near the capital Thimphu, houses 11 foreign companies specializing in telecoms, business process outsourcing and online data. A total of 350 workers are employed at the park, which is an important source of employment for young people (although a small proportion of the 350,000 economically-active national workforce). Companies report being attracted to the TechPark by good education, competitive wages, and cheaper electricity and rent than in neighbouring Bangladesh and India. With regard to education, an important factor is that most Bhutanese are taught English from an early age.

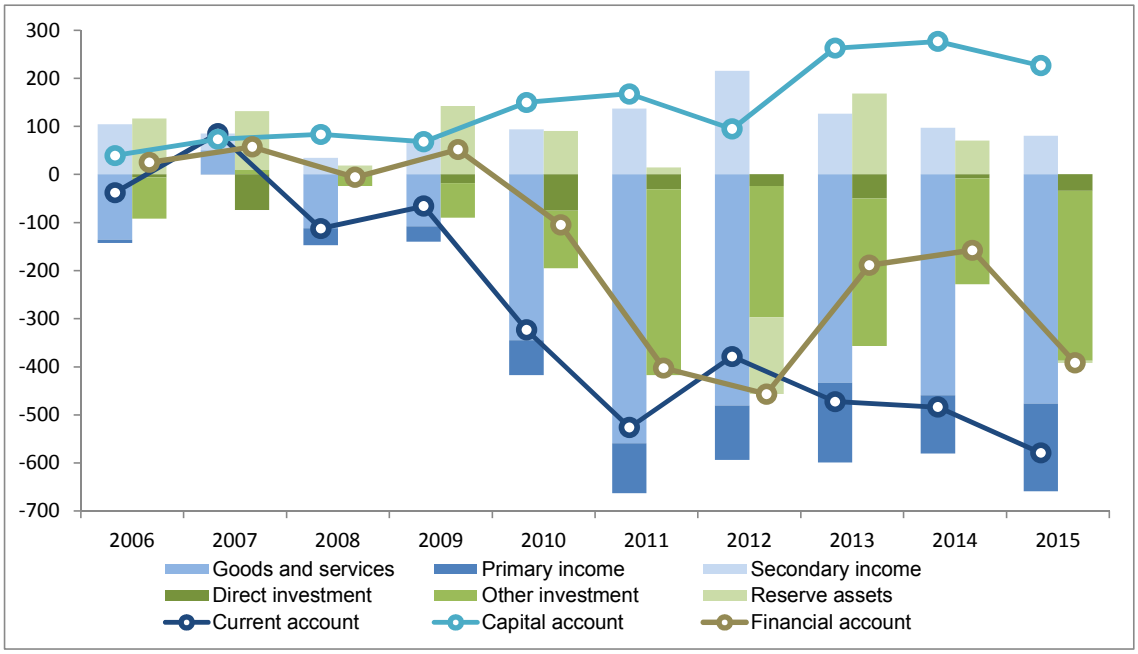
Finally, Bhutan is also benefiting from tourism, benefiting from its history, landscape and largely unspoiled nature. Again, a **notable characteristic of tourism development in Bhutan is the alignment with its natural vision**. To minimize negative environmental and cultural impacts associated with mass tourism, the country decided to limit tourism and appropriating the corresponding economic rents. Visitors are obliged to pay a minimum of US$200 per day ($250 in the high season), which includes a US$65 royalty charged by the government plus food, accommodation, local transport and guides. Tourism arrivals rose to 155,121 in 2015, with total spending estimated at $71 million, approximately 4% of GDP.

Challenges in sustaining macroeconomic stability

The nature of the dominant hydropower sector causes challenges for macroeconomic stability. The country appears not be affected by Dutch disease effect, as the local currency is irrevocably pegged

to the Indian Rupee and inputs (capital and labour) to the sector are mostly imported and do not significantly affect domestic prices. Moreover, the development governance structure limits other negative impacts of massive natural resource exploitation such as conflicts over rents or weakened incentives to develop alternative sectors. However, Bhutan faced challenges in maintaining monetary stability. The hydropower investments require massive imports from India and high demand for Indian rupees that generate export revenues (and hence inflows of rupees) once they the plants start operating. Consequently, the current account exhibits large swings, whereas the capital account is generally more stable and positive due to development aid in particular from India (see figure y). In 2011/2012, Bhutan faced a massive shortage of Rupees, forcing the Central Bank to liquidate reserves, resort to short-term commercial borrowing and ultimately impose additional capital control measures to maintain the peg. The current account deficit has actually widened further in recent years, but has been balanced by loans and higher capital transfers (both hydropower related) rather than by depleting reserves.

Figure x: Balance of payment in Bhutan (in millions of US Dollar)



Source: IMF Balance of Payments, accessed 14 November 2016. Note that in the standard presentation of the BoP we have: Current account + Capital account= Financial account – Errors and Omissions.

The experience provides useful lessons for many countries with non-synchronized import and export flows, particularly if swings are to a large extent predictable as in Bhutan. Maintaining high levels of international reserves remains a standard tool for many developing countries. Bhutan actually had plenty reserves, with an international reserves to GDP covering more than nine months of input even in the 2011/2012 financial year of the Rupee shortfall. However, less than 4 per cent of reserves were in Rupee, the currency (which is not fully convertible) actually needed for most transactions. After the crisis, the share of Rupees in reserves has increased and stood at 18 per cent in 2014/15. However, this ratio is still regarded as too low, so that the mismatch of reserve composition could become problem again (IMF, 2016). **This underscores that not only the amount of international reserves but also the composition matters**. The experience also shows the

potential benefits of a stabilization fund that can serve as effective ex-ante sterilization mechanism of time-varying natural resource related flows (Rashid, 2012). Such fund could receive Rupee inflows of the Government of Bhutan and pay for necessary imports and interest on hydropower loans, without channelling these flows through the domestic banking system. Such a mechanism would also stabilize credit and money supply, though this might also reduce seigniorage as source of government revenue.

C. Pathway III: Structural transformation by building human capital and diversifying economies

The third pathway to graduation combines investment in human capital with diversifying economies. Typically, countries at early stages of structural transformation focus on measures for increasing agricultural productivity, resulting not only in improved food security but also in enabling people to move to higher productivity activities in manufacturing and modern services, though sectors and subsectors vary across countries.

1. Viet Nam

Background, structural transformation and progress toward graduation

Viet Nam is often seen as a successful example of rapid economic transformation. Until 1986, Viet Nam implemented a Soviet-style centrally planning economy. Despite hopes of achieving high economic growth, results were negative and disappointing: slow growth, high inflation and overly high dependency from the assistance from the Soviet Union. The collectivized farmers did not have incentives to work and Vietnam had to import million tons of crops annually. The collapse of the Soviet Union deprived Vietnam suddenly from all these important supplies, from oil, steel, fertilizer, crops and other goods. This dramatic pressure has pushed Vietnam to conduct bold reforms, moved from centrally planning to market economy with socialist orientation and joined the regional and international integration. Vietnam developed the private sector as a driving force in an economy still dominating by state-owned companies, reformed the price system and banking system, and attracted foreign direct investment (FDI).

The reforms led to solid economic growth. As can be seen from appendix B, Viet Nam structurally transformed away from agriculture towards manufacturing and services. However, the share of manufacturing has recently started to decline. Whereas the share of manufacturing is higher than in almost all LDCs, it is lower than in its more advanced ASEAN peers.[30] Hence, Viet Nam could well become an example of premature de-industrialization.

Viet Nam has never been an LDC, despite being a low income country until 2011. As can be seen from appendix B, this is due to the comparatively high levels of human assets and relatively low EVI scores. It should be noted that Viet Nam in actual reviews never met the inclusion threshold for either HAI and EVI or their predecessors, because HAI thresholds were comparatively lower in the past (as were general levels of human assets in all countries) and because previous versions of the EVI did not recognize key vulnerabilities to climate change. In fact, share of population coastal zones

[30] The share is higher in the orginal ASEAN members Thailand, Malaysia, Indonesia, Philippines and Singapore as well as in new ASEAN member (and LDC) Myanmar, it is lower only in Brunei and the LDCs Cambodia and Lao PDR.

and victims of natural disasters contribute more than 75 per cent to Viet Nam's EVI score. Moreover, despite high HAI scores, there are many concerns on upper secondary school enrolment and on the quality of the education system, in particular in comparison to Asian non-LDC developing countries.

Challenges in development governance

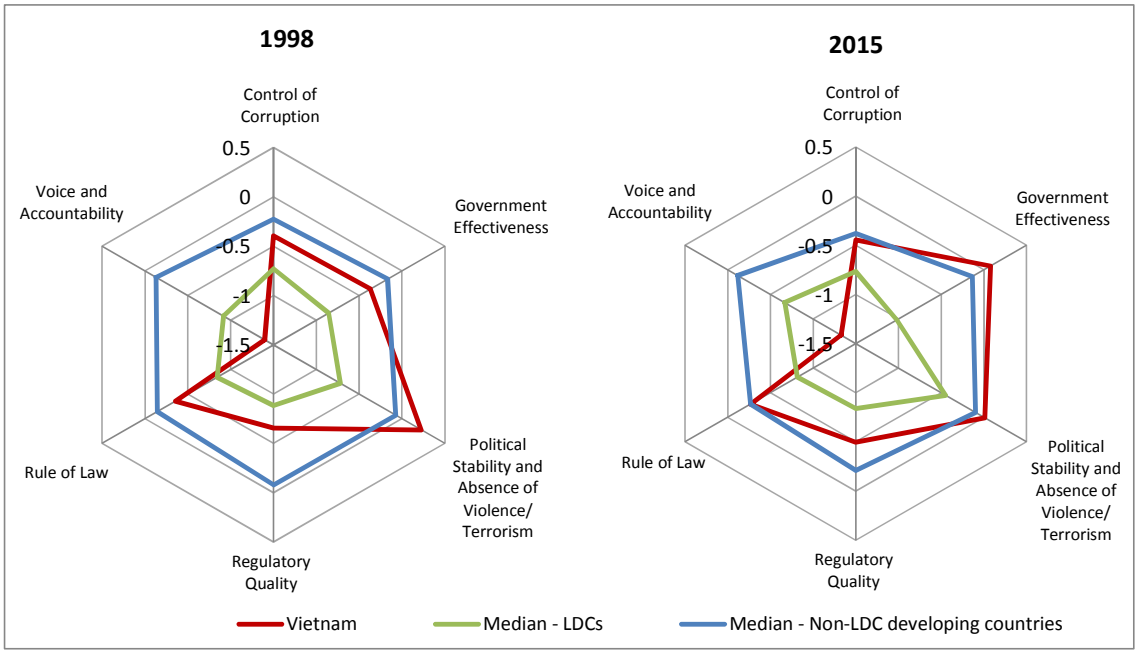
Whereas Viet Nam was able to adopt implemented wide ranging economic reform on basis of strong political leadership, progress in political and institutional reform is clearly lagging behind. There is no counter-balance to State power at any level; civil society is officially not allowed yet and only loyal mass organizations are authorized to operate. Transparency and accountability are generally low, partly reflected in the strict control and surveillance of the press by the State. Whereas the Constitution of Vietnam in 2013 has promulgated fundamental human rights, such as freedom of expression, freedom of press, and freedom of association, these rights have yet to be translated into laws and implemented.

Low transparency and accountability also enable vested interest groups to dominate public investment decisions (highways, seaport, public procurement), land use, mineral exploitation, equitization (privatization) of State-Owned Enterprises (SOEs), as exploitation of "connections" promises larger gains than fair competition. Within the government, lack of accountability as well as an overburdening of the bureaucracy leads to low fiscal discipline, wasteful spending and rising debt levels. This is exacerbated by the fact that the State budget finances not only State administration, but also the apparatus of the Party and some 140 loyal mass organizations.

Coordination of Government institutions is also limited and insufficient, both between various central Government agencies, (e.g. between the Ministry of Finance and the State Bank on fiscal policy and monetary policy, between the Ministry of Finance and the Ministry of Planning and Investment) and between central and local Government. Moreover, there is a lack of local autonomy in Vietnam, so that local governments are relying on transfers from the central Government, but lack possibilities and creativity for solving locally specific issues.

The governance challenges are also visible from figure y on governance indicators in Viet Nam, though Viet Nam overall remains comparable to other non-LDC developing countries, with the exception of voice and accountability.

Figure x: Worldwide Governance Indicators for Viet Nam



Source: CDP Secretariat based on Worldwide Governance Indicators, 2016 update.

Agricultural market reforms

Agricultural reform has been a priority in the economic reform program from the late 1980s. While maintain quasi state ownership of all agricultural land and existing collectivization of agriculture, the **Government of Viet Nam assigned farmers five specific rights in 1989**: to cultivate the land, to earn the harvest, to mortgage the land for bank credit, to transfer the land using right to another farmer and to inherit the land using right to their children. In addition, the Government **cancelled the system of state procurement** on rice and pig meat at fixed (and below production cost) prices and allowed farmers to sale their products freely at market price. Moreover**, the state subsidized the costs of irrigation**. The impact of these reforms had been impressive. The income of farmers increased immediately threefold and agricultural production increased fourfold, turning Vietnam from an importer to a major rice exporter while ensuring food security Rice production has been jumping from 15.8 million ton in 1985 to 19.22 million ton in 1990 and 40 million ton in 2010. The integration of Viet Nam into the global economy also turned the country into an important exporter of black pepper (exporting 98 per cent of its production), coffee (exporting 92 per cent of its production), cashew nut, shrimp and catfish.

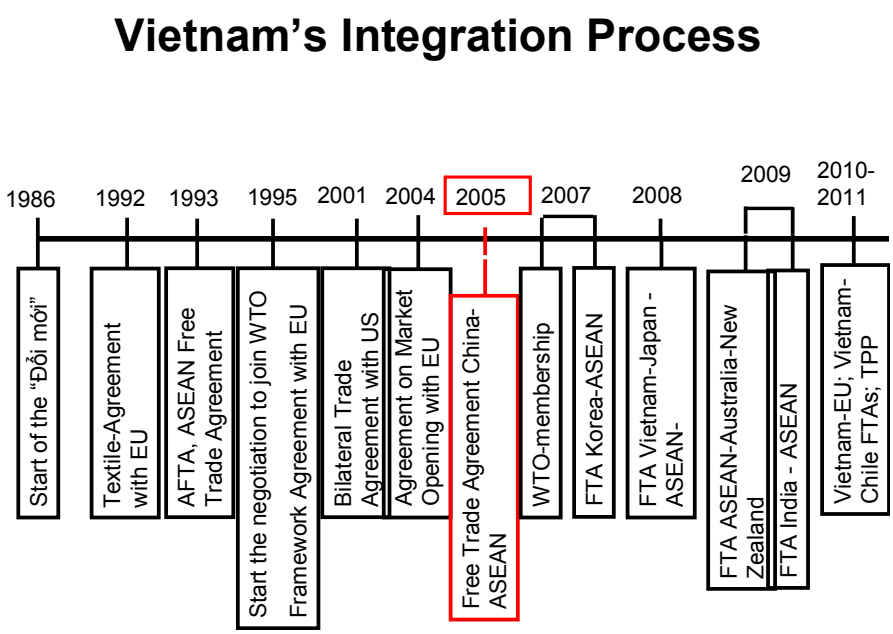
After decades of high growth rate, Vietnam's agriculture nowadays faces big challenges; as the growth rate is declining, Vietnam's agriculture is at a crossroad.[31] Climate change and various dams built by China, Lao PDR and Thailand on the upstream of the Red River in the North and the Mekong River in the South are causing drought and salination downstream in Vietnam, especially in the Mekong River-Delta. In addition, structural problems of Viet Nam's agriculture remain. Per capita arable land in Vietnam is too small, only 0.34 ha/capita only, leading to sub-optimal sizes of farms.

[31] http://documents.worldbank.org/curated/en/116761474894023632/Transforming-Vietnamese-agriculture-gaining-more-from-less

Moreover, **the quasi state ownership of land, while not hindering initial reforms, has over time turned into a constraining factor**, indicating the importance as well as difficulty in adapting reforms to changing external conditions. The State can take away arable land away from farmers by laws, turning it into construction land while compensating farmers at below market prices. In addition to negatively affecting famers and their livelihoods, such actions also negatively affect social cohesion. Annually there are ten thousand of protest actions by the farmers against land appropriations, constituting 86 per cent of all protests in the country.

Integration into global economy

As noted, Viet Nam used integration into the regional and World economy as means to advance its development. Rather than passively using trade opportunities, the country has actively negotiated a multitude of agreements, as can be seen below for the period 1986 to 2011.



Lately, Viet Nam has also signed the Trans Pacific Partnership (TPP) agreement and is actively participating in the in the negotiations to form the RCEP (Regional Comprehensive Economic Partnership) between the ten ASEAN States, Australia, China, India, Japan, New Zealand, and the Republic of Korea and which is expected to be signed in the near future. If all these signed agreements will be implemented, Vietnam will have Free Trade Agreement with 56 economies.

The combination of international and domestic policy reforms was indeed successful**. Hence, Viet Nam's experience shows that it active integration into World markets can indeed serve as an external vehicle to enforce domestic reforms, provided that supply capacities exist or can rapidly be developed.** Since beginning of the reforms, Viet Nam diversified its economy and become a major actor in international trade. At the same time, Viet Nam is facing challenges in moving-up the value chain and producing more sophisticated products. A key challenge for Viet Nam, in addition to the governance constraints discussed above, appears to be a lack of investment in science and technology and human capital. Despite high attention by the Vietnamese leadership to science and technology and more than 1100 (public and private) research and development institutions, a recent

assessment by the World Bank and OECD found that "Despite its historical record of scientific research, Vietnam's innovation system in the modern sense is only emerging. Current science, technology and innovation capabilities are weak and the national innovation system is in a nascent and fragmented state. Research and development both in the public and private sectors still have a lot of room for improvement."[32] The country's ranking innovation and knowledge indices is also relatively low. A key constraint appears to be the structure of the private sector. About 95 per cent of the companies operating in Vietnam are small and medium size enterprises (SMEs) with less than 50 employees. They are unable to invest at least 3% of their profit into science and technology according to the Law on Science and Technology 2013. Whereas Viet Nam aims to have 3000 science and technology enterprises until 2020 and established the National Foundation for Science and Technology (NAFOSTED) that provides financial support for research and development in science and technology research, progress to date has been limited.

2. Bangladesh

Background, structural transformation and progress toward graduation

Upon independence in 1971, Bangladesh was seen as "test case of development" (Faaland and Parkinson, 1976), as widespread poverty and illiteracy as well as overcrowding and high population growth in the country was seen as almost intractable development constraints at that time. Against these odds, Bangladesh can be seen as development success. As can be seen from appendix B, the country experienced a positive trend of increasing growth rates and a gradual transformation from agriculture to manufacturing and services. Growth rates in 2017-18 are expected to be close to 7 per cent (WESP, 2016), underscoring even in difficult economic environment negatively affecting many other LDCs. Whereas growth was initially driven by an increase in agricultural productivity associated with the Green Revolution, remittances and production of garments became main drivers since the 1990s (Cornia and Scognomilla, 2016.)

Consequently, the country has made significant progress towards graduation from the LDC category. Whereas in the 2015 triennial review it still met only one criterion (EVI), it is on track to meet HAI as well in the 2018 review, making a recommendation for graduation in 2021 possible. As shown in appendix B, the rate of progress in building human assets has been particularly strong in the 1990s. Bangladesh reduced its economic vulnerability in particular due to reduction in export instability amidst the rapid increase in exports, mainly ready-made garments, which could indicate that manufacturing can be a less volatile means of integrating in the global economy than natural resource exploitation or services. In addition, the shift of global trade towards Asia has reduced Bangladesh's remoteness and the overall transformation out of Africa also contributed to lowering EVI score, in which 'fixed factors' overall play a smaller role due to the large size of the country (though exposure to climate change impacts such as sea level rise and storm surges is very high). However, despite some progress in recent years the country remains amongst the most vulnerable to natural disasters.

[32] http://www.worldbank.org/en/news/press-release/2014/11/24/enhancing-science-technology-and-innovation-to-drive-sustained-growth-in-vietnam

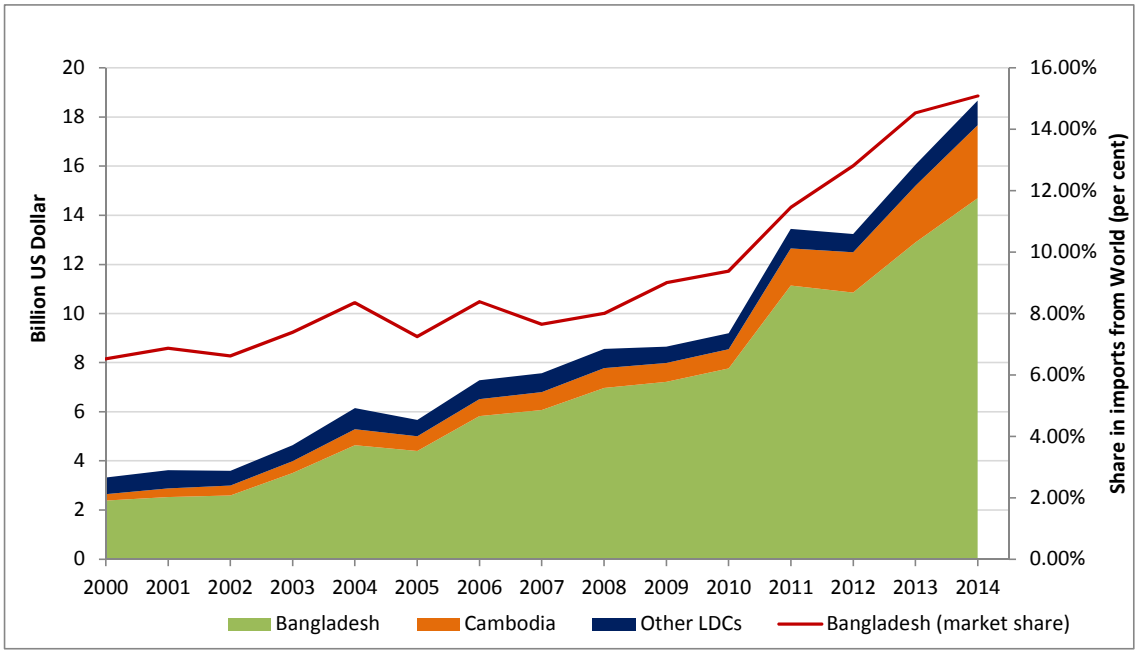
Using trade preferences as engine for growth

Bangladesh is one of the few LDCs that has developed a sizeable manufacturing sector, in particular clothing. In fact, in 2014 the country was the second largest exporter of garments after China, with a market share of over seven per cent.[33] Hence, Bangladesh can be seen as example of successful integration into the global economy. Overall, the export oriented garment sector consists of around 4,000 production facilities and employs around 2.8 million workers, corresponding to 40 per cent of total manufacturing employment (Rahman, 2014). Taking into account backward and forward linkages, the sector accounted for 7 per cent of GDP (Center for Policy Dialogue, 2003). As 70 per cent of the employees are women, the sector had been significant in terms of women's status and decision-making within families, higher domestic savings rate (as in Bangladesh poor women have higher savings rates than poor men), reduced fertility, and higher demand for education and health services as well as for public transportation, communication and safety (Rahman, 2014).

The success can be attributed to a combination of domestic policy reforms, international support measures (in particular duty-free quota-free access to most developed country markets) and a capacity to take advantage of global market opportunities.[34] Bangladesh entered the global clothing market in the 1990s under the Multi Fibre Arrangements, under which Bangladesh was unaffected by quotas in the EU and less binding quota in the US. Before the MFA dismantled, most expert analysis predicted a decline in clothing exports. However, Bangladesh actually benefited from dismantling the MFA, as it contributed to the fast growth of the global market and rendered a number of countries with unfavourable cost structure uncompetitive. A major factor for Bangladesh growth has been the duty free access to major developed markets, as non-LDC developing countries face average tariffs between 6 and 11 per cent in the EU, Japan, Canada, Australia, or Republic of Korea.[35] The country has also benefited from a relaxation of rules of origin in Canada (in 2003), Japan and the European Union (in 2011). Importantly, Bangladesh was a very active demander and negotiator for relaxing rules of origin, underscoring that **LDCs can have some, albeit limited influence in shaping the rules of the global trading system.** Figure x shows how Bangladesh has increased its significance on its largest market, the European Union, not only in absolute terms but also relative to other countries. However, the figure also shows that with the exception of Cambodia, other LDCs have not much benefited from preferential market access in the clothing sector in the EU.

[33] Data is from Comtrade, downloaded 20/11/2016. Clothing is understood as covering HS codes 61 and 62.
[34] Most of the following observations are also based on Rahman (2014).
[35] The notable expeception is the US, where garments are excluded from LDC preferences and where many non-LDCs hav e access to other prefererntial rates.

Figure x: LDC clothing exports to the European Union



Source: UN Comtrade, downloaded from WITS, 23/11/2016. Clothing exports are defined as exports under by HS chapters 61 and 62

In addition to market access, other market characteristics also contributed to Bangladesh's growth. The **buyer-driven market structure facilitated the entry in the global market**, as producers do not need to invest in marketing and distribution.[36] **This market feature also allowed domestic producers to flourish**. Whereas the sector was initially dominated by joint ventures between domestic and foreign firms (starting in the 1980s with a joint venture between the Bangladeshi company Desh Garments and the conglomerate Daewoo from the Republic of Korea), nowadays 95 of garment exports are produced by Bangladeshi entrepreneurs. After the dismantling of the MFA, Bangladesh also benefited from the "China plus one" strategy of many major buyers, which did not want to rely on one country as sole supplier. Recently, the strong increase in wage costs in China provided additional room for Bangladeshi supporters. However, the latter two effects in principle could have also benefited other low-cost, non-LDC producers such as India, Indonesia or Viet Nam. Hence, despite favourable market conditions, the success of Bangladesh remains remarkable.

Bangladesh benefited from existing capabilities in the sector, as Bangladesh had had an established clothing and textile industry already in the colonial times. For the recent boom in the sector, the **abundance of female labour was a key element**, as these workers had sufficient skills to acquire the basic skills required and were willing to work for the low wages offered in the sector. Domestic policy measures have also been instrumental. The Government established **bonded warehouse facilities** (so that producers did not have to pay tariffs on imported fabrics) and allowed so called **back-to-back letter of credits** (under which producers use orders from their buyers to finance fabrics) that minimized capital requirements. In addition, Bangladesh also provided subsidies

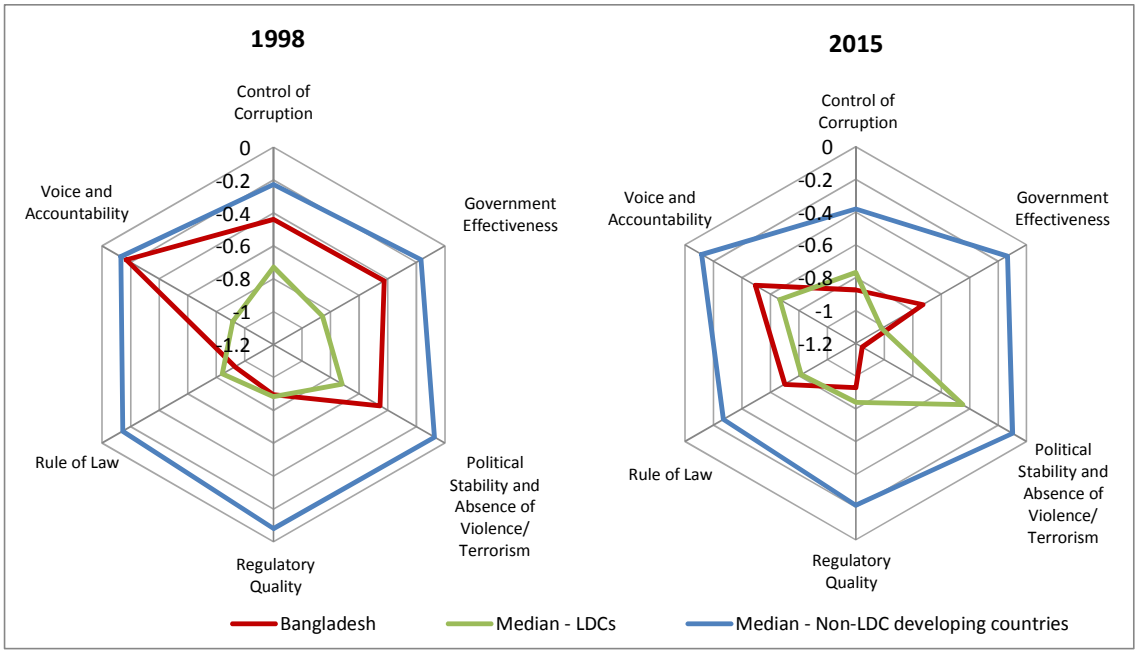
[36] However, this feature also contributes to the fact that producer appropriat eonly a small amount of the value added, which together with the low bargaining position of workers contributes to the low wages in the sector. Unsafe working conditions area arguably an even larger concern in the sector, in particular in Bangladesh.

to domestic suppliers of fabrics to garment producers, enabling them to remain competitive vis-à-vis imported fabrics and helping to establish domestic backward linkages. Hence, Bangladesh's experience shows that targeted support to selected industries can indeed contribute to building productive capacities. However, it needs to be acknowledged that similar policies were available to other industries, which however have failed to grow significantly. Moreover, there are apparent policy coordination challenges in providing incentives and sector specific government support, as the list of sectors benefiting from cash incentives does not fully match the high priority sector identified in Bangladesh's export policy (Chowdhury, 2014). **Hence, while targeted industrial policies can be successful, 'picking winners' strategies may still fail.**

Innovative ways of building human assets

As seen above, Bangladesh has made impressive progress in expanding its human assets. As many of the rapid increases occurred before the acceleration in economic growth, raising income are not the main factor. In this regard, Bangladesh confirms the view of 'social policies' first. However, a remarkable feature in Bangladesh is that neither external aid nor budget prioritization appear to be the crucial factor (Asadullah et al ,2014). In fact, Bangladesh made more progress than other South Asian countries, despite spending fewer resources. Better governance fails to be a convincing explanation either, given that Bangladesh generally receives poor and actually decreasing scores on governance indicators, see figure y. A likely candidate for explaining Bangladesh's progress in social outcomes is the specific **institutional setup under which the public provision of health and education services has been engineered by non-government service providers, combining low – cost solutions with public awareness campaigns** (Mahmud, 2008). Hence, the **pursuit of an inclusive development strategy involving non-governmental actors appears to be a key lesson from Bangladesh.**

Figure y: Worldwide Governance Indicators for Bangladesh

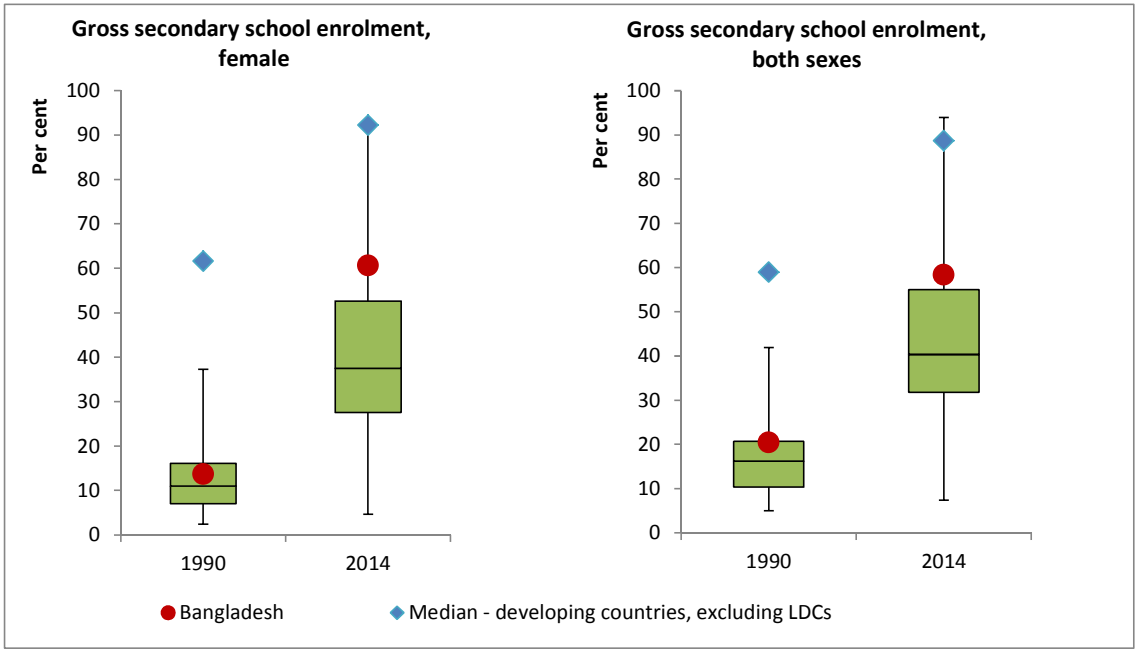


Source: CDP Secretariat based on Worldwide Governance Indicators, 2016 update.

For example, in the 1980s a leading NGO (BRAC) implemented the Oral Therapy Extension Programme (OTEP), under which health workers provided simple rehydration solutions and instructed mothers on the value of immunization. A key factor was also the early reduction in fertility rates, which in turn can be attributed to information campaigns by NGOs and government. Whereas it is difficult to determine why NGO-led programs were so effective in Bangladesh, a number of plausible explanations have been identified. **One is the dominance of community based approaches (such as investing community health workers), experimentation with informal partnerships and rapid adoption of technologies** (El Arifeen et al, 2013). Another key explanation is the **widespread use of female agency** (Chowdhury et al, 2013), as delivering social services by women delivery changed gender and mobility norms. The NGO-led approach also **benefited from positive contextual factors such as high population density and social homogeneity**, as they facilitated the rapid diffusion of interventions (Devarajan, 2008).

In education, the rapid rise in female school enrolment, in particular in secondary schools, has been impressive. As can be seen from figure x, enrolment increases were higher than in most other LDCs and the increase was much stronger for female students. Whereas NGOs also played a significant role in providing education in marginalized communities, a government- and donor led gender-targeted cash-transfer programme (FSSSP), scaled up by partnering with pre-exiting Islamic schools, played a central role (Asadullah et al, 2014). However, it should be acknowledged that there are quality concerns, as these schools appear to lead to even lower learning levels than public schools (Asadullah et al, 2017). However, whereas the overall level of education is still too low to clearly identify impacts of increased educational attainment on economic growth, microeconomic evidence shows high private returns of additional years of schooling on wages (Asadullah, 2006).

Figure x: Gross secondary school enrolment ratios for Bangladesh and other developing countries



Source: CDP Secretariat based on UNESCO Institute for Statistics, downloaded 21/11/2016.

3. Ethiopia

Background, structural transformation and progress toward graduation

In the last decade, Ethiopia, one of the African's most populous nations and land-locked, has been achieving remarkable GDP growth rates of more than 10 per cent per year, the fourth highest in the World (behind three oil and gas exporting countries) and the highest among LDCs. While growth is expected to drop in 2016 due to the worst drought in decades, it is expected to bounce back to 7 per cent in 2017-18 (WESP 2017). Even though growth rates are comparable to East Asian countries in the past, there are important differences between Ethiopia today and East Asian countries in the past. Whereas in East Asia the engine of their growth and structural change was characterized by diversification and technological upgrading of manufacturing, Ethiopia focused on the development of agriculture and on substantial public infrastructure investment. This is also reflected in the figures on sectoral structural transformation in appendix B, which shows a rather gradual reduction in the share of agriculture in GDP (which is still above 40 per cent), a share of construction growing to almost 10 per cent in 2015 and a small and even slightly decreasing share of manufacturing. However, similar to East Asian countries in the past, Ethiopia took the ownership of the process of development in its own hands and moved gradually towards a market-based economic system (Zhu, 2006).

A remarkable characteristic of Ethiopia's' development experience is that growth has been admirably inclusive. The poverty rate declined from 60.5% in 2005 to 30.76 in 2011, and Gini coefficient of 33.6 indicates that inequality has been contained (Yusuf, 2014, p. 4). Regarding child and infant mortality and life expectancy, Ethiopia surpassed other low income and Sub-Saharan Africa averages, and has attained most of the Millennium Development Goals, especially on extreme poverty, undernourishment, gender parity in primary education, infant and child mortality, maternal mortality, HIV/AIDS, malaria and water access (WB, 2016,p. 5). Thus, although Ethiopia remains a poor country, the average household has better health, education and living standards today than in 2000.The country moved from being the 2nd poorest in the world by 2000 to the 11th poorest in 2014; if these trends continue, the prognosis is that the country could achieve its goal of becoming middle income country by 2025 (Yusuf, 2014; the WB, 2016).

Consequently, the country has also made progress towards graduation from the LDC category, though it is still failing to meet the threshold sin any of the three criteria (see appendix B). Progress has been strong in the HAI, where Ethiopia had the second highest absolute increase, driven particularly by the health and nutrition component. Economic vulnerability, however, remains relatively high for a large country. Whereas vulnerability due to dependence on agriculture and limited range of exported products has been reduces, export instability remains high and the country remains very vulnerable to natural disaster, in particular drought.

Development governance

After the fall of the Communist regime in 1991, the new Government pursued a development vision that reflected key characteristics of Ethiopia, in particular the dominant rule of agriculture, the low urbanisation, high poverty and low levels of education. The vision concentrated on increases in productivity in agriculture, the development of physical infrastructure and investments in natural resource-related manufacturing. Rising productivity was assumed to increase the demand for industrial investment in the production of goods suitable for the level of per capita income, paving

the way to reallocation of workers from agriculture to industry and services. It was understood that both processes to be successful require also significant investment in education and health.

To materialize this vision the Ethiopian government in1993 formulated a long-term economic development strategy focused on the promotion of agricultural-led industrialization (ADLI), "bringing about a structural transformation in the productivity of the peasant agriculture and to streamline and reconstruct the manufacturing sector, so that it makes extensive use of the country's natural resources and manpower" (Yusful, 2014, p. 9). ADLI emphasizes small farm[37] agricultural growth to stimulate growth in other sectors of the economy, most notably industry. In a second phase, and in order to accelerate structural transformation, the government adopted in 2010/11 a five-year Growth and Transformation Plan (GTP1) that contained massive industrial and infrastructure projects, improvements in social and human development, and improvement in national governance and democracy. The second Growth and Transformation Plan 2015/16 - 2019/20 (GTP2) aims at improving the productive and competitive capacity in manufacturing, the competitiveness of export products and at supporting support new emerging sectors.

Ethiopia's governance approach can clearly be describes as State led. Already the ADLI clearly stated the leadership role of the government, while emphasizing the integrated and coordinated participation of the public at large in nurturing the strategy and the pivotal contribution of the private sector. The central role should remain so long, "until the emergence of broadly based and representative educated middle class emerges in order for economic development to be sustainable and inclusive or in the interest of poor majority; as this class does not exist yet, the liberalization of the economy would lead to undesired consequences such as high income inequality and creation of wealthy elites, while the majority of population would remain poor and disadvantaged" (Vaughan and Gebremichael, 2011, p. 31). Public consultations also featured prominently in the GTPs, based on the understanding that successful implementation of economic development strategy needs the support of citizens[38]. Strong political leadership is accompanied with political stability, as the country has been led by the Ethiopian People's Revolutionary Democratic Front (EPRDF) since 1991.

Ethiopia was able to develop organically a strong bureaucracy, by putting strong emphasis on deepening of human capital through adequate education and on the development of competent

[37] Christiansen, et al (2010, p.17) report that ", sectoral variations in the poverty-reducing effects of growth are likely to arise from differences in asset inequality, particularly the distribution of land. Bourguignon and Morrison (1998) find that the larger the share of land cultivated by small and medium farmers, the lower the observed income inequality and thus the greater the impact of growth on poverty. Emerging evidence from country studies supports this, see, e.g., Ravallion and Chen (2007), Ravallion and Datt 1996) and Dorosh, Niaza and Nazli (2003).

[38] As stated by the Planning Commission (2016): »The determining actors and forces of executing the GTPs are also the citizens. Hence in addition to building the implementation capacity of the government sector, extensive capacity building programs of the public at large were conducted during the plan period. Accordingly, wide ranging public consultations were conducted continuously throughout the planning period on themes related to the country's long and medium-term vision, government policies and strategies, and other agendas with the objective of nurturing and consolidating motivation and commitment among all section of the public for long-term development and transformation of Ethiopia".

governance capabilities[39] (National Planning Commission, 2016), and promoted continuous learning process and refinement of ideas on what worked and what does not (for example, preparation of GTP2 is also based on the lessons learned from GTP1). Besides, the leadership has shown significant (although not uniform) commitment to disciplining the system of rent-seeking over the long term[40] thus successfully directing the rents to increasing productivity against the individual rent seeking.

Over the past 25 years, institutional arrangements in Ethiopia have been adapted to changes in the environment. Generally, institutional arrangements have been the result of development not the cause of development. In addition to standard ministries, an important role has been played by specific agencies supporting growth and improvements in agricultural productivity (ranging from financial to R&D institutes and planning institutions). A critical element has been that the government has control over financial resources, a bank-based financial system to ensure that long term finance is available for productive investment through the Development bank of Ethiopia, and through a large public (SOE) sector, endowment-owned businesses, and substantial regional development organizations. Government control over financial resources (and embedded in the overall development governance) has enabled the country to finance public investments despite low domestic savings and taxes. Specific policies include low government consumption, keeping interest rates low, directing credit towards public infrastructure, monetary expansion through the Central Bank (including through direct monetary financing of the budget). Even though these financing policies are clearly "unorthodox", the country has been able to attract substantial amounts of FDI as well as non-concessional and concessional financing from development partners.

Boosting agriculture through extension services

As mentioned, agriculture has been a main driver of economic growth in Ethiopia. Over the past decade, the sector grew more than 8 per cent on an annual basis, the third highest in the World (after Chad and Burundi). The main contributing factor to rapid agricultural growth in Ethiopia has been the development of the World's largest extension system during the GTP 1. The extension system performed the following important roles: Development agents (DA) trained farmers during their visits on how to diversify into more valuable and exportable agricultural products and how to increase their quality and how to adopt modern technology. DAs received training from Farmer-Training Centres (FTC) and Agricultural Technical and Vocational Training (ATVET) institutions which were established throughout the country. By 2008 and 2009, around 8,500 FTCs have been built and around 60.000 DAs have been trained (WB, 2016, p. 67). With one DA for every 376 farms or 21 DAs per 10,000 farmers in Ethiopia, extension services are more accessible than in China, Indonesia and

[39] During the GTP1 period, as part of strengthening the implementation capacity of the civil service and justice sector, 3,955 (2,890 males and 1065 females) in BA degree, 4,885 (4,171 males and 714 females) in MA degree, and 24 civil servants in PhD degree were trained and graduated from the Ethiopian Civil Service University. In addition, more than 800 professionals graduated with master's degrees in urban planning, tax administration, federalism, leadership and good governance and were deployed to strengthen some key civil service institutions. To build the capacity of the federal, regional and local level parliamentarians in all regional states and municipal management bodies, a series of training programs were conducted to enhance the overall competence, knowledge and skills. In addition, in order to strengthen the civil services' organizational structure with young professionals, new university graduates were recruited and short induction trainings were conducted for those professionals (National Planning Commission, 2016).

[40] Corruption in Ethiopia, compared to developing-country norms in the African continent, is considered less extensive although both public institutions and the political commitment fall short of zero-tolerance approach. (Vaughan and Gebremichael, 2011; WB, 2016).

Tanzania, where the ratios are 17 and 4 respectively (Davis et al., 2010). The use of extension services increased from 3.6 million to 10.9 million, the number of land holders covered increased from 3.6 million to 6.6 million and the planted area covered by extension package program increased from 1.5 million to 3.9 million hectares in the period 2004/2005 to 2013/14.

Support institutes were also established, such as Research-Extension-Farmer Linkage Councils, the National Agricultural Research System, and the Ethiopian Institute for Agricultural Research, the Regional Research Institutes and the Agricultural Transformation Agency. Each of them having their own tasks, ranging from disseminating best practices, introducing new technologies, advances to increase the quality and crop yield, to strengthening value chains and introducing new technologies to cope with weather and climate change also contributed to rising agricultural productivity (Yusful, p. 20-21).

Construction of public infrastructure

To bring agricultural products to the market, the Government invested heavily in expansion of physical infrastructure and in the provision of rural public services in the late 1990s and early 2000s to ensure more efficient utilization of land and labour resources in rural areas. During the GTP1 period, development and expansion of reliable water supplies to rural and urban areas were undertaken. Public infrastructure investment was the key structural drive of growth and accounted for around 19 percent of GDP in 2011 compared to 5 percent in early 1990s (WB, 2016, p.14). So far remarkable improvements[41] were achieved in two broadly defined areas: physical and telecommunications infrastructure – roads, railways, airports, telecommunication networks-, in power generation and power transmission lines, necessary to fuel industrialization and for attracting foreign investors. For example, as reported by Shiferaw (2015, p.5), massive public investment in road infrastructure, at a cost of more than $7billion during 1997-2010 was carried out through a series of Road Sector Development Programs which significantly improved the country road accessibility. The federal and regional road network increased to 60.000 km in 2014 compared to 26,500 km in 1997[42], power generation capacity in 2014 increased nearly 5 times compared to 2002. Other achievements are: investment in Grand Ethiopian Renaissance Dam at a cost of around $4 billion and into broadening of customer base of Ethiopian Telecom (26 million customers in 2011-2014 compared to 7 million in 2002). Other significant investments were also in water and sanitation infrastructure. Whereas this experience shows that massive public investments can tackle infrastructure bottlenecks, the country's infrastructural deficit is still the 3rd largest in Africa (Shiferaw, 2015). As in the case of agriculture, Ethiopia's experience also shows the importance of developing an institutional support system. It includes the launching of the Ethiopian Construction Industry Development Policy Framework, the establishment and operationalization of the Ethiopian Construction Management Institute and the preparation and implementation of Construction Industry Strategic Reform Program. By now the country trained 41 domestic construction

[41] Shiferaw, A. (2015).

[42] Accordingly, during GTP1 period, total distance covered by buses increased from 70,000 Km in 2009/10 to 101,983 Km by 2014/15. The number of passengers transported increased from148.1 million to 394 million. The number of deaths (due to car accident) per 10,000 vehicles decreased from 70 deaths per 10,000 to 60 during the same period.(National Planning Commission, p,59)

contractors and 35 domestic construction consultants that are considered to be internationally competitive (National Planning Commission, 2016, p. 45).

Public investment is also used to accommodate rural-urban migration induces by structural transformation. To provide for the influx of people from agriculture to urban areas, the government designed an on-going housing development program. In Addis Ababa, 174,190 housing units were constructed in the period of GTP1, with impressive results in terms of job creation (845,900) benefitting the low and middle income citizens as well as women. This has also important role in equitable distribution of wealth among the citizens (NPC, 2016, p.46).

Public health

The Government has placed high priority on achieving its goals in the health sector, which can be seen as a main reason for maintaining relatively low inequality over the decade of rapid growth. As discussed in NPC (2016) and WB (2016), several important policy initiatives in this regard include establishment of health posts and health centres in all areas providing essential health services accessible to all citizens as well as the deployment of 38,000 "health-extension workers" (both mid-level and highly qualified health professionals) all over the country, ensuring that 98 per cent of the population is covered by public health programs. The health extension workers provide coaching on public health issues such as immunization and hygiene as well as family planning. In fact, fertility rate has declined from 7 children per women in 1990 to 4.4 children in 2014, aided by an increase in contraceptive prevalence and media campaigns on advantages of small family sizes. Deliveries attended by skilled health personnel have increased from 16.8 percent in 2009/10 to 60.7 percent by 2014/15 and postnatal care coverage has increased from 36 percent in 2009/10 to 90 percent by 2014/15, contributing to the improvement in reducing child and maternal mortality.

It should be underscored that rising education (in particular for girls; facilitated by the provision of free schooling and free school lunches in rural areas) as well as a participative governance stimulated community engagement and particularly the participation of women groups contributing to changing traditional habits leading to health improvements, disease prevention, primary treatment, and socio-economic changes. This demonstrates how important it is that a country mobilizes its citizens in the implementation of development goals.

Sectoral policies

In order to increase competitiveness of the services sector and to induce within-sector structural change towards increasing the share of modern activities, the government, during the GTP1 period, undertook several measures, such as the adoption of a uniform and harmonized trade registration and licensing system and the launch of a regulative agency, the "Trade Competition and Consumers Protection Authority". The Government also organized 1999 primary markets throughout the country in order to render a modern marketing system; further activities have been undertaken to establishing and starting electronics marketing system and modernizing the existing marketing system. However, "rent seeking behaviours, slow performance in supporting the trade registration and licensing system with technology, limitations in the use of market opportunities fully and effectively and underdeveloped market centres as well as poor infrastructure for market centres have remained constraining challenges of the sector." (NPC, 2016, p. 33).

While manufacturing contributes only modestly to value added and employment, this could be explained as legacy of the ADLI stimulated development of rural industry, which put great

emphasis on small and micro enterprises as a source of employment. While perhaps limiting overall growth of manufacturing, this policy increased domestic demand for agricultural product and brought about positive externalities from intra-sectoral linkages both to agriculture as well manufacturing.

In particular during the GTP 1 period, Ethiopia undertook measures typical of horizontal and vertical industrial policy concentrated on improvement of business environment[43] (investment incentives, tax holidays, exemptions from custom duties and export duty, voucher schemes, duty drawback scheme, cost sharing scheme, preferential financing schemes, consultations with the private exporters, help and consultation provided to individual companies…) and of the regulative framework (KOICA, 2013).The development of industries with comparative export advantages was supported through targeted investments into industries such as leather, textile, metal, and agro industry, indicating a shift to the production of light consumer goods, building industrial zones for attracting foreign investment (flow of FDI from Taiwan, China, Turkey). Further support was given to public-private partnership for transfer of technologies, skills and capabilities, allowing also private companies to lease land at a reduced rate from government and establish their own industrial zones. Moreover, privatization of old "Soviets style" state companies in non-infrastructural areas was carried out to give greater role to the private sector in driving growth. However, the growth of enterprises which have the prospects of competing on the world market has been lagging behind.

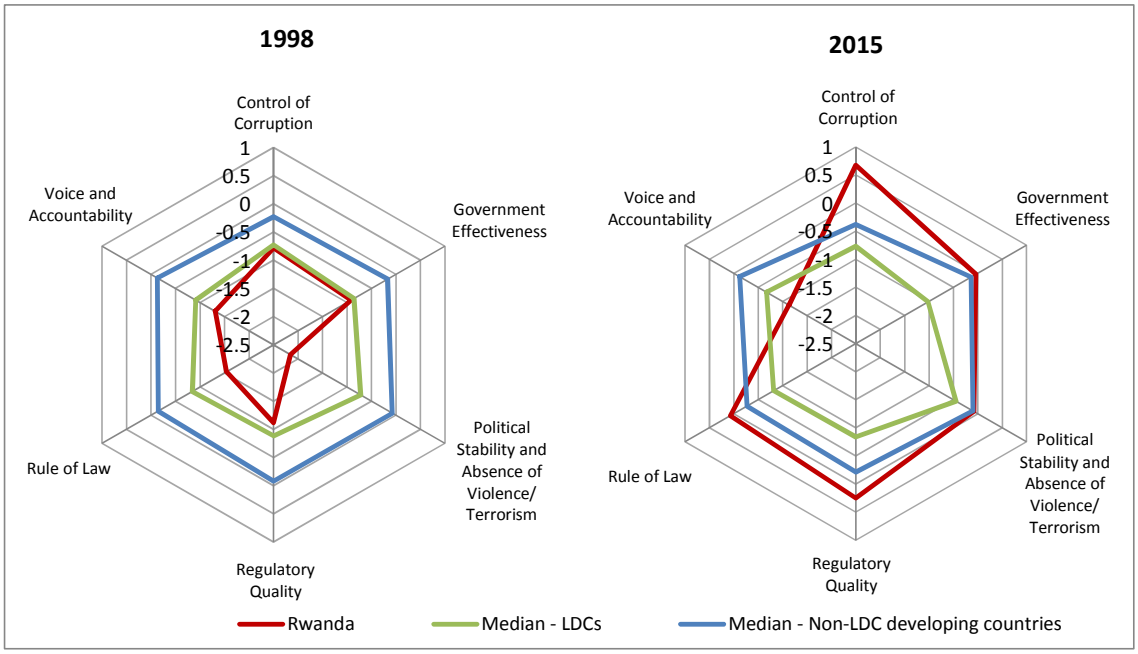
4. Rwanda

Background, structural transformation and progress toward graduation

After the genocide in Rwanda in 1994, the country has been experienced rapid economic and social development. Transformation of the economy has been facilitated by enacting economic incentive schemes and governance reforms, which are also reflected in the astounding progress of Rwanda in standard governance indicators shown in figure x.

[43] For example, the cost of starting a company by percentage of income per capita dropped from 484% in 2004 to 13% in 2012. Paid-minimum capital as a percentage of income per capita fell from 1,964% in 2004 o 334% in 2012.

Figure x: Worldwide Governance Indicators for Rwanda



Source: CDP Secretariat based on Worldwide Governance Indicators, 2016 update.

As can be seen from appendix B, Rwanda's economy has been growing strongly with relatively low volatility, surpassing the target of seven per cent GDP growth in 15 out of 20 years since 1995. Like Ethiopia, Rwanda has chosen to follow the structural transformation pathway to expanding productive capacity focusing on agriculture as the engine for economic growth, supported by a number of complementary industrial and building human capital policy measures. This choice is consistent with key structural features of the Rwandan economy. Although the share of agriculture in total value added has dropped from close to 50% in the 1990s to 35% in recent years, it has been a key driver of economic growth. More than 45% of foreign exchange revenue from exports comes from agriculture and the country is almost food self-sufficient, domestically supplying more than 90% of all food consumed (World Bank, 2011). Agriculture also continues to be the major employer absorbing more than 70% of the total workforce and supporting incomes, consumption and livelihoods of more than half of all households, and even higher shares among the poor (NISR 2013). Nevertheless, whereas total employment in agriculture actually increased between 2002 and 2012, the share of agriculture shrank from 87 to 75 per cent (ILO), as employment in manufacturing and especially services increased even more.

Rwanda has also made significant progress towards LDC graduation (see figures B.8.2 to B.8.4 in the appendix, though it still quite distant from reaching the thresholds. Per capita income has started to grow over the past decade, but is still below $ 700. Improvements in HAI are quite spectacular, with Rwanda showing the largest absolute increase in HAI scores over the past 15 years in the World. Initially, progress has been strongest in reducing child mortality and undernutrition. However, in recent years, secondary education has also expanded significantly. The Government made substantial investments in human capital, with public expenditures for health and education as share of GDP rising from 5.8 per cent in 2000 to 7.9 per cent in 2013 (World Bank, WDI), Economic and environmental vulnerability as measured by the EVI has also declined on account of reduced

export and agricultural instability. It is noteworthy that the rapid growth has not lead to an initial increase in vulnerability, which could indicate that growth is not confined to a sudden boom in few narrow sectors.

Increasing agricultural productivity through crop intensification and land use consolidation

The agricultural development strategies of Rwanda have to be seen in light of specific challenges. Rwanda is the most densely populated country in Africa (416 people /km^2); scarcity of land is further aggravated by the fact that most of the 1.5 million hectares of Rwanda's arable land is on hillside terrain. Substantial encroachment of extensive cultivation on fragile steep hilly slopes has therefore been inevitable with severe soil erosion consequences.

Agricultural production in Rwanda is predominantly practiced under smallholder subsistence systems. The average size of landholding is only 0.33 ha, with more than 70% of farmers cultivating less than 0.9 ha of land. Land fragmentation is a major productivity constraint, given that 0.7 ha is considered to be the minimum farm size needed to sustain a family (Republic of Rwanda 2004). Another feature of Rwandan agriculture is the domination of food crops occupying more than 67.1% of all cultivable land and contributing 84% of agricultural GDP (NISR 2010). These structural features are behind giving priority to investments in realizing productivity gains from intensified food crops' production systems. The Government of Rwanda has accordingly launched the crop intensification program (CIP) in 2007 to enhance productivity of key food crops for greater security and self-sufficiency in food in pursuit of the ultimate goals of the country's strategic Vision 2020 of eliminating poverty and attaining middle-income status (Republic of Rwanda 2009 and 2013; WB, 2013). The agricultural sector component of this national strategic vision and its constituent programs aim at transforming Rwandan agriculture from a traditional subsistence to an inclusive, modern, and market-oriented productive sector (Republic of Rwanda 2009a).

This favorable policy environment **enabled channeling substantial shares of public funds to be invested in promoting use of productivity enhancing inputs and practices (e.g. improved seeds, fertilizers, irrigation, etc.) by smallholder farmers.** It also allowed for **the establishment of soil conservation and other hillside terracing and marshland development infrastructures**. An important component of the CIP is the land use consolidation (LUC) scheme launched in 2008 to address the nationwide problem of the small holding size constraint on productivity[44]. The LUC program promotes **joining small plots of several owners to be planted as one large unit to realize productivity gains from scale economies in acquisition and use of modern inputs and provision of extension advice and post-harvest processing and marketing services** (Organic Land Law 2005; New Land Law 2013). The LUC is voluntary, where farmers agree to join and plant their plots to the crops chosen by CIP in exchange of the support provided by the program of input supplies (improved seed, fertilizer), extension and some post-harvest services (MINAGRI 2007, 2011).

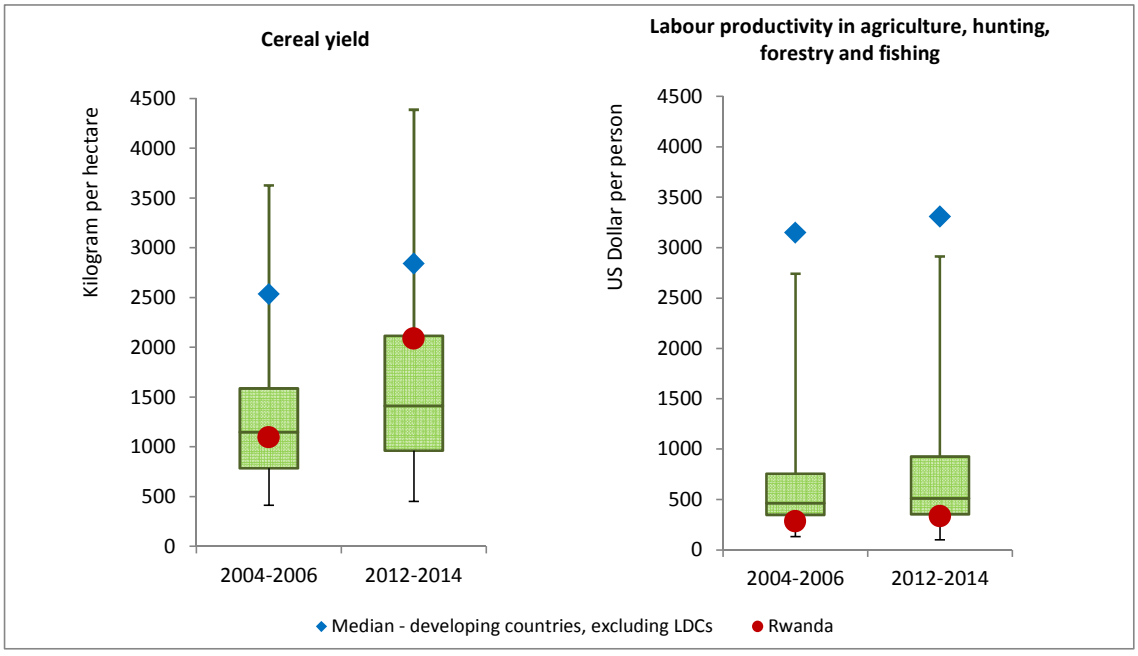
Generally, these agricultural support programs have been a huge success in achieving its productivity expansion, food security and poverty reduction goals (WB 2011; MINAGRI 2012; Kathiresan 2013; Mushara et al. 2014; WB 2014). The said studies report on historical performance records by 2012 in annual agricultural GDP growth (5.6%), reduction in rural poverty by 49%, growth

[44] Every rural family in Rwanda cultivates four very small land parcels on average, each of between 0.13 ha and 0.37 ha (Republic of Rwanda 2004).

in agricultural exports (44%), GDP share investment in agriculture of 22.2%, off-farm share in total employment (26.6%), among others (Republic of Rwanda 2014). These impressive records have been attributed to major gains in crop productivity (60%) and conservation achieved under the CIP. LUC increased by more than 17 fold and protection against soil erosion reached 73% of the land with rates of use of inorganic fertilizers rising from 7 per cent to 30 per cent by 2012 (Republic of Rwanda 2014). Figure y below demonstrates that the increase in crop productivity is remarkable also in comparison with other countries. Whereas cereal yields were below average before the reforms, Rwanda now has the third highest yields among African LDCs.[45] At the same time, labour productivity has not yet increased much, indicating that the impacts of the reforms on food security and rural poverty are up to now dominating.

Nevertheless, the program also faces challenges. Whereas the fear of farmers of losing land rights has been largely addressed by the programs to regularize land rights (see below), there are concerns on the sustainability of the uptake of modern inputs after cessation of CIP subsidies. There are also concerns on appropriateness and participation of farmers in the selection of crops; in particular whether LUC participants could plant more traditional food staples and more profitable cash crops in addition to selected priority crops. Moreover, there continue to be challenges to expanding investment in complementary rural infrastructures (transport, storage, processing, etc.); and access to non-farm employment, finance and basic services (clean water, sanitation, energy, health) (WB 2011; Republic of Rwanda 2012; Kathiresan 2013; Mushara et al. 2014; Republic of Rwanda 2014).

Figure x: Cereal yields and agricultural labour productivity in Rwanda



Source: CDP Secretariat, based on FAOSTAT (cereal yields), UNSD National Accounts Main Aggregates Database (sectoral value added) and ILO WESO 2015 (sectoral employment), all accessed 2 November 2016.

[45] Yields in Asia are generally far higher than in Africa

Land tenure regularization

Regardless of whether or not conflict over the control of land was the main contributing factor to the 1994 genocide in Rwanda, the civil war led to serious disruptions of existing settlement patterns and worsened disputes over ownership and access to land. Addressing the land rights of the millions of widowed women, orphans and displaced citizens left behind, and resolving land claims of returnees presented a huge challenge for the post-war administration (Andre and Plateau 1998, Global IDP Project 2005, Musahara and Huggins 2005, Boudreaux 2009). Several legislations and policies have accordingly been introduced to establish definitive rights and security of land tenure in general (including formalization of customary rights), and to improve rights of disadvantaged groups (particularly women). These regulations provided an enabling legal framework for the establishment of land administration institutions to support implementation of a nationwide Land Tenure Regularization (LTR) program. A main goal has been to replace the dual customary and formal tenure regimes with a single statutory land tenure system. The LTR program launched in 2009 aimed at creating **complete public registry of titles to all landholdings, with state ownership and long-term** (up to 99 years depending on type of land use) **usufruct rights to landholders that can be sold, leased, mortgaged or passed on to heirs**. One key constraint stipulated, however, is the prohibition of any further subdivision of land smaller than one ha and acquisition of approval for subdivision of land between one and five ha (Republic of Rwanda 2009).

The main objective of LTR was to establish clear ownership rights and increase land tenure security to all citizens. In turn, security of land tenure is expected to increase land productivity by stimulating investments on land, increase access to credit, promote market transactions for efficient allocation of land to more productive uses, and reduce disputes over land and risk of expropriation (and hence the costs of protecting property). The LTR program was tested and fine-tuned through extensive piloting prior to its countrywide implementation in 2009 and became a model for other countries to follow (Ayalew et al, 2012). More than 10 million parcels were successfully registered and 8.4 million certificates of title were issued by 2013, constituting the vast majority of private land in Rwanda (Republic of Rwanda 2013, Sagashya 2014, Biraro et al 2015).

In an assessment of Rwanda's LTR model and associated land reform programs, Ali et al (2014) found that evidence of **significant positive short-run impacts of the LTR program on investment in soil conservation and stronger land rights of legally married women**. No significant changes in land market transactions were observed, however, in the 2.5 years period post piloting the LTR program. This is nevertheless considered an indication of no serious immediate negative unintended consequences such as distress sales or landlessness (Ali et al. 2014). A more recent comprehensive assessment of Rwanda's land reform experience suggests even stronger positive impacts in the medium-term of 6 years after implementation of the LTR (Biraro et al 2015). The said study confirmed that title certificates had decisive influence on resolving land disputes. Formal credit providers find them to be a sufficient security for acquiring a loan.

The LTR program was also found **to promote investment on the land, but so far had little impact on land market transactions**. The study indicates that the cost/fees on registering transactions and land subdivision restrictions have negatively affected potential land market activities, suggesting the possibility of citizens engaging in selling and buying less than one hectare plots outside the formal system. There seems to be **high demand for making legal provisions regulating land sub-division more flexible to accommodate certain special circumstances**. It has

also been suggested that the fixed transfer fees for registering land transactions be revised taking into consideration the size and value of market transferred properties and consider different bases for fees of non-market transferred properties (e.g. inheritance, gift, etc.). **Moreover, completeness of land registry requires complementary policy measures.** Investment in better road and public transport infrastructure and greater decentralization of land administration services are needed for improving access to and increasing the probability that people will formally use the system to register their land transactions (Biraro et al 2015).

5. Ghana

Background, structural transformation and progress toward graduation

After a decade of strong economic growth (with a peak of 15 per cent in 2011), Ghana made significant economic progress and moved to the middle income category of the World Bank. As can be seen from appendix B, the share of agriculture to GDP is slowly reducing and services. In recent year structural transformation away from agriculture has accelerated, the main shift was to mining (in particular gold and recently crude oil) and construction, whereas manufacturing fell from already low levels. It should be highlighted that much of the progress in Ghana became apparent only after the country changed it national accounts methodology in accordance with recent international standards, providing a cautionary tale against overly relying on data of unknown quality. Generally, Ghana, like many African economies, is still largely agrarian, and is increasingly dominated by a largely informal service sector, in spite of the changes it has experienced in the contribution to GDP of its various sectors over the years (Tsikata, 2016).

While Ghana has never been a LDC, it had been recommended by the CDP for inclusion in 1994, but refused to join. Figure B.14.2 shows that Ghana would have met the graduation criteria only in 2012, after gradual and continuous progress in building human assets. Progress has been especially pronounced in reducing child mortality and, particularly, undernourishment. However, the 2011 multi-indicator cluster survey (MICS) found that in spite of the improvements attributed to falling levels of poverty, 22.7% of Ghanaian children under age 5 were stunted, and 13.4% were underweight. Malnutrition and stunting are very serious issues because as the report points out, the negative consequences of undernourishment follow a child for his or her entire life, with grave consequences for the economies in which such a child lives, learns and works. In general, there are strong indications that inequality is increasing in Ghana. Cooke *et al.,* (2016) have reported increasing inequality, drawing attention to north-south and rural-urban dynamics. Cooke *et al.,* 2016 also found that the wealthiest 10 percent consume nearly 7 times what the poorest 10 percent consume.

Progress in reducing economic and environmental vulnerability has been slow, despite the fact that more 'fixed factors' play a smaller role in Ghana than in most LDCs. Progress in reducing agricultural instability and impact to natural disasters has been largely outweighed by an increased export instability. However, the latter effect is driven by the commencing oil exports, so that export instability might well decline in the future.

Modernizing services as engine of growth

By 2015, agriculture's contribution to GDP was 21 percent while that of the service sector was 53 percent. Therefore, it can be argued that the services sector had become more important in

propelling Ghana into the Middle income country status than the agricultural and industrial sectors. The expansion of the services sector has been driven by banking and finance, information and communications technology (ICT), tourism, and transportation. The growths of these sub-sectors, particularly ICT and banking and finance, have largely been influenced by the implementation of government policies and reforms. For instance in 1987 the Government of Ghana and the World Bank introduced the Financial Sector Adjustment Programme as a complementary programme to the broader Economic Recovery Programme that was already underway (Antwi-Asare and Addison 2000). The outcome of FINSAP was the "removal of the bad and doubtful debts of state-owned enterprises from bank balance sheets" and "the liberalisation of interest rates" amongst others. Competition in the sector increased and the sub-sector's contribution to GDP also increased from 4.3 percent in 2009 to 6.4 percent in 2013 (Powell 2015, p.1).

Reforms in the ICT sub-sector also occurred within the context of reforms in the global telecommunications industry. The earliest of the policies aimed at reforms was the Telecommunications Accelerated Development Plan of 1994. Through liberalisation and privatisation, this policy enhanced private sector participation in the provision of mobile and telephone services to the Ghanaian population (Frempong 2002). Another important element of the reform was the establishment of the National Communications Authority which is responsible for issuing licenses, regulating tariffs of service providers, and protecting consumers amongst other things (GoG 2004; Frempong 2002). Growth in the ICT sub-sector has been phenomenal: "the total number of mobile voice subscribers" increased to 35,008,387 at the end of December 2015 (NCA 2016) whilst the proportion of Ghanaian adults who use the internet is 25 percent (Pew Research Center 2016).

However, a major issue is that the most vibrant sub-sectors of the services sector namely, banking and finance, ICT and tourism are known to create only a limited number of decent jobs. Consequently, over 80 percent of the Ghanaian labour force in informal work which is noted for its low earnings, job insecurity and inadequate social protection.

Natural resource exploitation as source of income but loss of wealth

The major drivers of growth in the Ghanaian economy and citizens' participation in the growth process are centred on the exploitation of natural resources which provides livelihoods for the majority of the population. The concern here is that natural resources are used sustainably and not depleted before replacement income-earning opportunities are available. Boakye *et al.,* 2012 note that it is important to conceptualise resource extraction, particularly mineral resources, as a wealth reduction process since resources are non-renewable (Boakye et al., 2012). As they point out, the failure to consider mineral depletion could wrongly portray countries' development trends and lose sight on necessary offsetting measures, all aimed at replacing rents generated from the depletion of resources by another capital (physical, human, social), through effective investments. Mineral depletion has risen sharply from 1.9 percent of GDP in 2006 to 9.2 percent in 2011. This rise in depletion coincided with Ghana's impressive performance in economic growth in recent years.

Moreover, because simultaneous increases in investments have not been commensurate with the depletion of mineral resources, Ghana has had to depend on external funding sources, particularly borrowing (Boakye *et al.,* 2012, p3). In addition to mineral resources, another important primary export commodity that has depleted sharply over the decades is timber. According to the

Bank of Ghana (2004) "Ghana's total forest cover" declined from 8.2 million hectares in 1900 to 1.6 million hectares in 2000. Forest depletion in Ghana is largely attributable to gold extraction, settlement expansion and timber extraction (Tuffour 2004, p.23). Timber extraction has been carried out in an unsustainable manner and it is estimated that for the period 1990-1998, at the height of the Structural Adjustment Programme in Ghana, the rate of timber extraction exceeded the recommended rate by more than 46 percent (Agyarko n.d, p.9). For forest, energy and mineral resources combined, resource depletion increased from 8 percent of GNI in 2000 to 15 percent in 2012 (Twerefou et *al.,* 2015, p. 15).

Lack of physical infrastructure as binding constraint

Ghana has made mixed progress in improving transport infrastructure. Road transportation is the dominant means of transportation in Ghana. In 2008, the total road network in Ghana was estimated to be 67,291km (MRH & GSS 2009, p.3). Currently, the total road network stands at 71,063 km (MRH 2014, p.18). This represents an increase of 3,772 km over the road length recorded in 2008. The investments in road transportation have also been associated with a general improvement in the condition of roads, although this has been gradual. On the other hand, the rail transportation system (rail tracks, coaches, etc.) in Ghana has been deteriorating for decades. Total rail length was estimated at 1300 km between 2004 and 2008 and the proportion of "rail lines in operation" declined from 46 percent in 2007 to 36 percent in 2008 (MRH & GSS 2009, p.3). Currently, rail transportation "handles" only 2 percent of freight and passenger traffic and is no longer effective for the transportation of minerals (PWC n.d, p.47)[46]. Plans for the rail sector are ambitious but there appear to be limited efforts towards their full implementation to bring about the desired changes. For instance while Jedwab and Moradi (2011) reported that Ghana signed a $6 billion contract for the rehabilitation and extension of the rail network, there is no indication that activities directed at rail improvement or extension have taken off.

With the completion of the Akosombo Dam in 1965, hydroelectric power[47] became and is still the major source of energy for households and industries in Ghana. However, it can be observed from Table 3.1 that the share of energy generated from renewable sources reduced from 100 percent in 1980 to 68.8 percent in 2010. Currently, hydroelectric power is supplemented by power from thermal energy sources that use gas and/or light crude oil (Eshun and Amoako-Tuffour 2016). Sustainability in energy production and the ability to continuously meet the domestic demand for energy are the major problems facing the energy sector. Beginning from 1980, the energy sector has had periodic crises owing to energy demand outstripping supply. The crises which have occurred in four time periods namely: 1984, 1998, 2006 and recently from 2012/2013 to date have been attributed to drought (for instance in 1984) and low water levels in the Akosombo Dam. In addition to low water levels, the most recent energy crisis has also been attributed to "erratic supply of natural gas from Nigeria and machine breakdowns." (VRA 2015, p.1).

[46] Paper available at https://www.pwc.com/gx/en/transportation-logistics/publications/africa-infrastructure-investment/assets/ghana.pdf

[47] Hydroelectric power is classified as renewable energy.

Over the decades, the energy sector has responded to these crises through power rationing. In addition to the problem of meeting the demand for energy, per capita power consumption[48] has reduced by 144kWh between 1980 and 2010. Similarly, the proportion of power lost during transmission and distribution has increased from 5 percent in 1980 to 23 percent in 2010. Putting aside the challenges in generating sufficient energy and loss of power during transmission and distribution, Ghana's performance in electricity expansion has been impressive. The proportion of the population with access to electricity increased from 30.6 percent in 1990 to 60.5 percent in 2010. Thus, the major outstanding issue is averting the periodic shortfalls in energy supply that has been costly and disruptive to the activities of industries, small business and households. Unreliable energy supply is an impediment to economic growth (VRA 2015, p.2)[49] and it is estimated that Ghana "loses between 2 and 6 % of gross domestic product (GDP) annually due to inadequate and unreliable power supply" (Eshun and Amoako-Tuffour 2016, p.1).

IV. Conclusion and recommendation

[Summarize main recommendations from chapter III, organized along the four elements of expanding productive capacity for sustainable development: Development governance capacity; synergies with social outcomes; macroeconomic and financial policies; industrial and sectoral policies, plus international support.

Discuss linkages to 2017 HLPF theme of "Eradicating poverty and promoting prosperity in a changing world"]

[48] "Electric power consumption measures the production of power plants and combined heat and power plants less transmission, distribution, and transformation losses and own use by heat and power plants." (World Bank 2016).

[49] In the 2013 World Bank Enterprise Survey in Africa, the widespread, poor electricity supply was identified as one of the biggest barriers to economic growth in Ghana and Nigeria, and a hindrance to many multi-national investors.

Annex

A. Graduation pathways of focus countries

The bubble graphs below show the pathways to graduation based on the three LDC criteria, covering the period from 1990 to 2016. Whereas EVI and HAI scores determine the position of the bubbles on the horizontal and vertical axes, respectively; the size of the bubble denotes the GNI. The graphs are based on a time series dataset of the LDC criteria in their current form and based on latest available data. The data differs from historic data from LDC reviews due to data revisions, changes in methodologies and changes in the composition of the criteria. It is based on the same data sources as those used in the latest triennial review, but missing data was interpolated or filled with external estimates.

The colour of the bubbles denote to which extent the country met the graduation thresholds: Green bubbles signify that a country meets two or three criteria at the graduation thresholds (or the income only threshold), yellow signifies meeting one criterion whereas a red bubble signifies that a country is not meeting any of the three criteria. The colour coding is based on current threshold or threshold rule (in case of GNI per capita) and may depart significantly from thresholds used in actual LDC reviews. This holds in particular for the HAI, as the amount of human assets corresponding to the current graduation threshold of 66 would have been associated with more advanced developing countries in the early 1990s. As reference point, the graphs also depict the most recent graduation thresholds for HAI (dotted horizontal line), EVI (dotted vertical line) and GNI per capita (size of the dotted circle).

The pathway to graduation through building productive capacities for sustainable development would manifest itself in movement from the lower right towards the upper left quadrant while the bubbles become gradually larger. Graduation through economic specialization and human capital formation would manifest itself through upward movement with increasing bubble size. Graduation by fast growth from natural resource exploitation corresponds to fast growing bubbles, only very limited movements upwards (only small increase in HAI) and possibly rightwards (increasing vulnerability). For the reasons discussed in chapter II, section 2 (fixed factor nature of some components, sudden changes in victims, time lags and overshooting in instability indicators), we might expect more variation on EVI than from HAI.

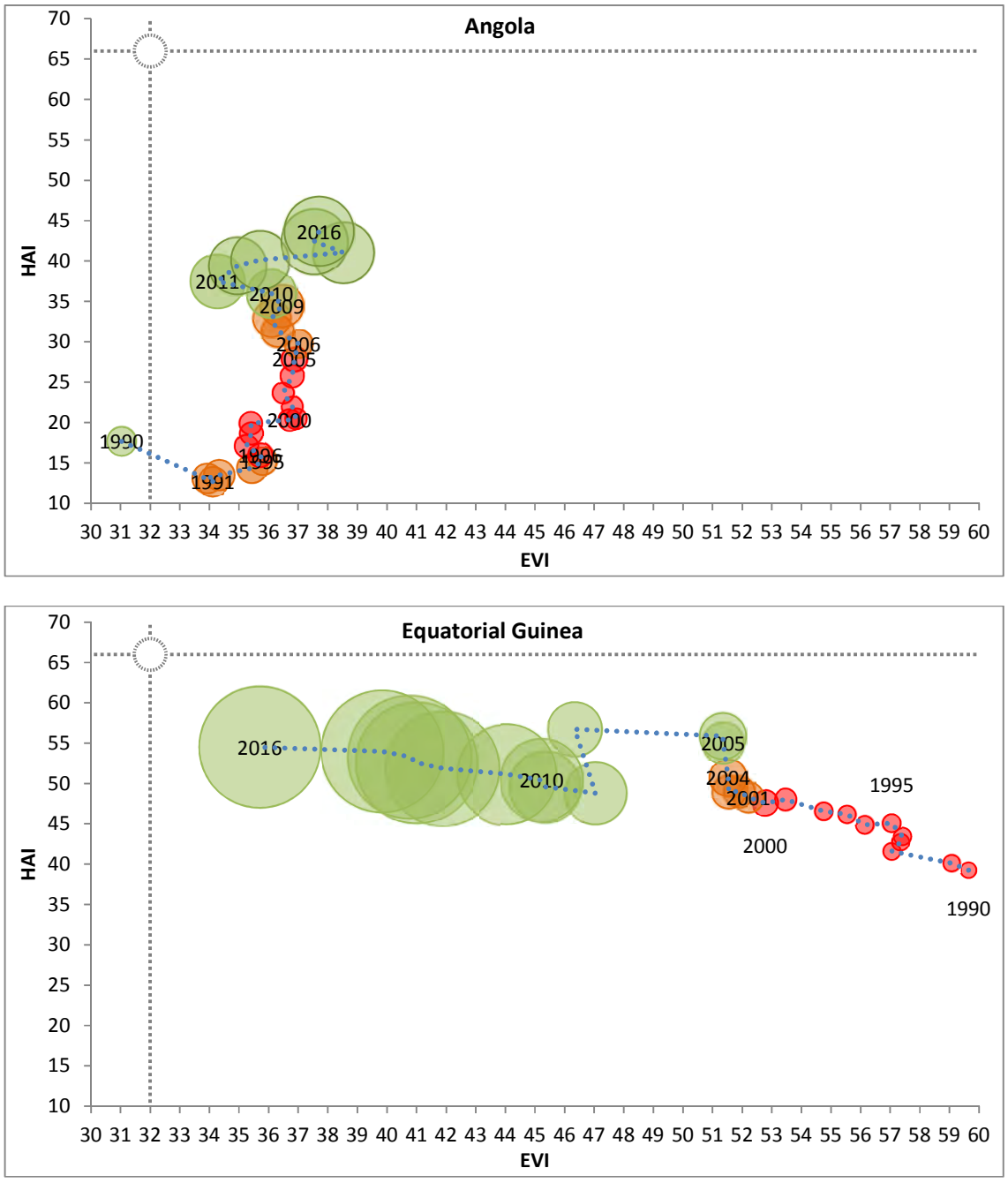
Angola and Equatorial Guinea (figure A 1) exhibit indeed the rapid GNI increase associated with natural resource driven graduation pathways. HAI scores are only slowly improving in Equatorial Guinea despite the income gains, whereas Angola actually observed progress, though from very low starting level and in a decreasing rate. EVI scores in Angola are increasing, while decreasing from high level in Equatorial Guinea.

As shown in figure A2, all countries with a specialization plus human capital investment pathway show progress in the HAI scores (perhaps with the exception of Samoa, which had very high human assets throughout the period under consideration, and Solomon Islands) and high EVI, though a number of them exhibit a trend of reduced vulnerability. Botswana, Bhutan and Maldives also show a rapid increase in GNI per capita.

The remaining countries (see figure A3) follow indeed a pathway associated with expanding productive capacity for sustainable development, though distance to graduation is still significant in

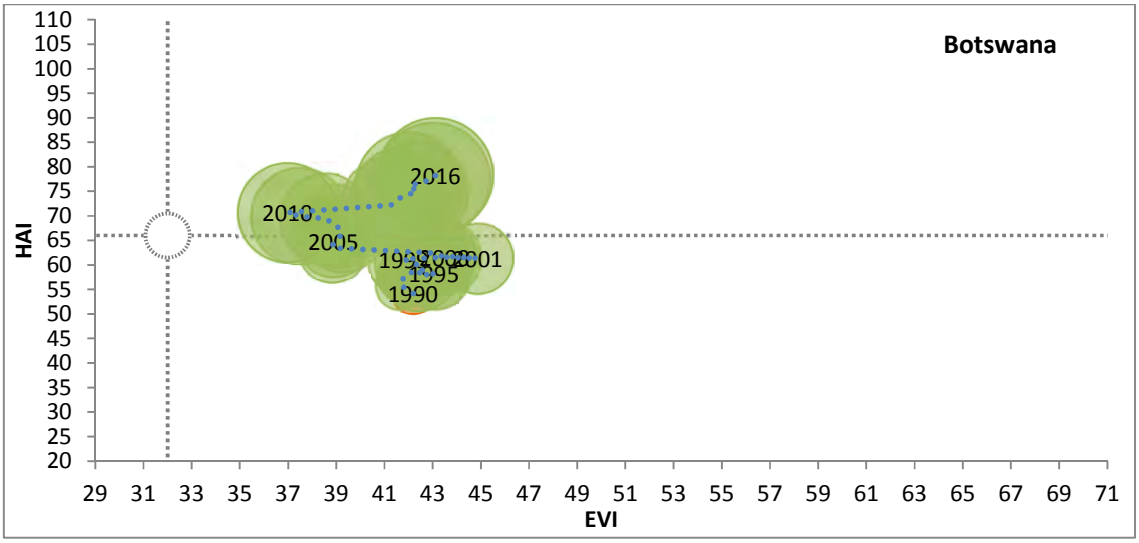
Rwanda and, in particular Ethiopia. The latter also showed less progress in EVI, reflecting the high volatility of exports in the recent years of high GDP growth.

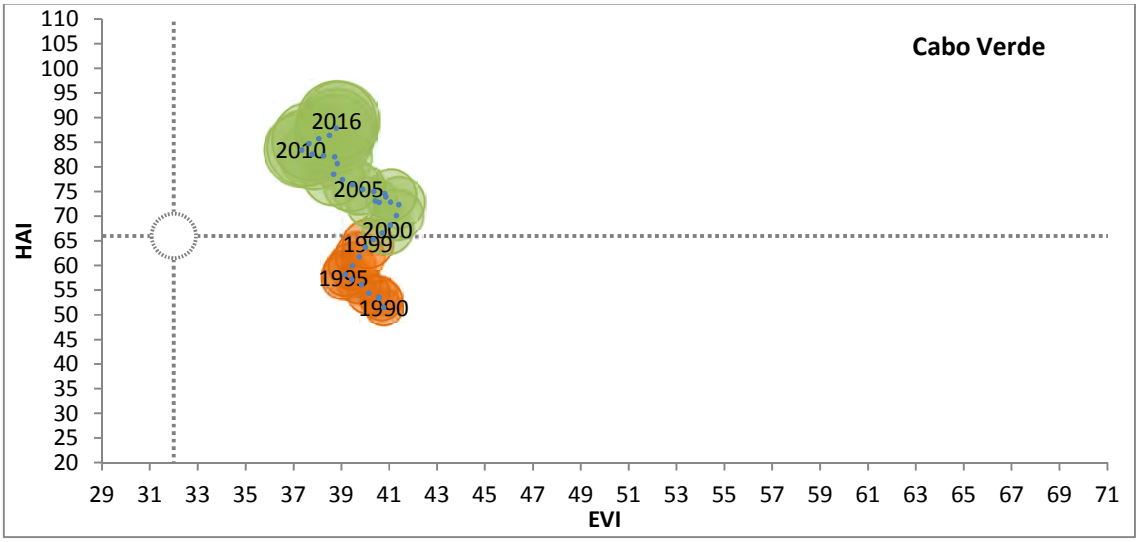
Figure A1: Graduation pathways – Group A

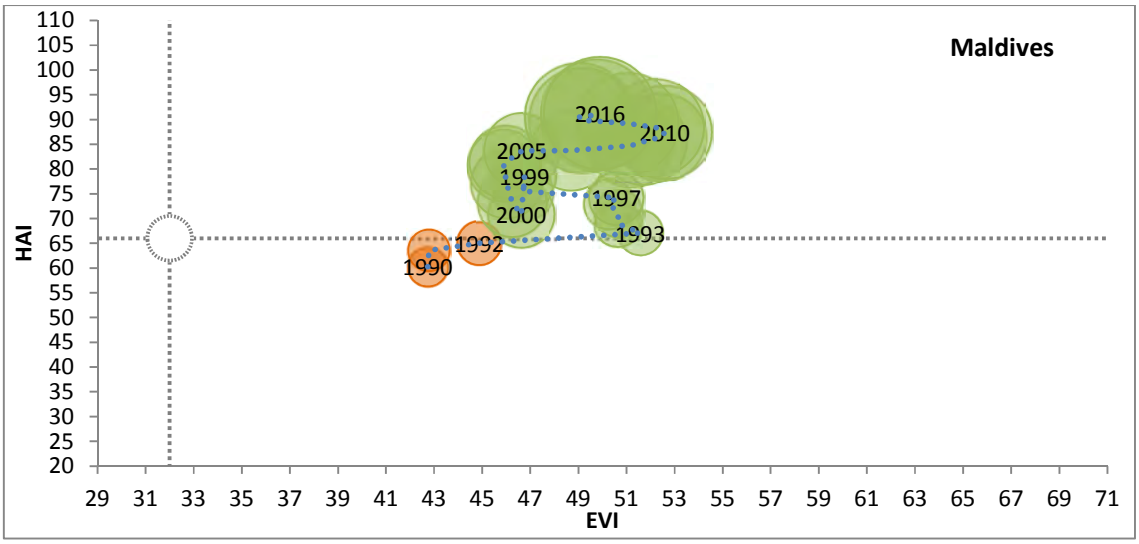


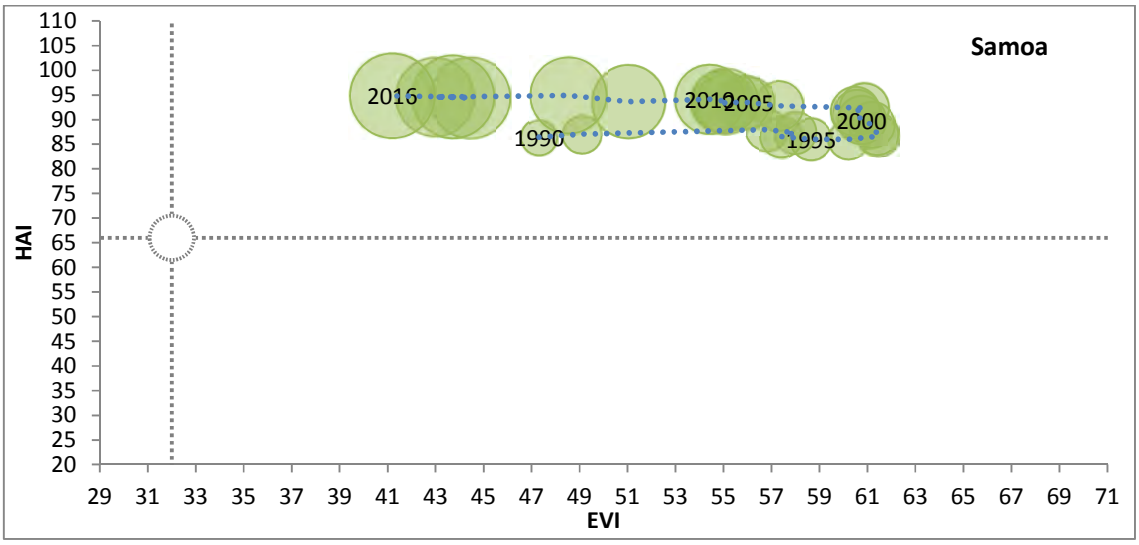
Source: CDP Secretariat

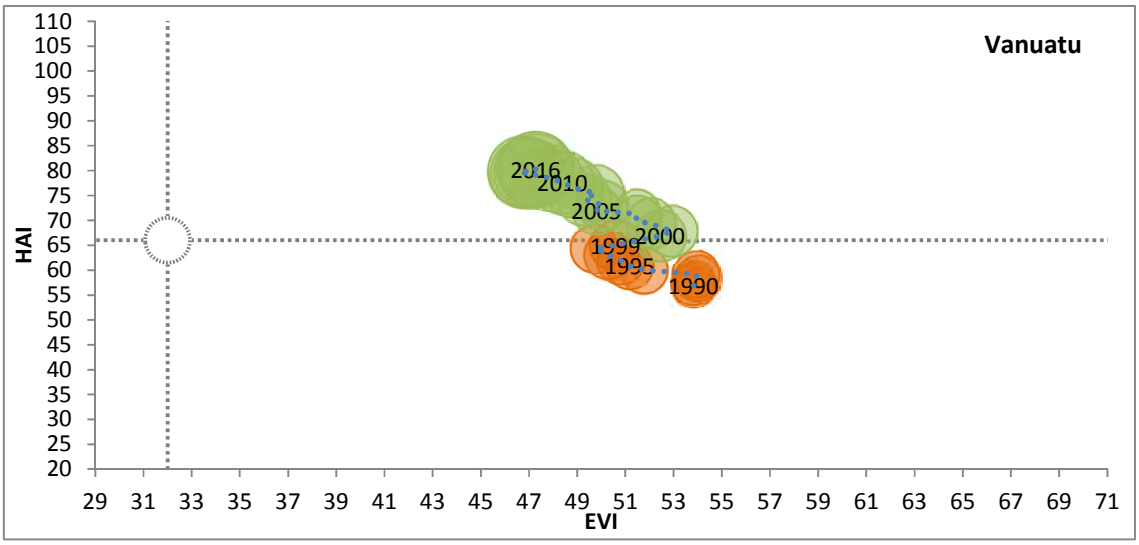
Figure A2: Graduation pathways – Group B

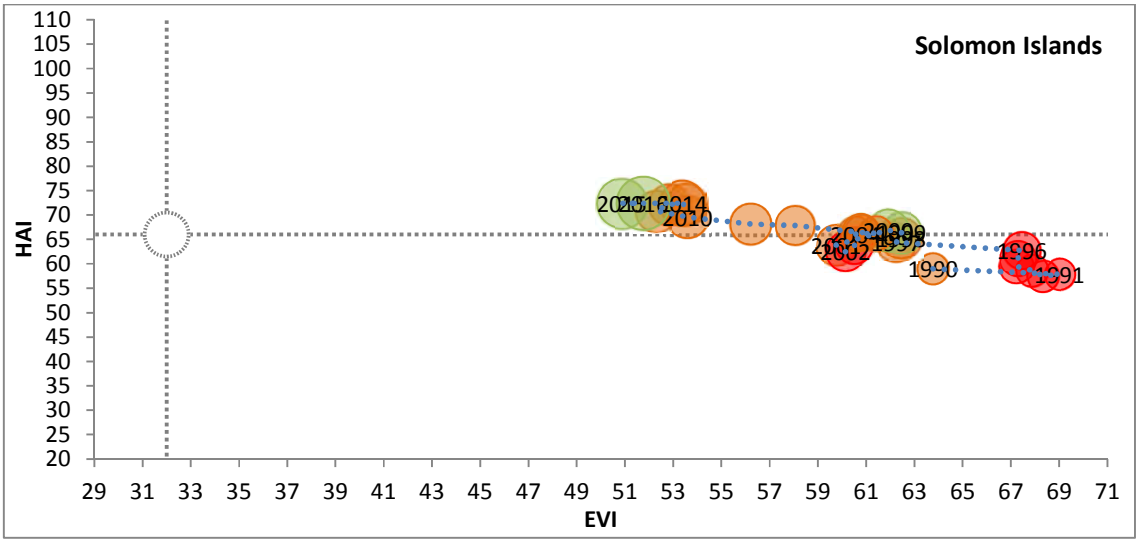


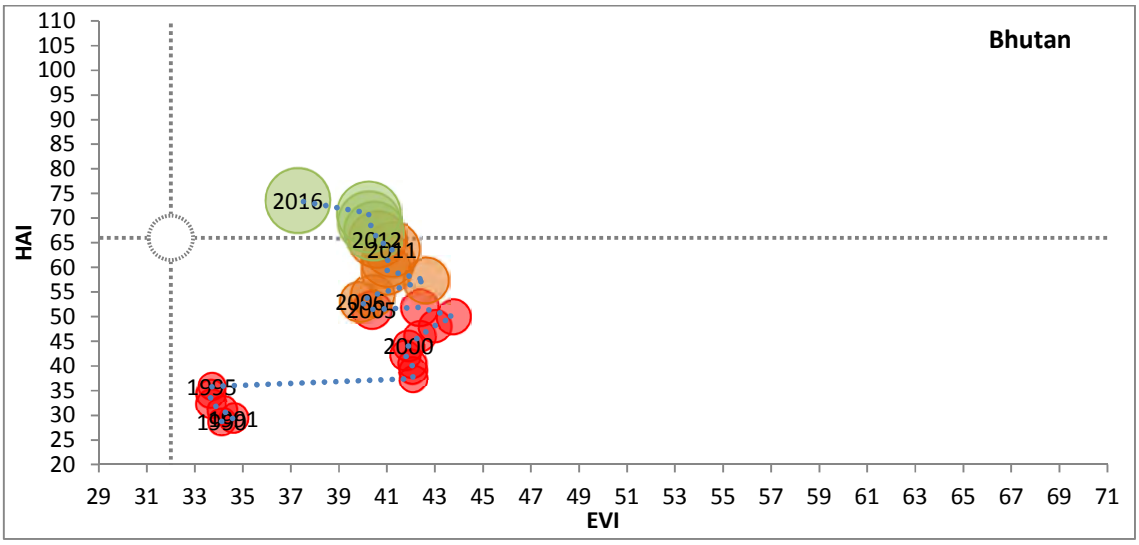





Samoa
HAI
EVI
2016
2010
2005
2000
1995
1990

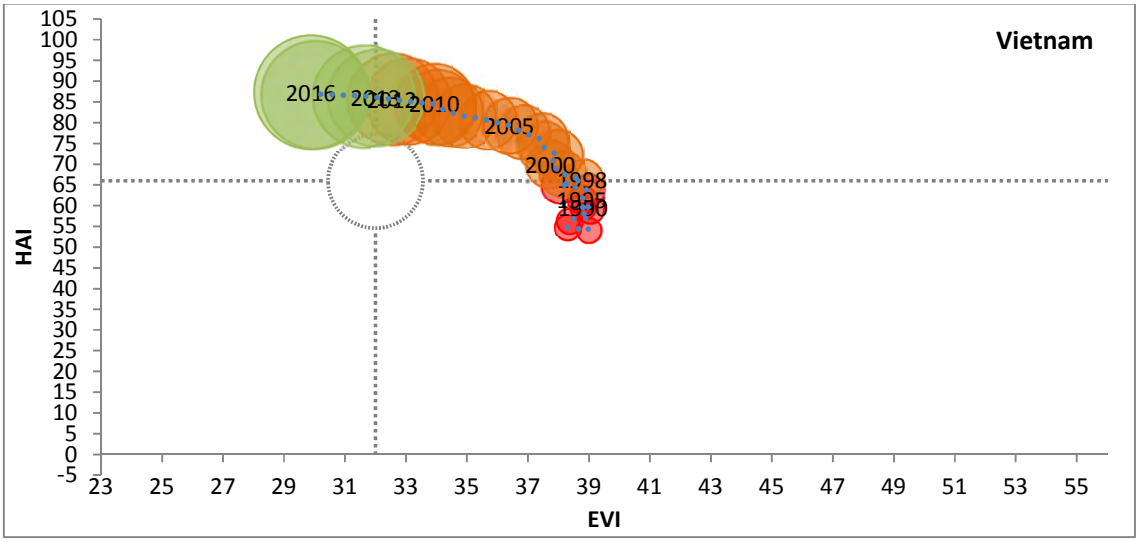

Vanuatu
HAI
EVI
2016
2010
2005
2000
1999
1995
1990

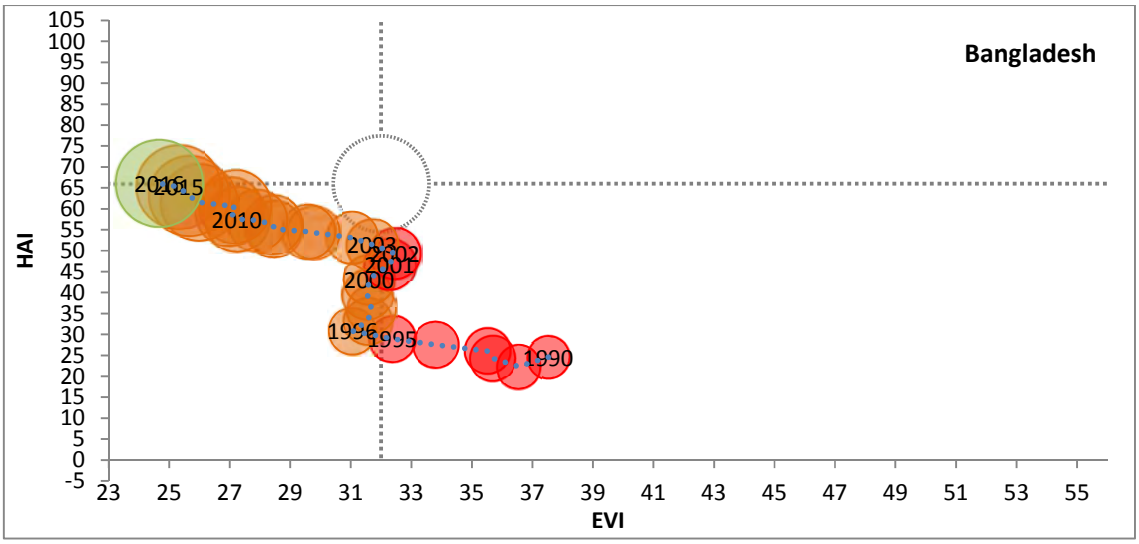

Solomon Islands
HAI
EVI
2010
1990
1991

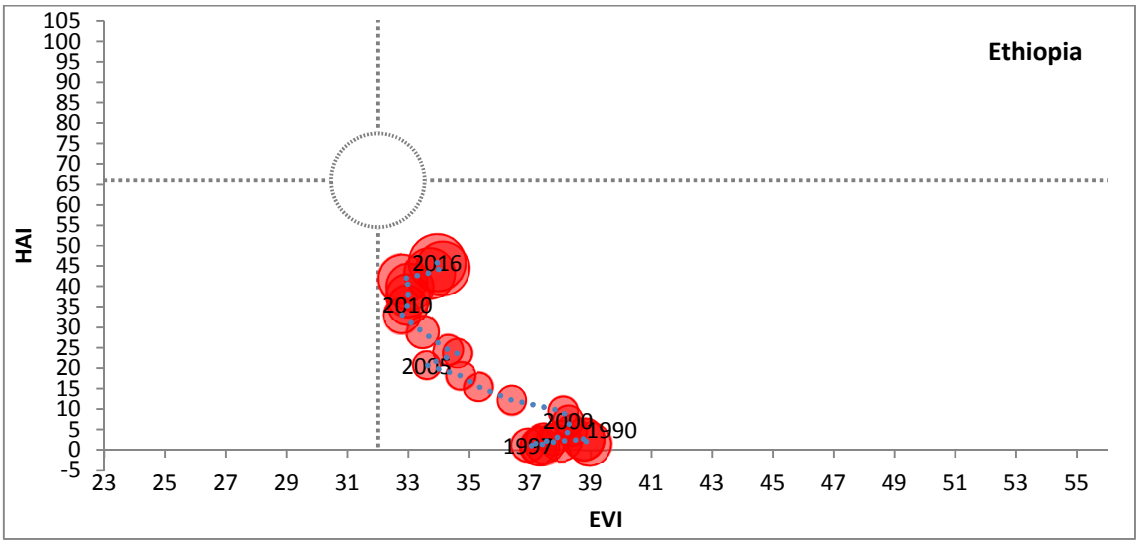


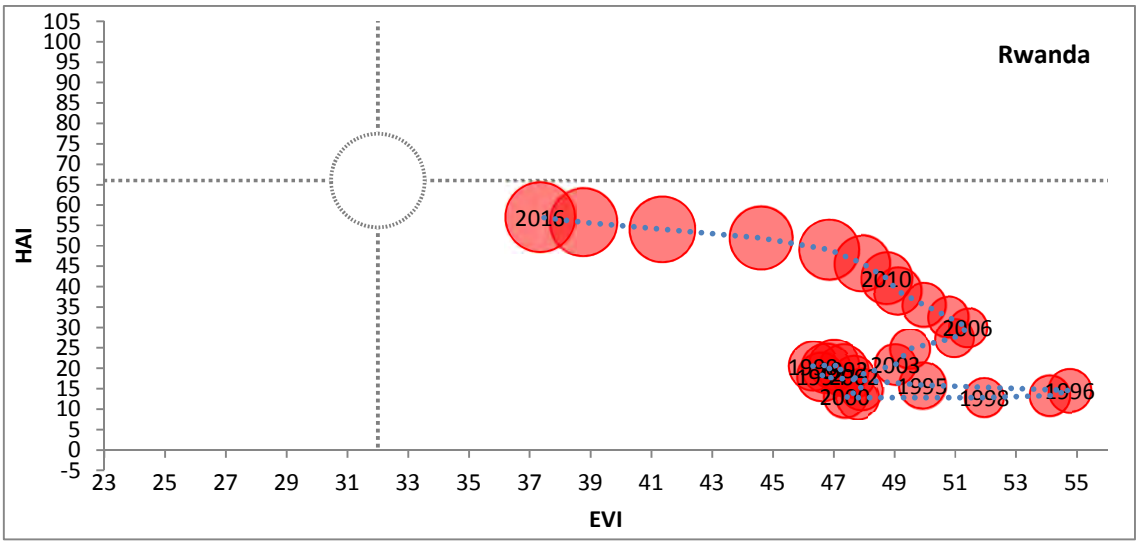
Source: CDP Secretariat

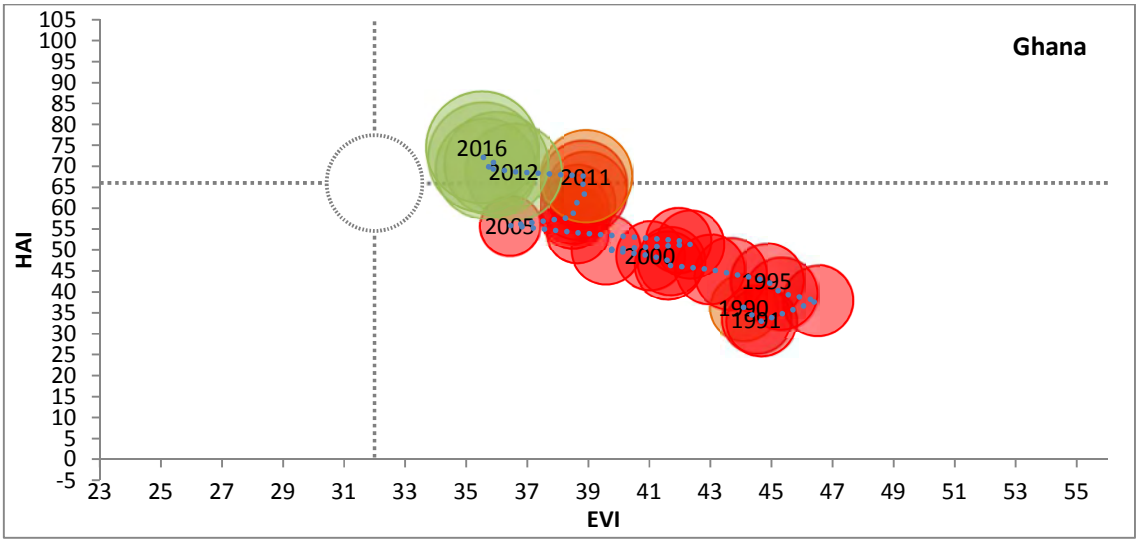
Figure A3: Graduation pathways – Group C






Ethiopia
HAI
EVI
2016
2010
2005
2000
1997
1990


Rwanda
HAI
EVI
2015
2010
2006
2003
1995
1998
1996


Ghana
HAI
EVI
2016
2012
2011
2005
2000
1995
1990
1991

A

B: Figures on structural transformation and progress towards LDC criteria in focus countries

This annex presents figures on sectoral composition and economic growth since 1971. The data is from the United Nations Statistics Division National Accounts Main Aggregates Database (AMA), but includes a more detailed decomposition than the publicly available version. The AMA database augments official data with estimates, with country details available on the AMA webpage, which should be taken into account when interpreting the data. In particular, constant sectoral shares that can be seen for a number of countries in early years are the result of a lack of sectoral data rather than a lack of sectoral change. The sectoral composition is based on the International Standard Industrial Classification of All Economic Activities (ISIC), version 3.1.

Table x: ISIC 3.1 Codes

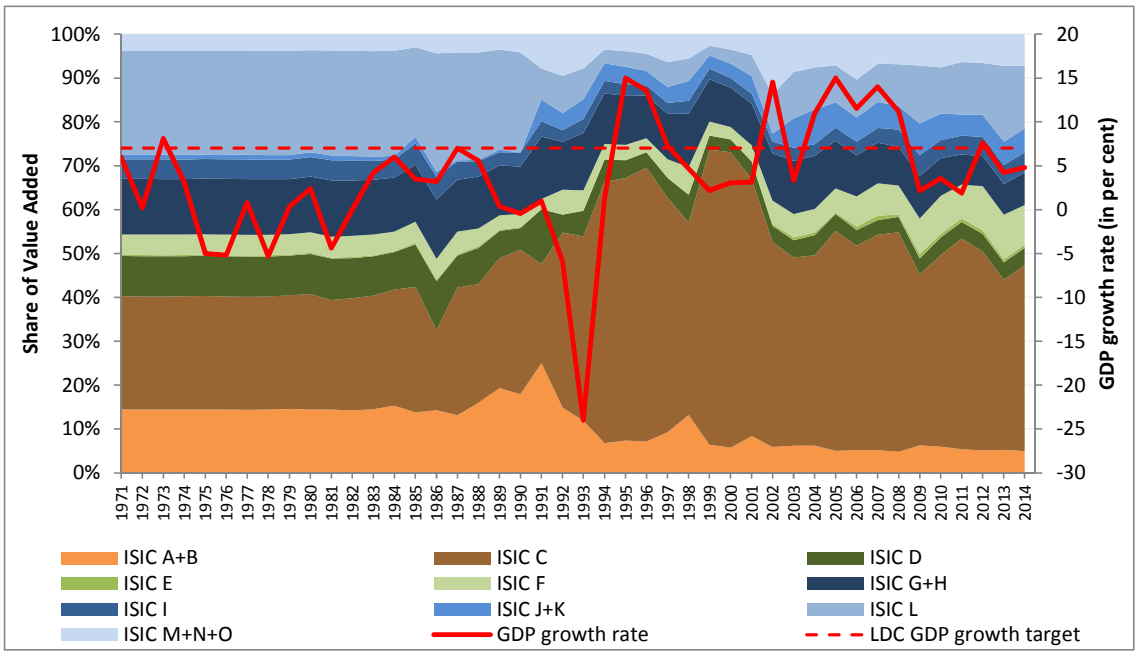
ISIC Code	Sector
A	Agriculture, hunting and forestry
B	Fishing
C	Mining and quarrying
D	Manufacturing
E	Electricity, gas and water supply
F	Construction
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H	Hotels and restaurants
I	Transport, storage and communications
J	Financial intermediation
K	Real estate, renting and business activities
L	Public administration and defence; compulsory social security
M	Education
N	Health and social work
O	Other community, social and personal service activities
P	Activities of private households as employers and undifferentiated production activities of private households
Q	Extraterritorial organizations and bodies

Source: UNSD; http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=17

The figures on progress towards the three LDC criteria, including the components of HAI and EVI, are based on the same data as the figures in Annex A. It should be noted that the contribution of individual indicators to HAI and EVI can be zero if the falls outside the bounds established by the CDP in 2012. This happens in particular for under-five mortality rate and gross secondary enrolment rates, as both indicators are influenced by a significant global trend towards lower mortality and increases school enrolment.

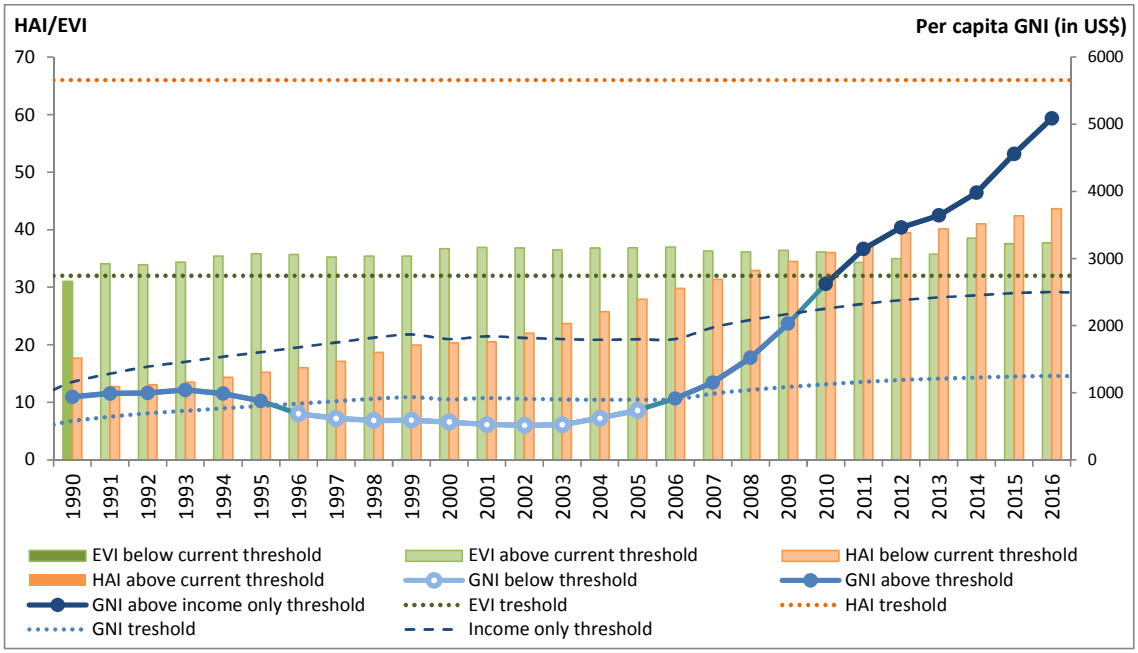
Angola

Figure B.1.1: Sectoral change and economic growth in Angola



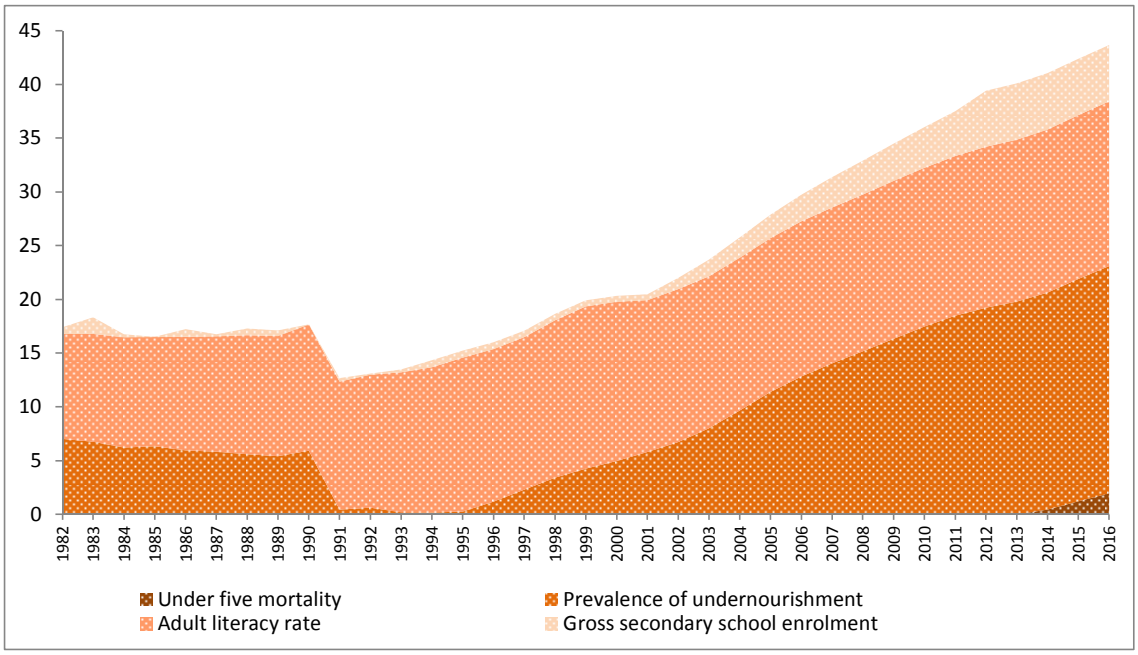
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.1.2: LDC criteria in Angola



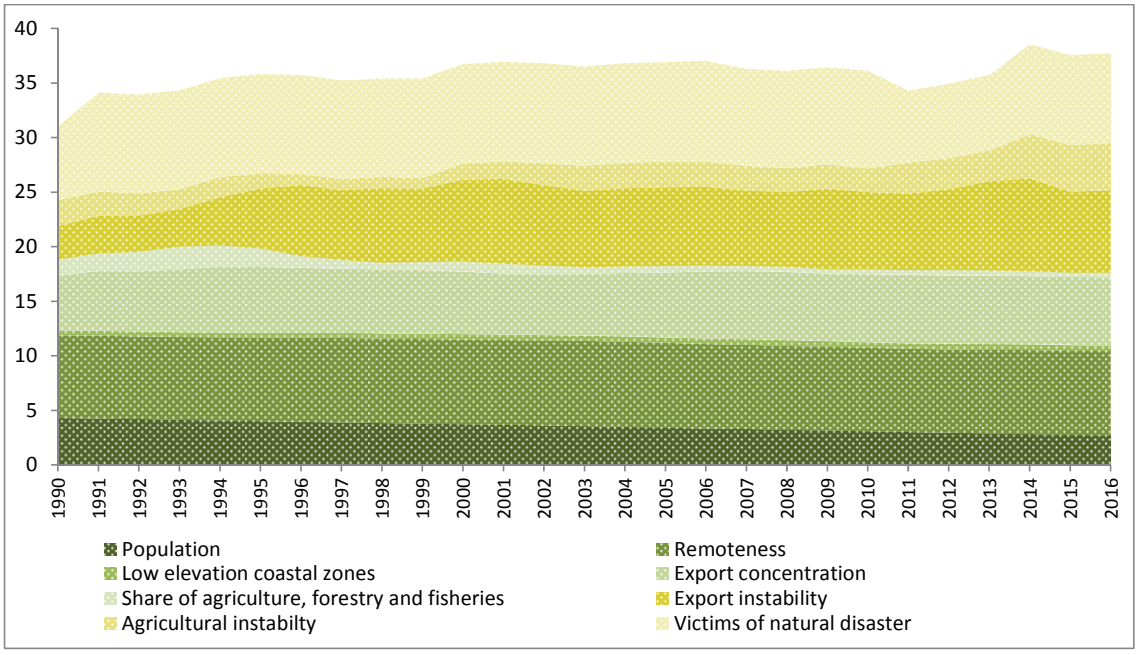
Source: CDP Secretariat

Figure B.1.3: HAI breakdown for Angola



Source: CDP Secretariat

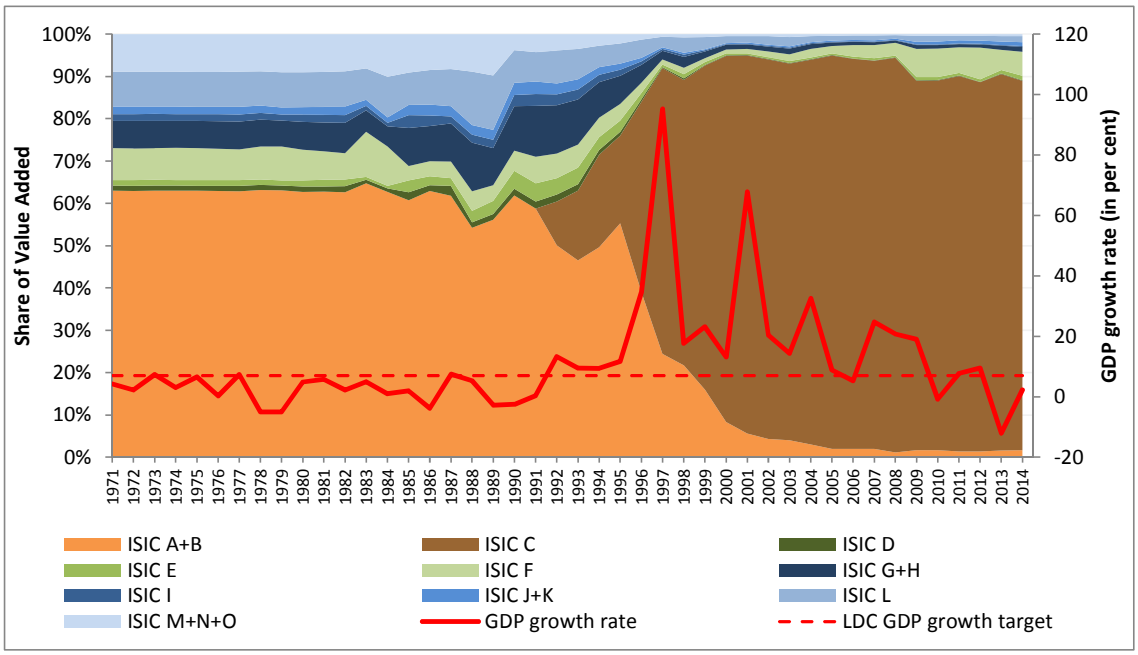
Figure B.1.4: EVI breakdown for Angola



Source: CDP Secretariat

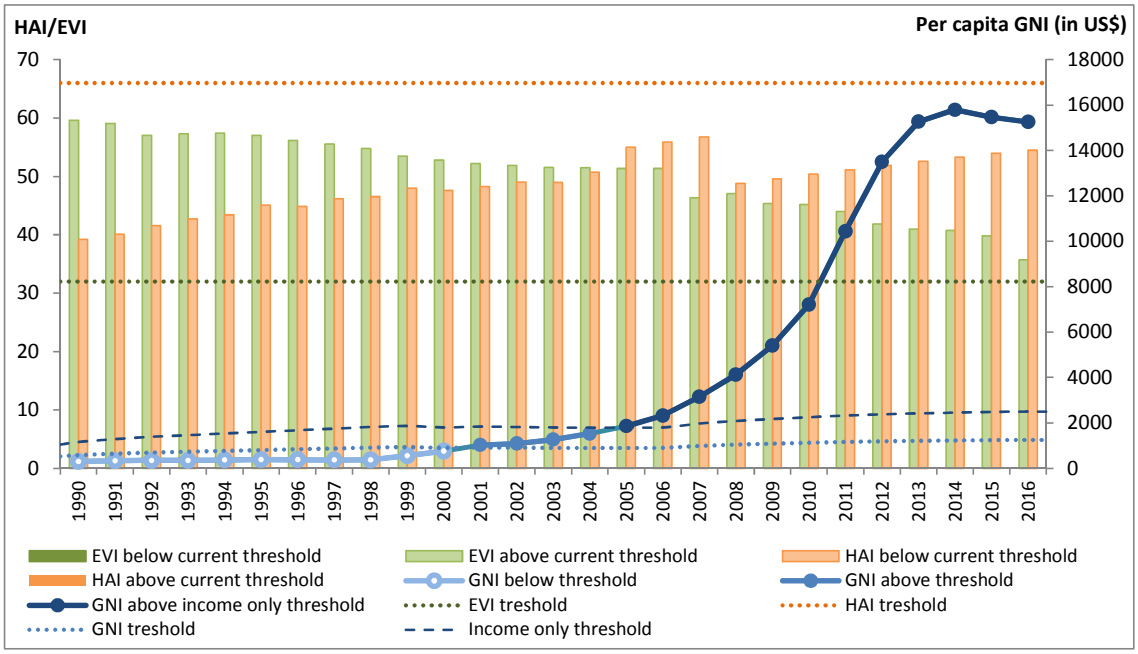
Equatorial Guinea

Figure B.2.1 Sectoral change and economic growth in Equatorial Guinea



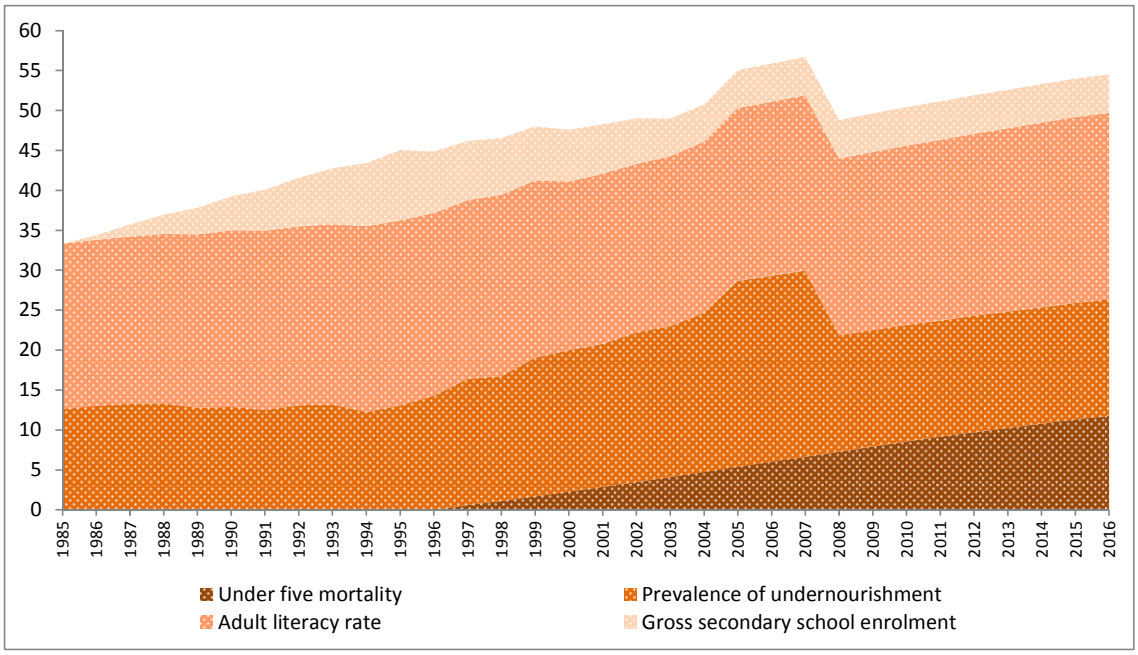
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.2.2: LDC criteria in Equatorial Guinea



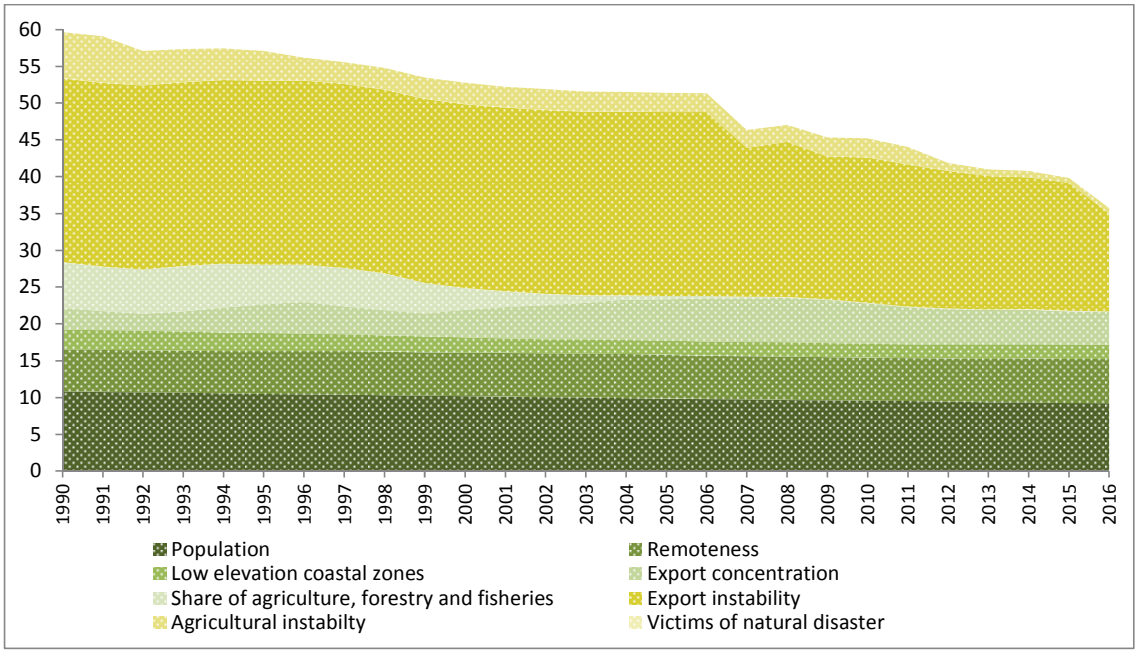
Source: CDP Secretariat

Figure B.2.3: HAI breakdown for Equatorial Guinea



Source: CDP Secretariat

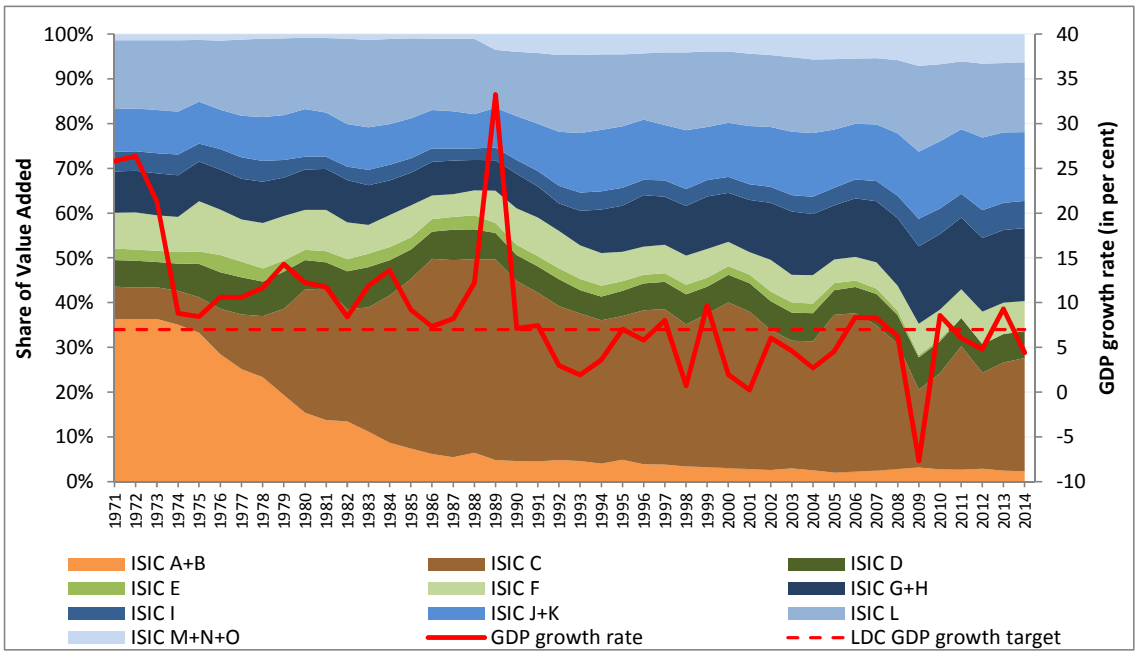
Figure B.2.4: EVI breakdown for Equatorial Guinea



Source: CDP Secretariat

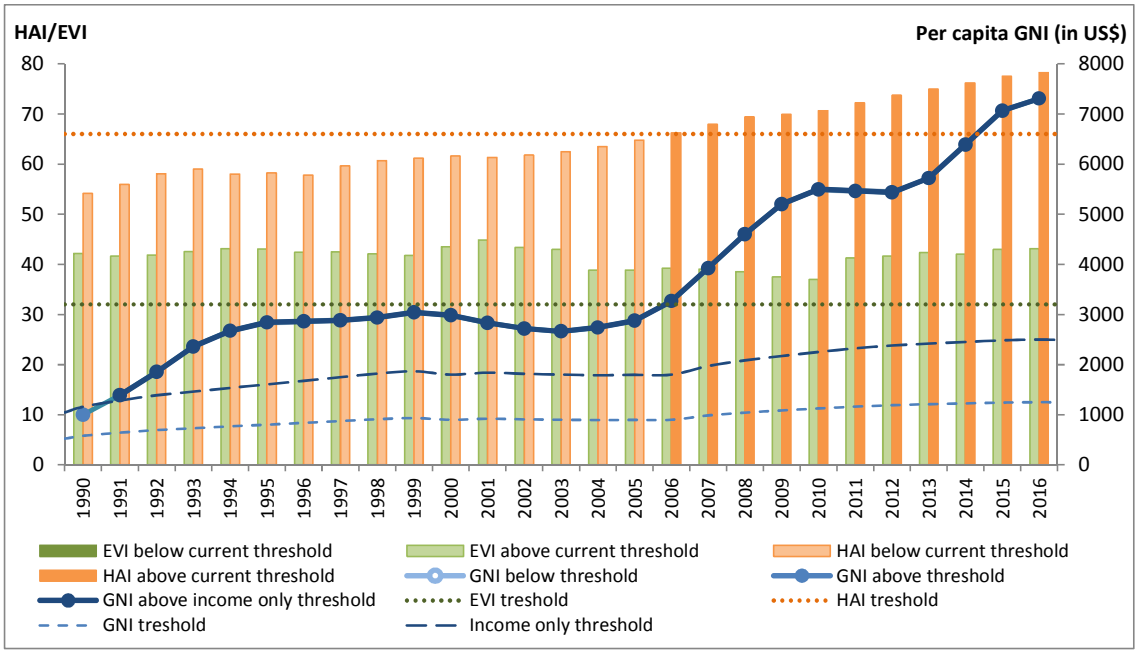
Botswana

Figure B.3.1 Sectoral change and economic growth in Botswana



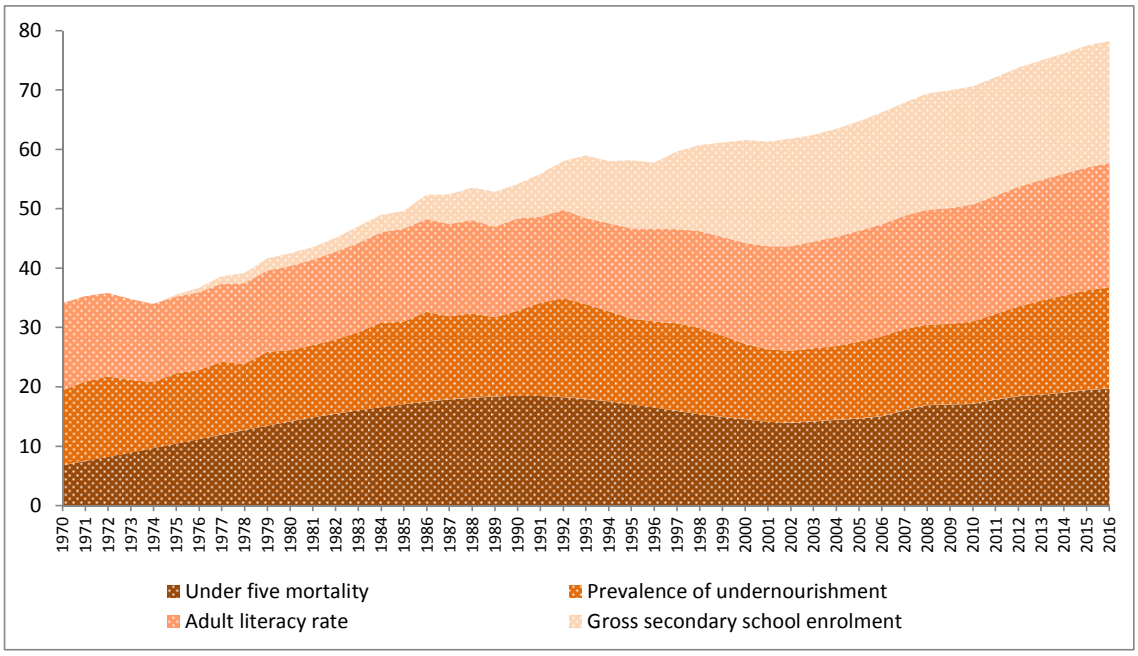
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.3.2: LDC criteria in Botswana



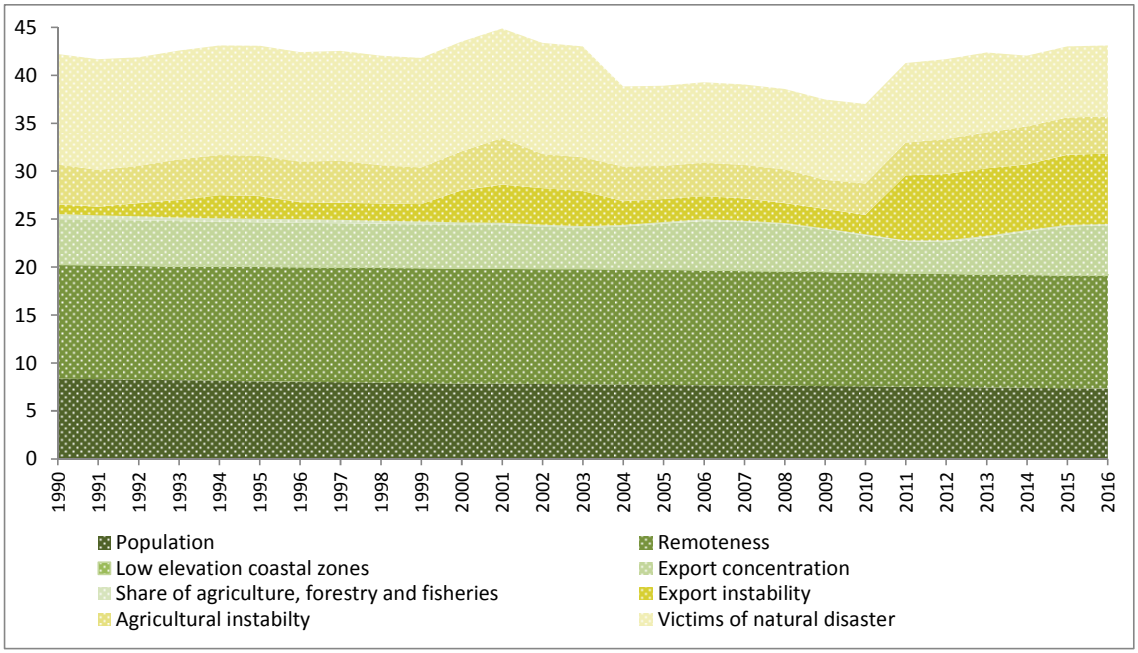
Source: CDP Secretariat

Figure B.2.3: HAI breakdown for Botswana



Source: CDP Secretariat

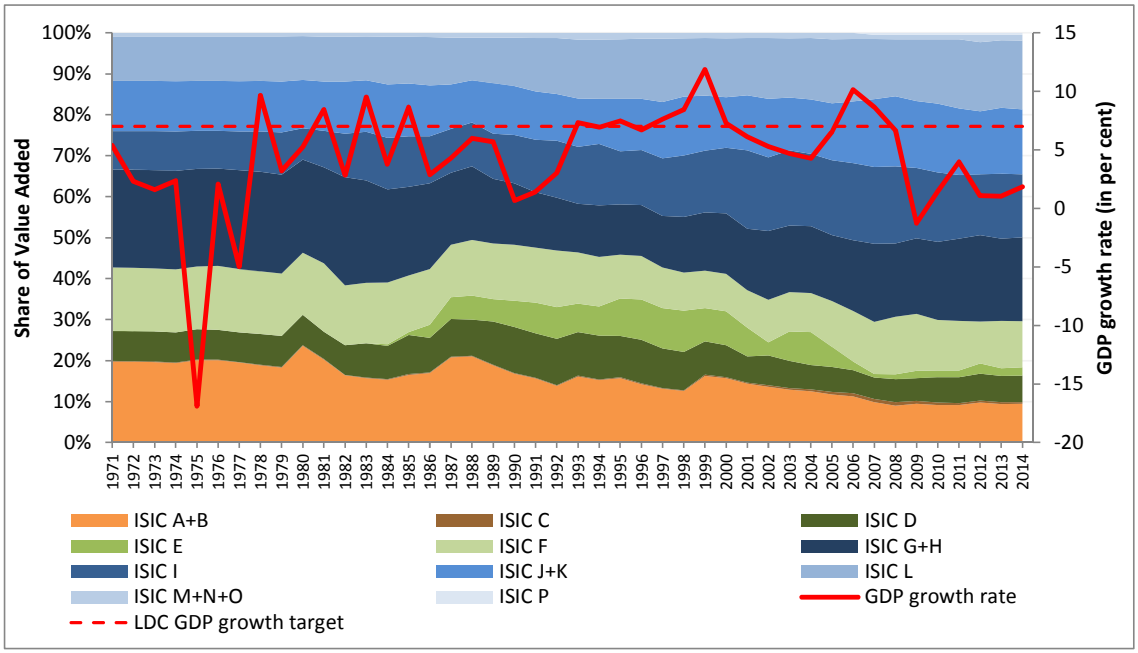
Figure B.2.4: EVI breakdown for Botswana



Source: CDP Secretariat

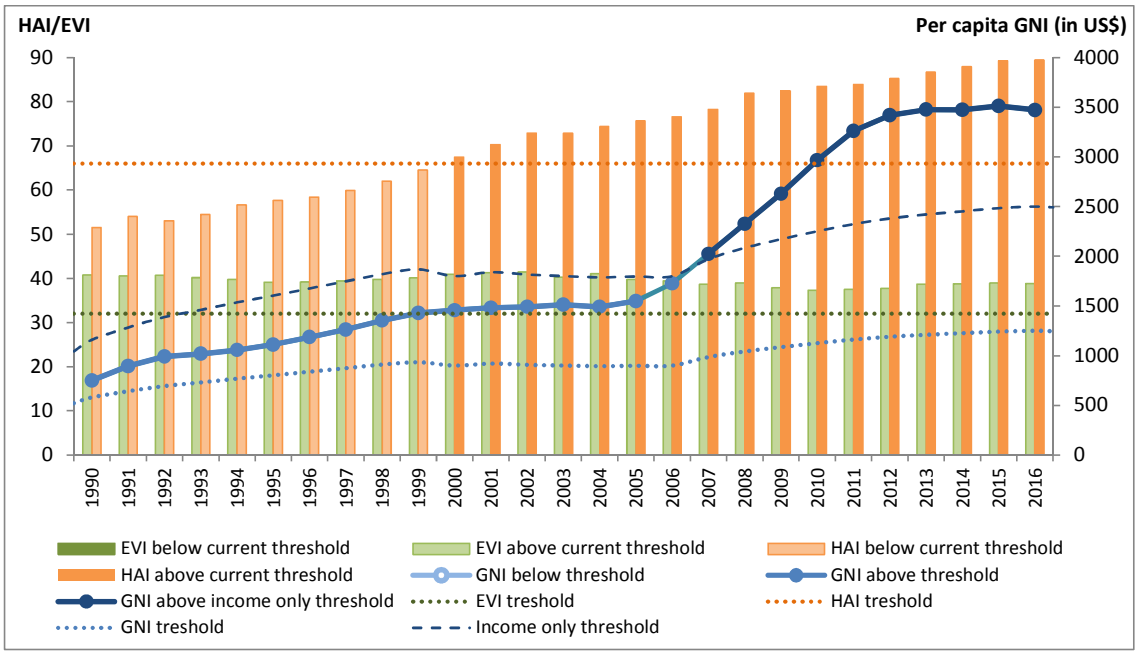
Cabo Verde

Figure B.4.1 Sectoral change and economic growth in Cabo Verde



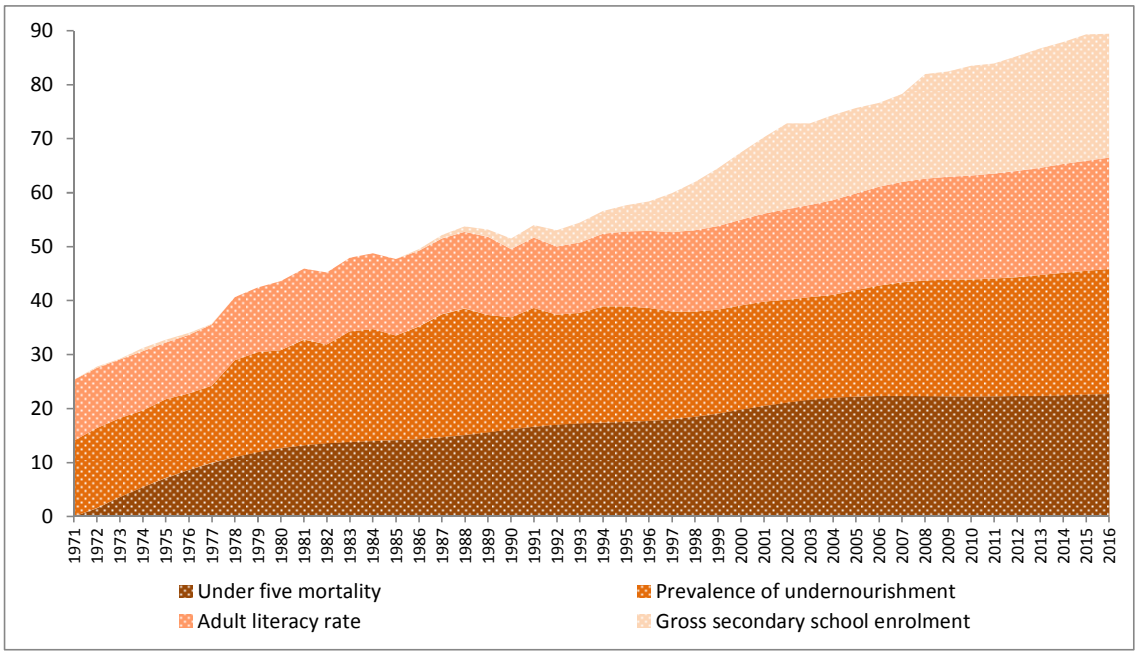
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.4.2: LDC criteria in Cabo Verde



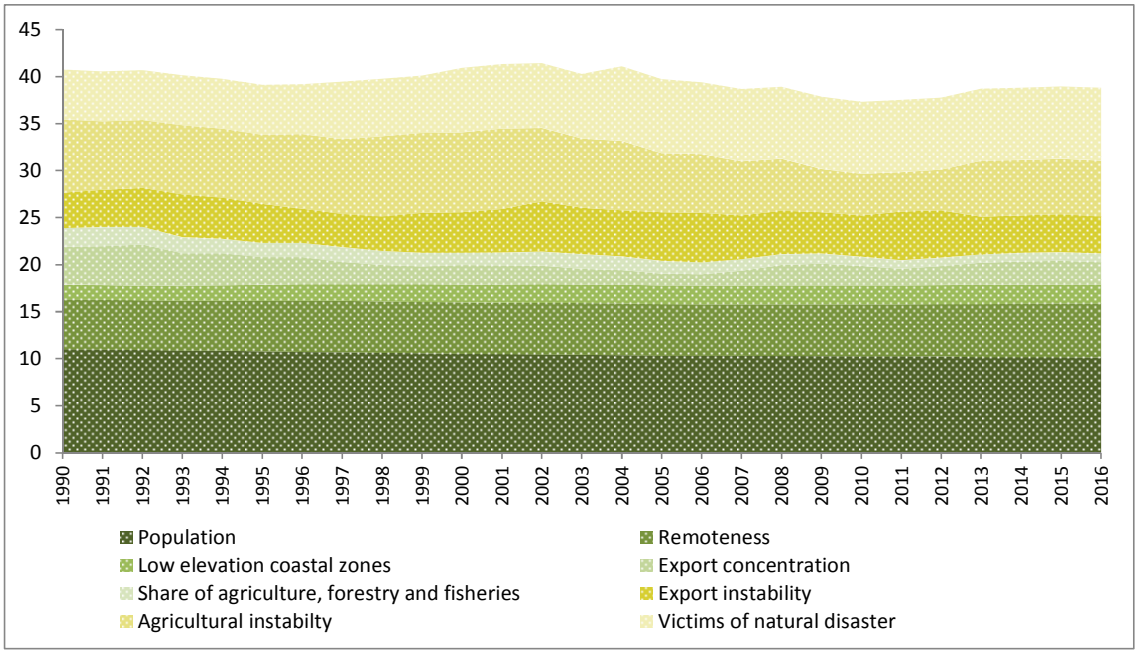
Source: CDP Secretariat

Figure B.4.3: HAI breakdown for Cabo Verde



Source: CDP Secretariat

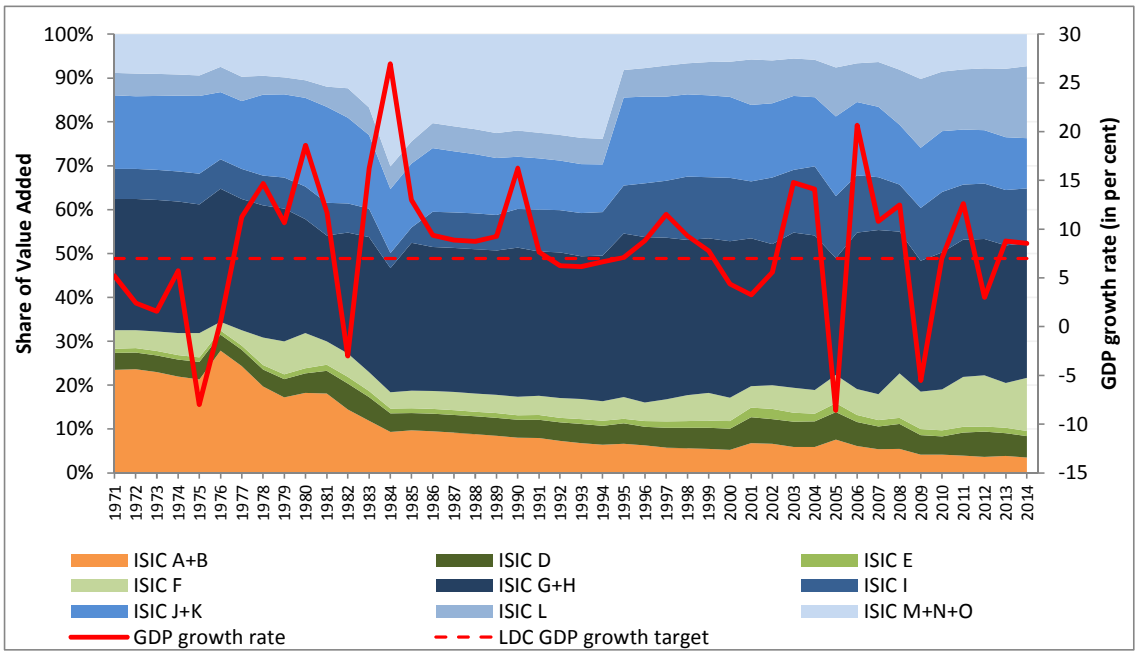
Figure B.4.4: EVI breakdown for Cabo Verde



Source: CDP Secretariat

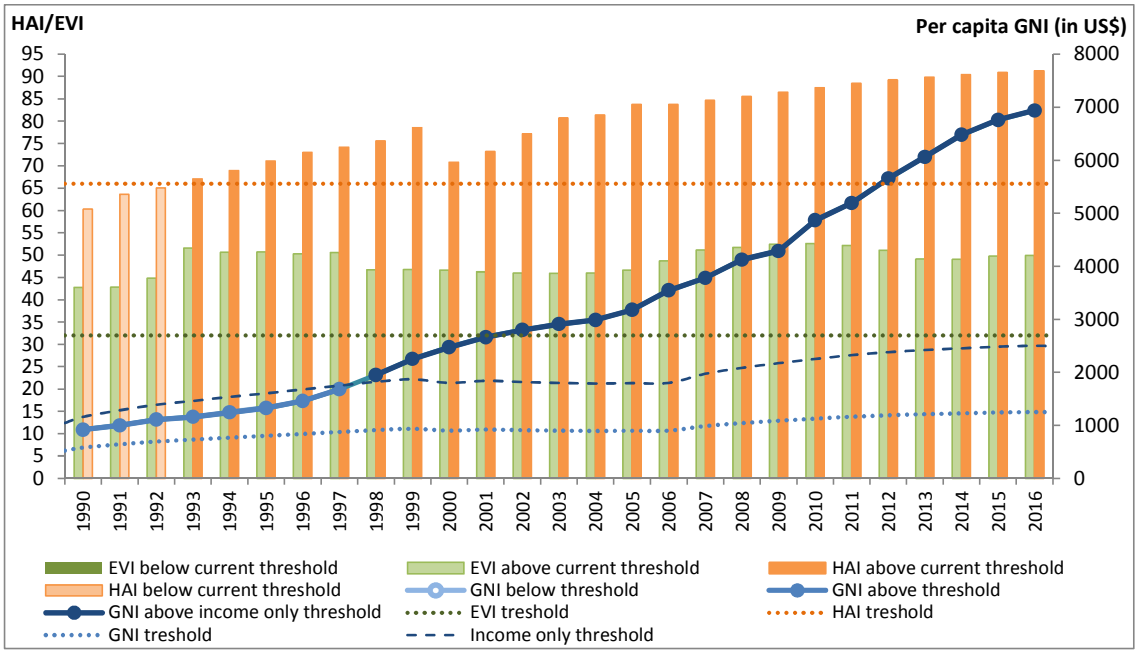
The Maldives

Figure B.5.1 Sectoral change and economic growth in the Maldives



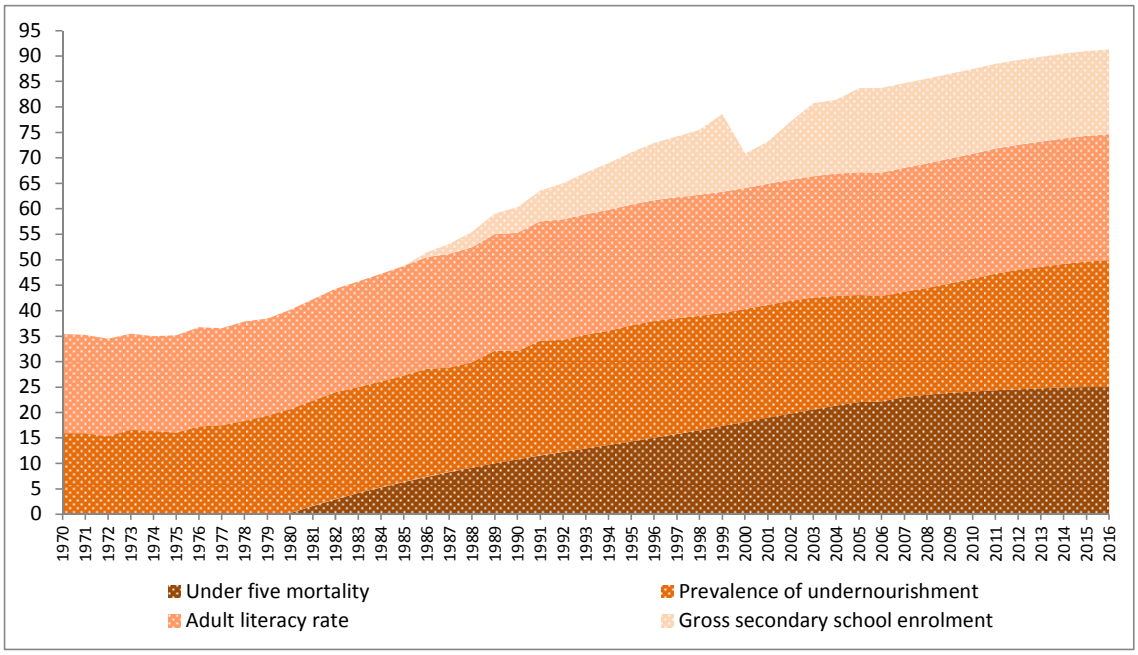
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.5.2: LDC criteria in the Maldives



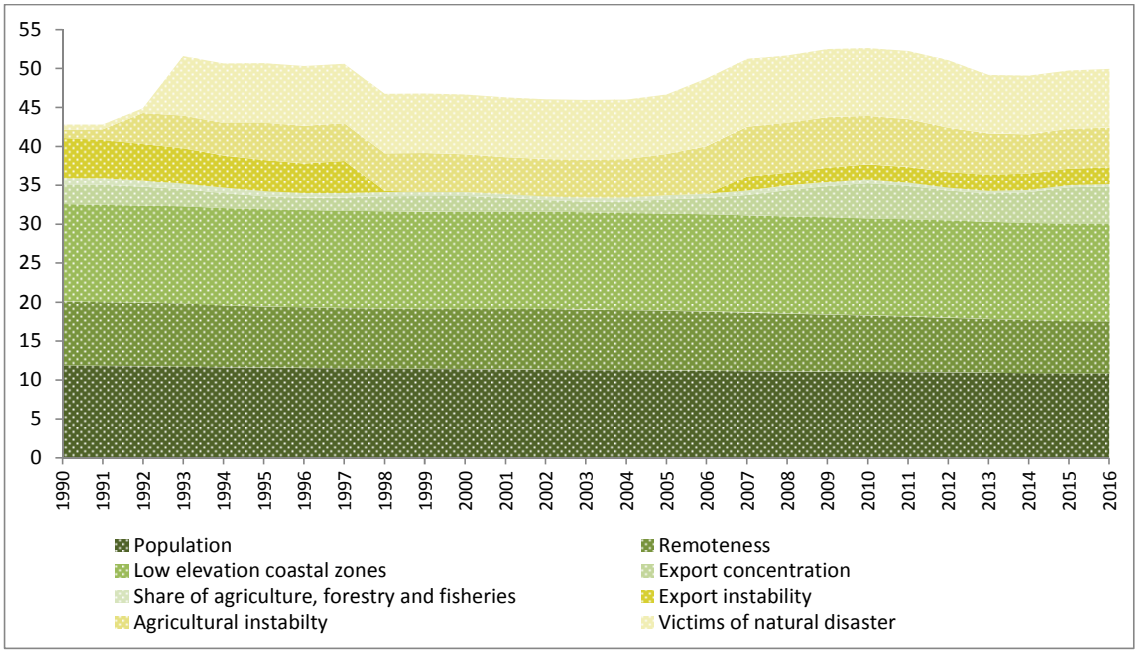
Source: CDP Secretariat

Figure B.5.3: HAI breakdown for the Maldives



Source: CDP Secretariat

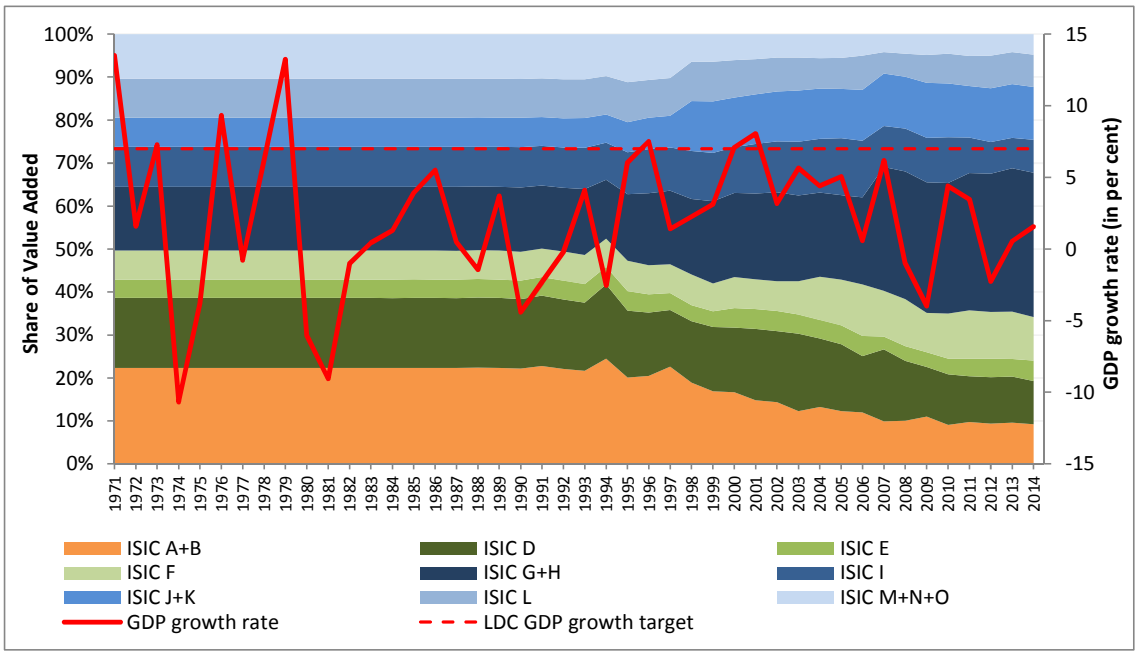
Figure B.5.4: EVI breakdown for the Maldives



Source: CDP Secretariat

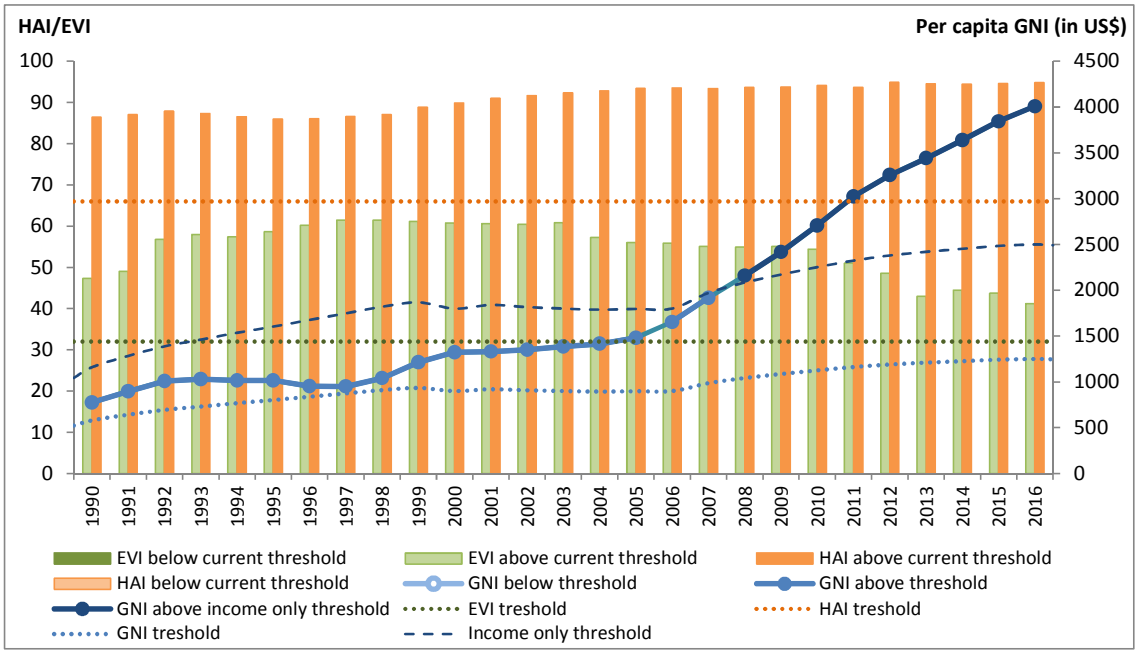
Samoa

Figure B.6.1 Sectoral change and economic growth in Samoa



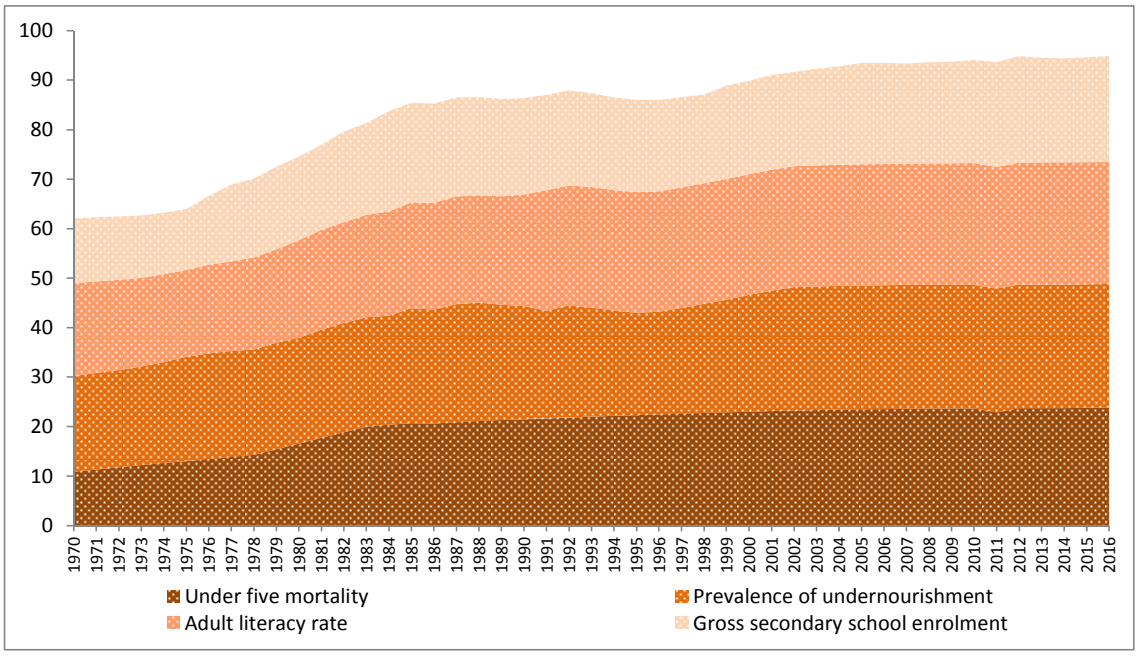
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.6.2: LDC criteria in Samoa



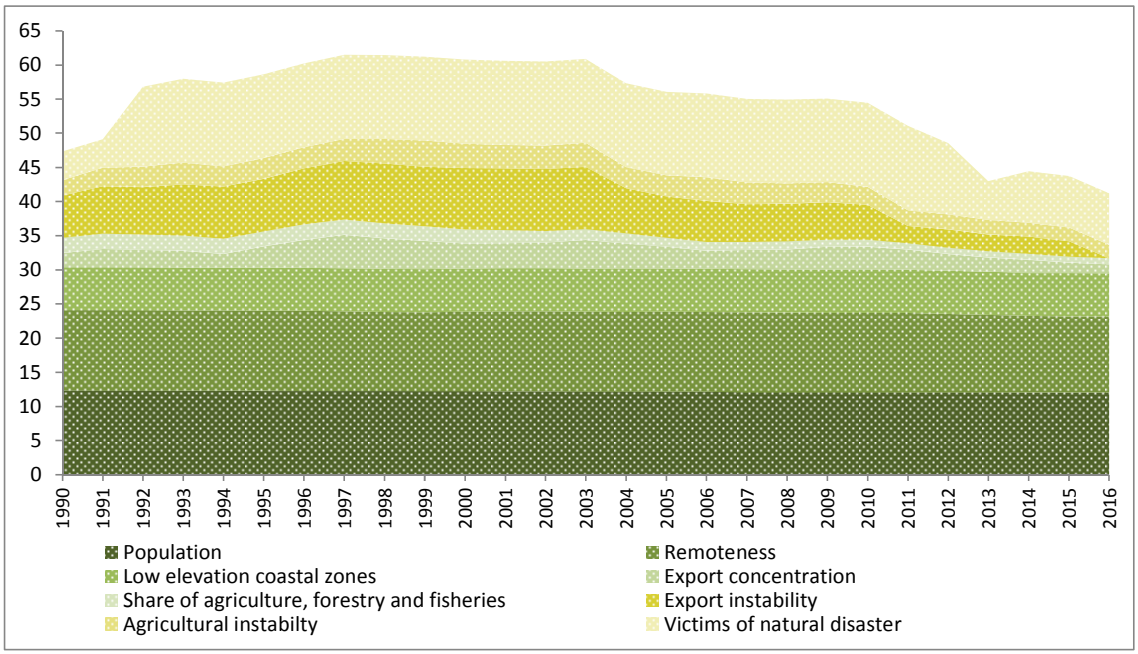
Source: CDP Secretariat

Figure B.6.3: HAI breakdown for Samoa



Source: CDP Secretariat

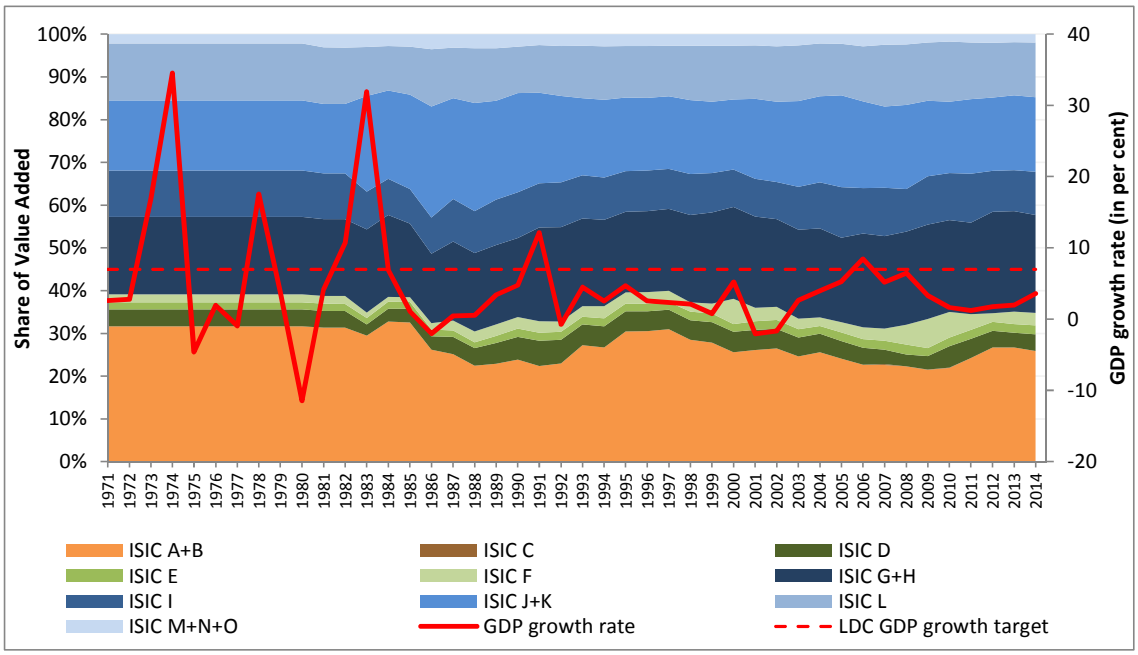
Figure B.6.4: EVI breakdown for Samoa



Source: CDP Secretariat

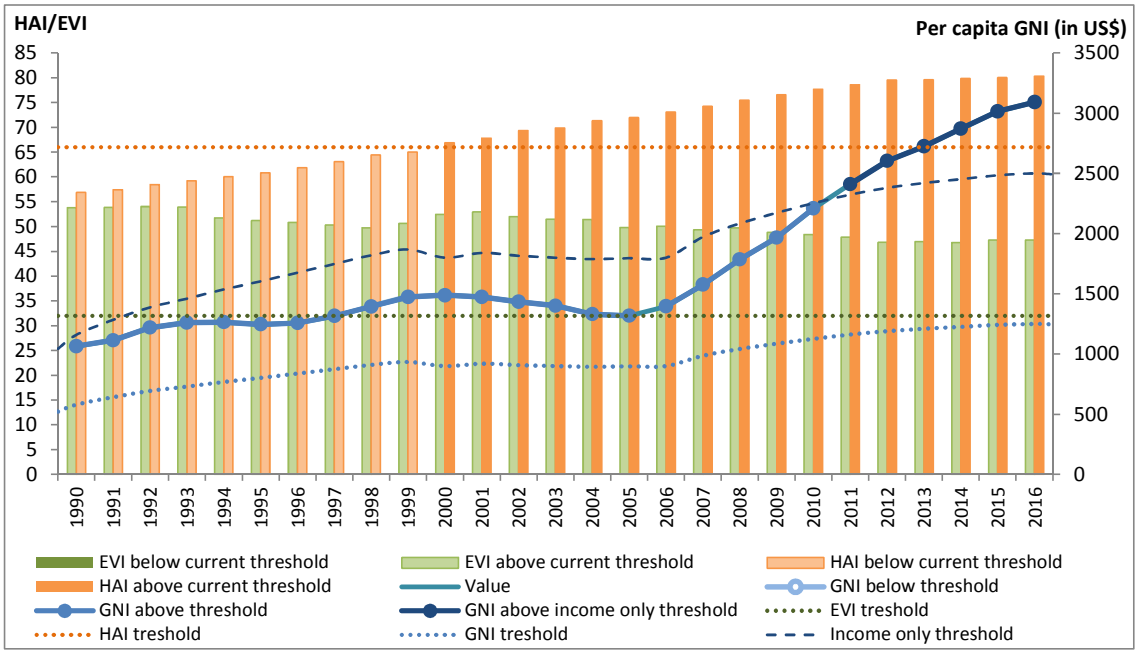
Vanuatu

Figure B.7.1 Sectoral change and economic growth in Vanuatu



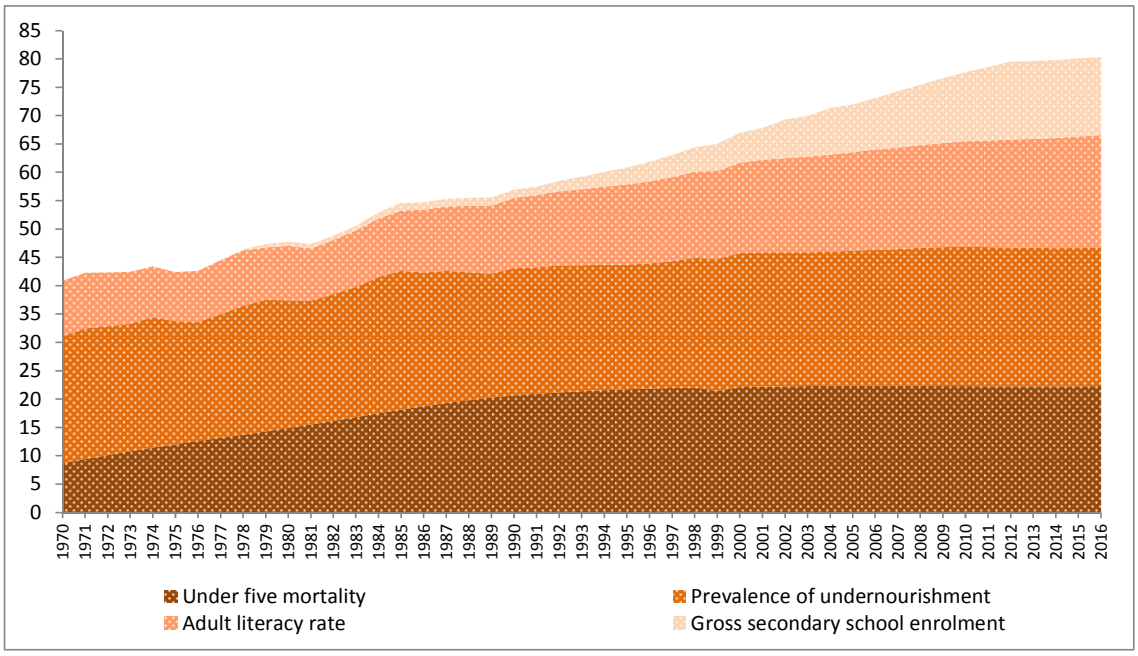
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.7.2: LDC criteria in Vanuatu



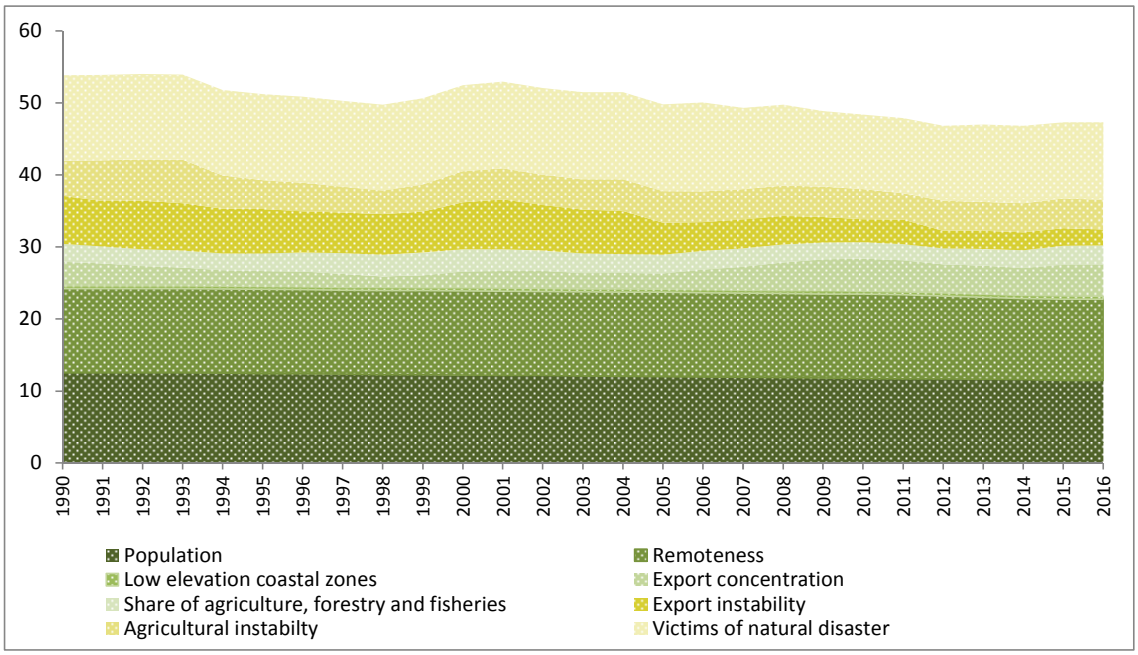
Source: CDP Secretariat

Figure B.7.3: HAI breakdown for Vanuatu



Source: CDP Secretariat

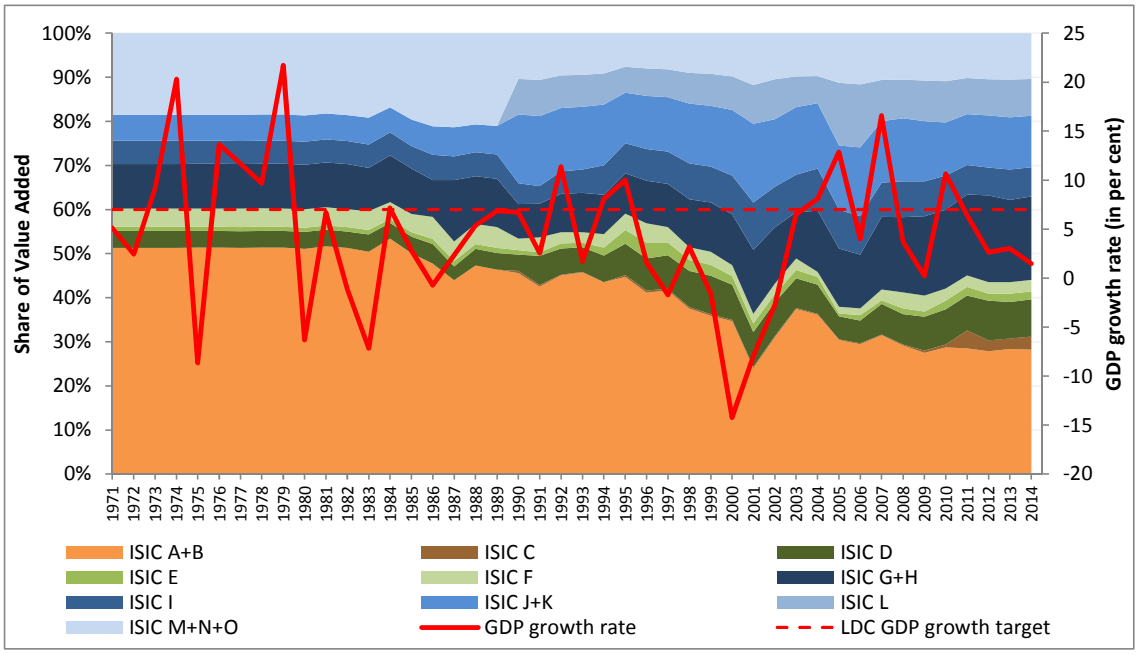
Figure B.7.4: EVI breakdown for Vanuatu



Source: CDP Secretariat

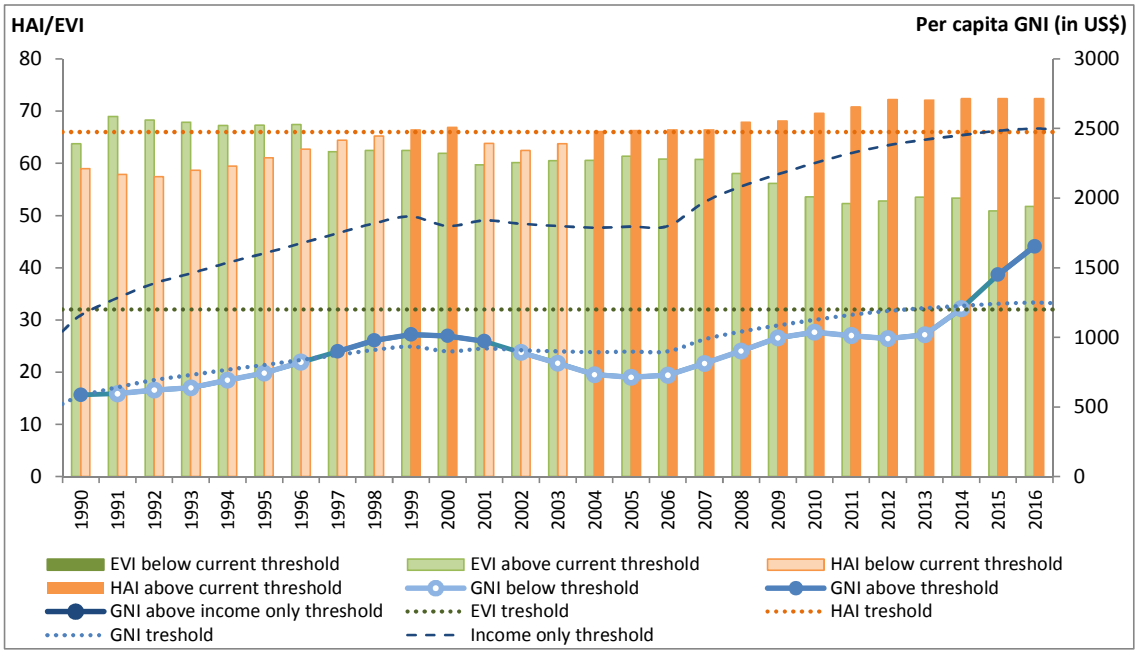
Solomon Islands

Figure B.8.1 Sectoral change and economic growth in Solomon Islands



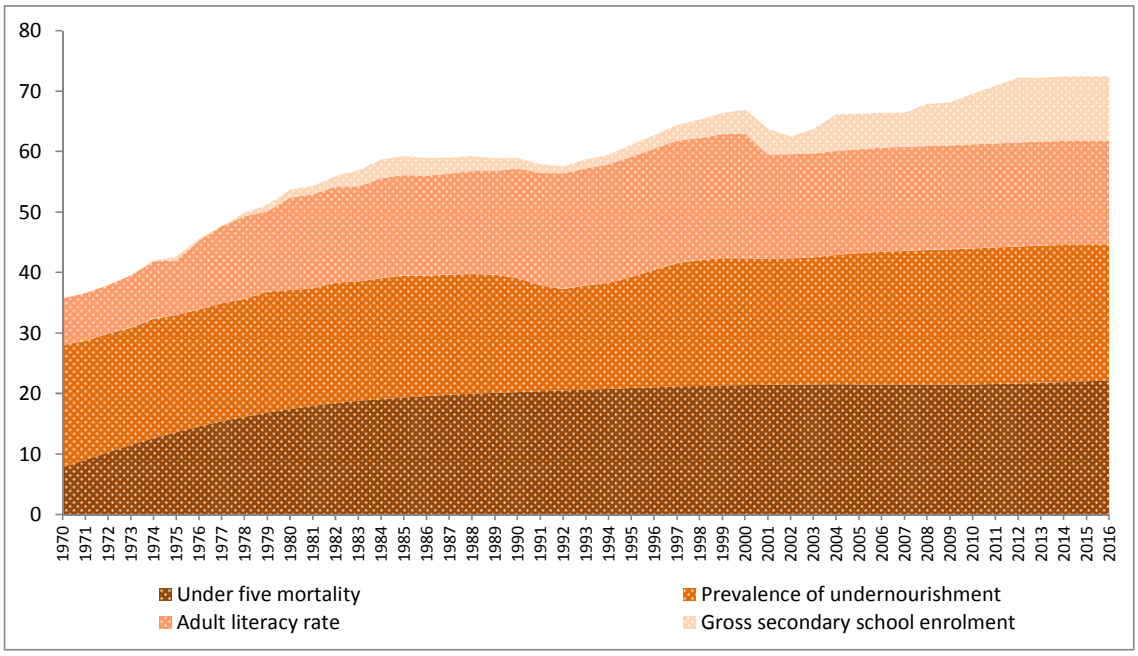
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.8.2: LDC criteria in Solomon Islands



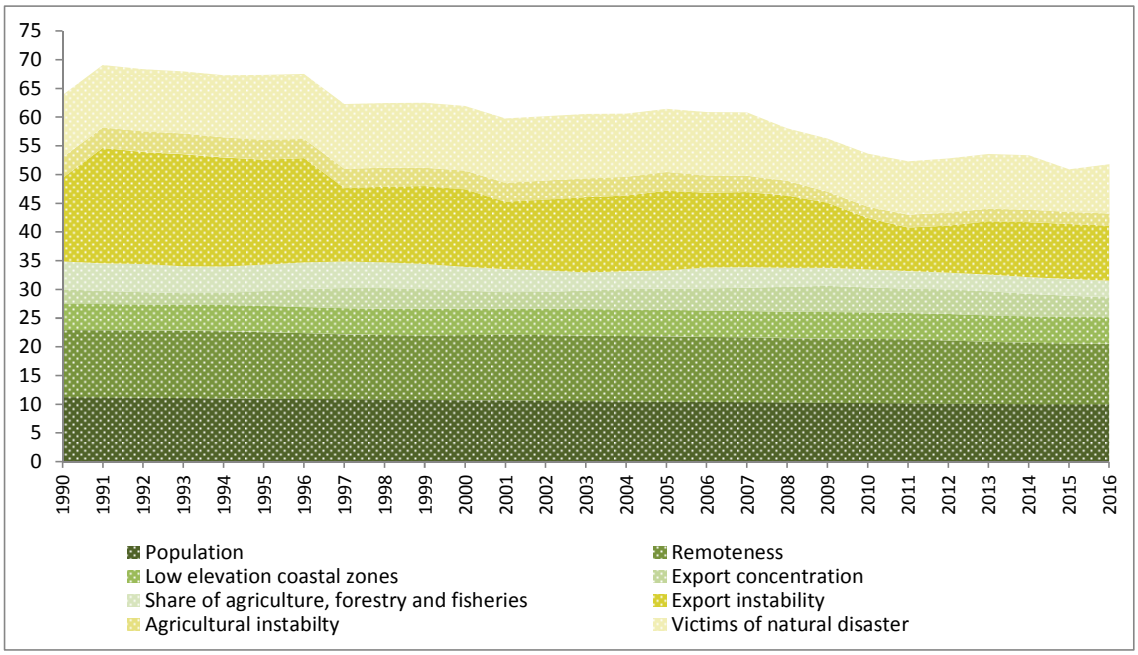
Source: CDP Secretariat

Figure B.8.3: HAI breakdown for Solomon Islands



Source: CDP Secretariat

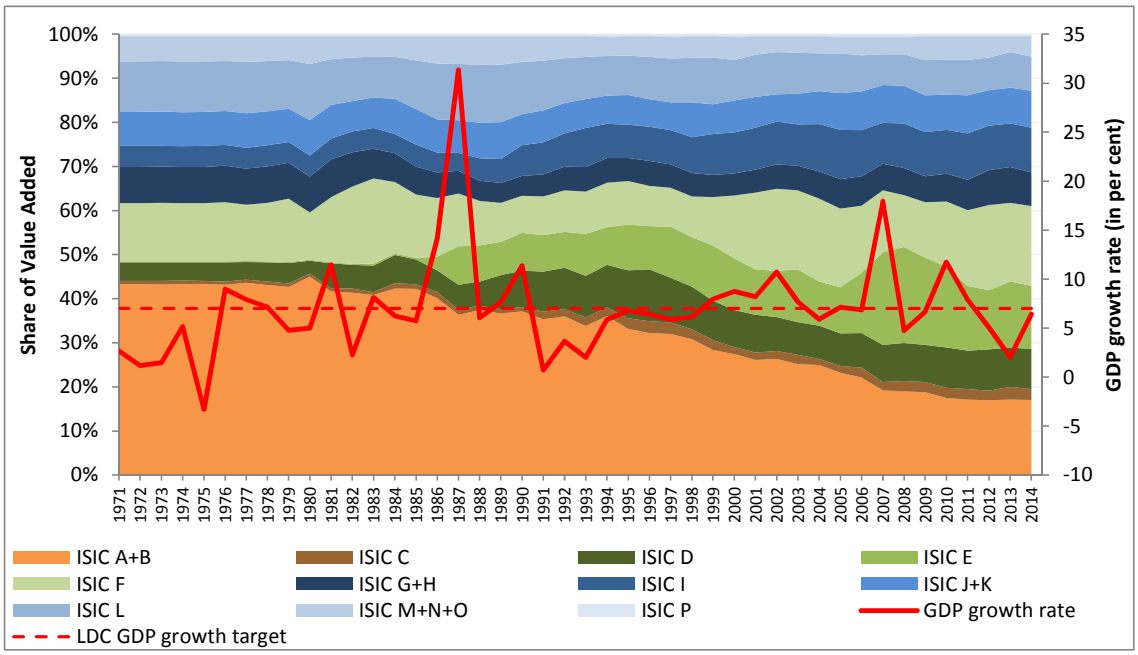
Figure B.8.4: EVI breakdown for Solomon Islands



Source: CDP Secretariat

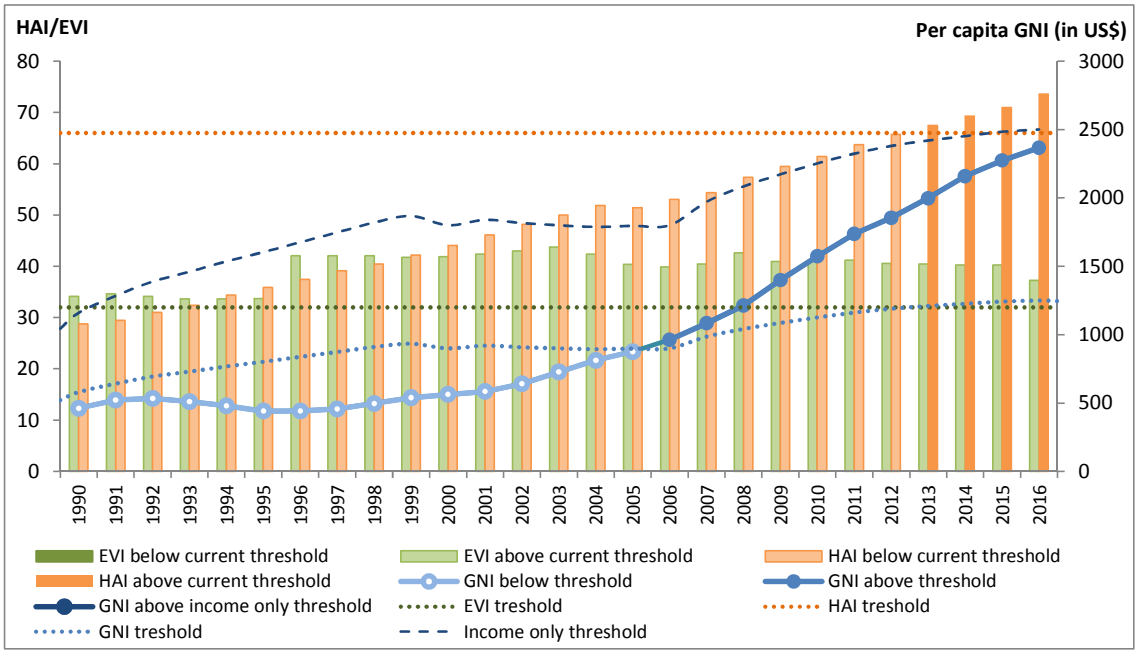
Bhutan

Figure B.9.1 Sectoral change and economic growth in Bhutan



Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.9.2: LDC criteria in Bhutan



Source: CDP Secretariat

Figure B.9.3: HAI breakdown for Bhutan

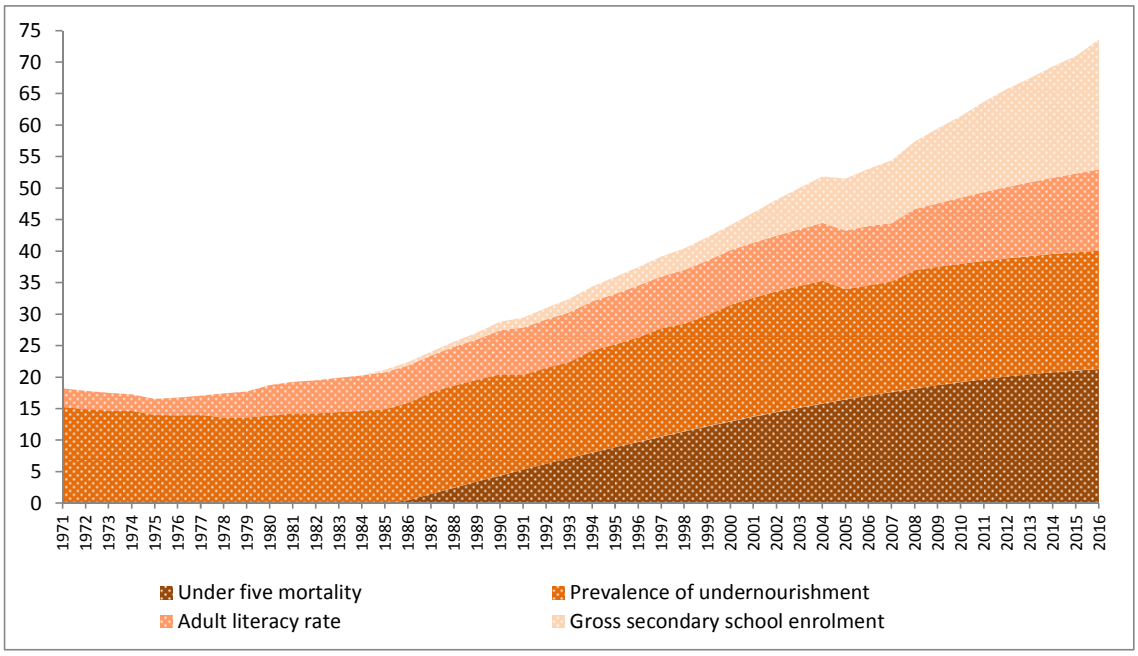


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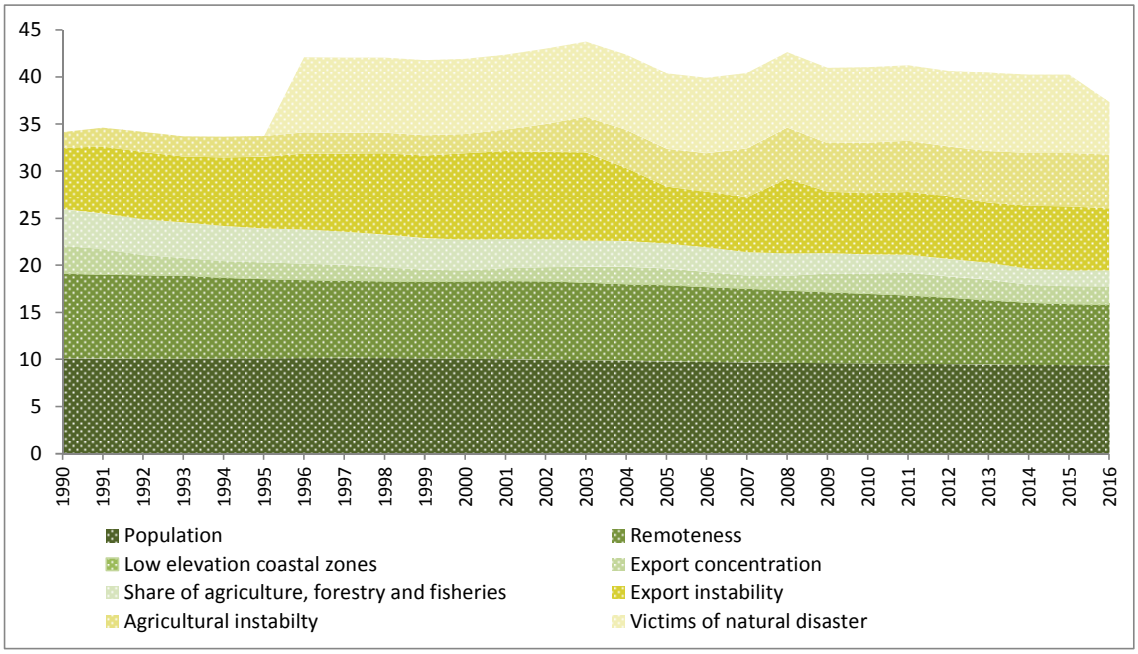
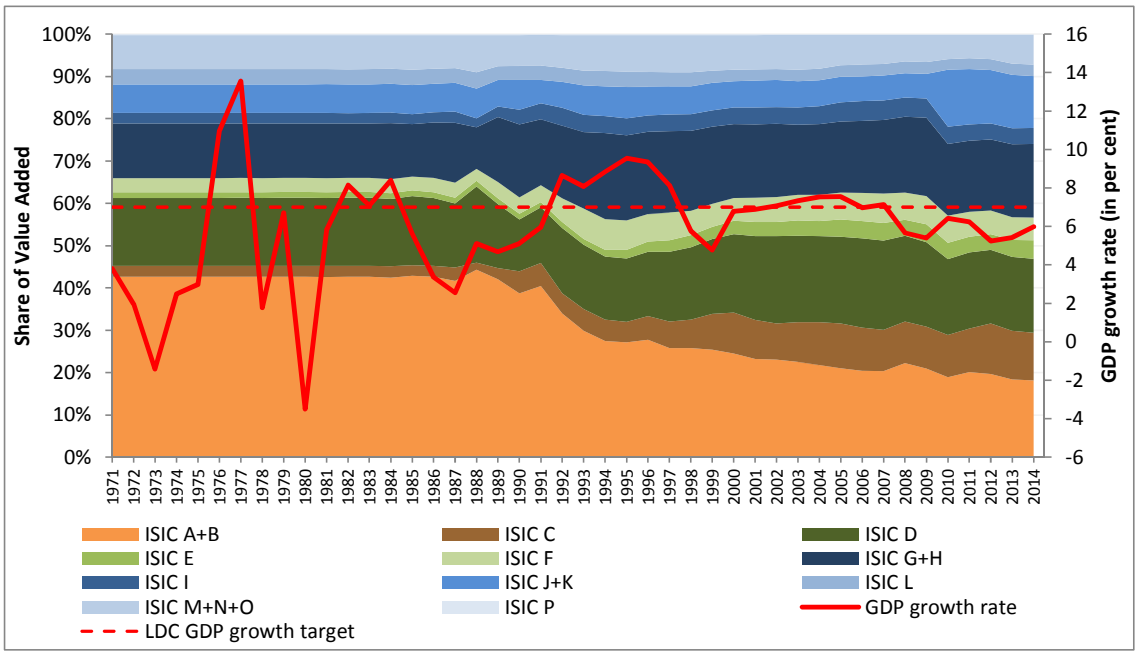
Figure B.9.4: EVI breakdown for Bhutan



Source: CDP Secretariat

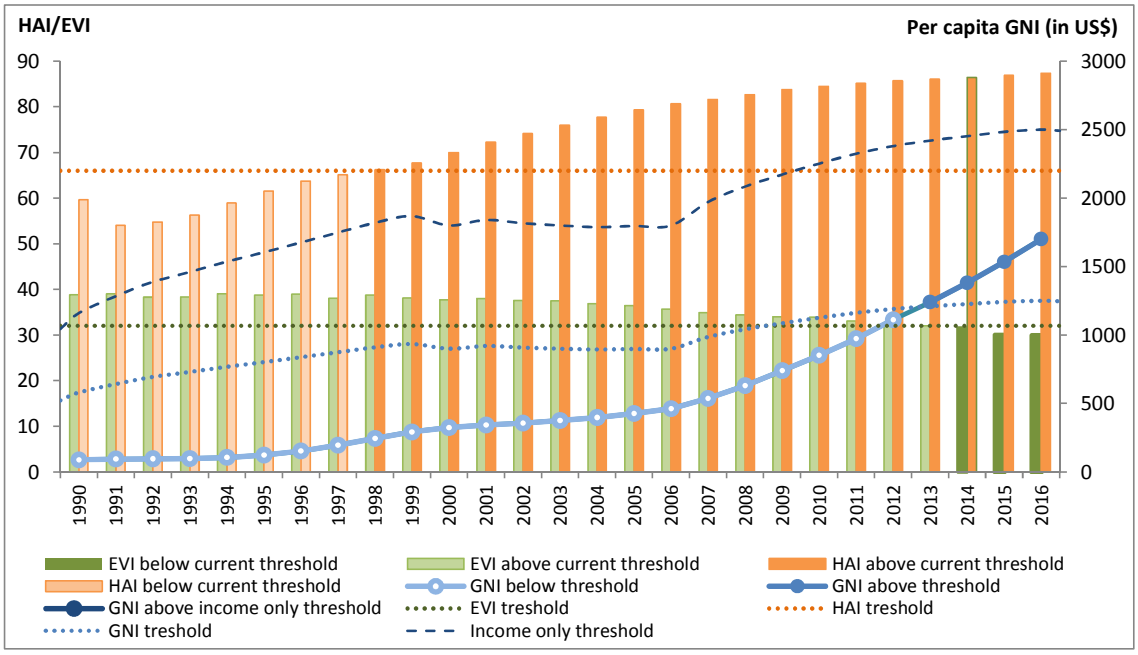
Viet Nam

Figure B.10.1 Sectoral change and economic growth in Viet Nam



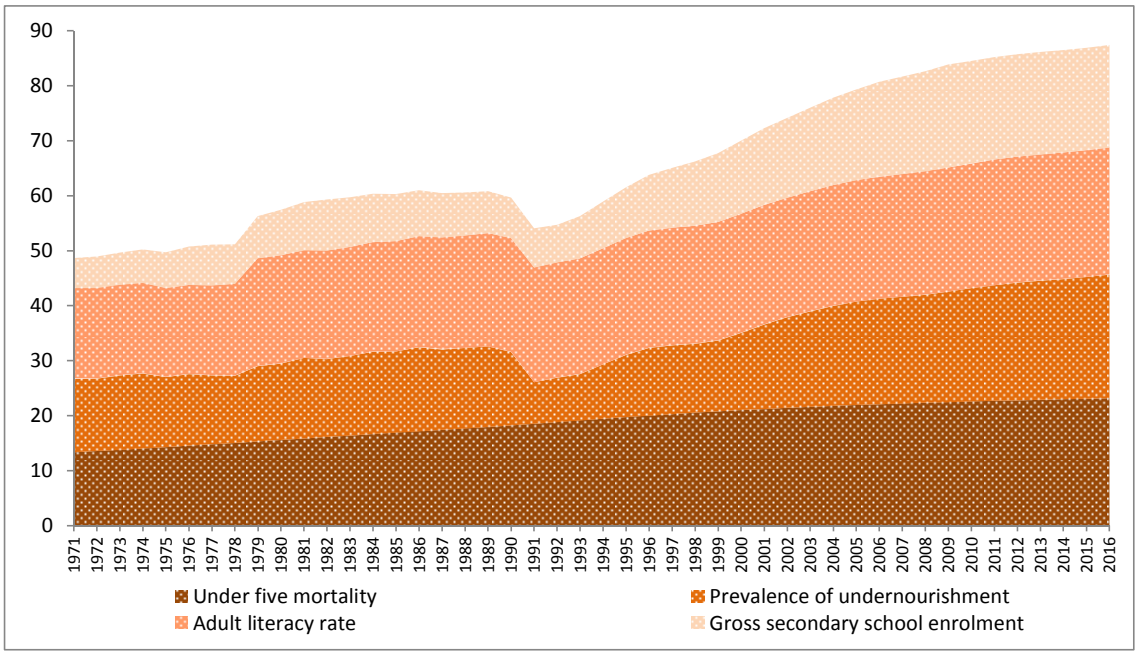
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.10.2: LDC criteria in Viet Nam



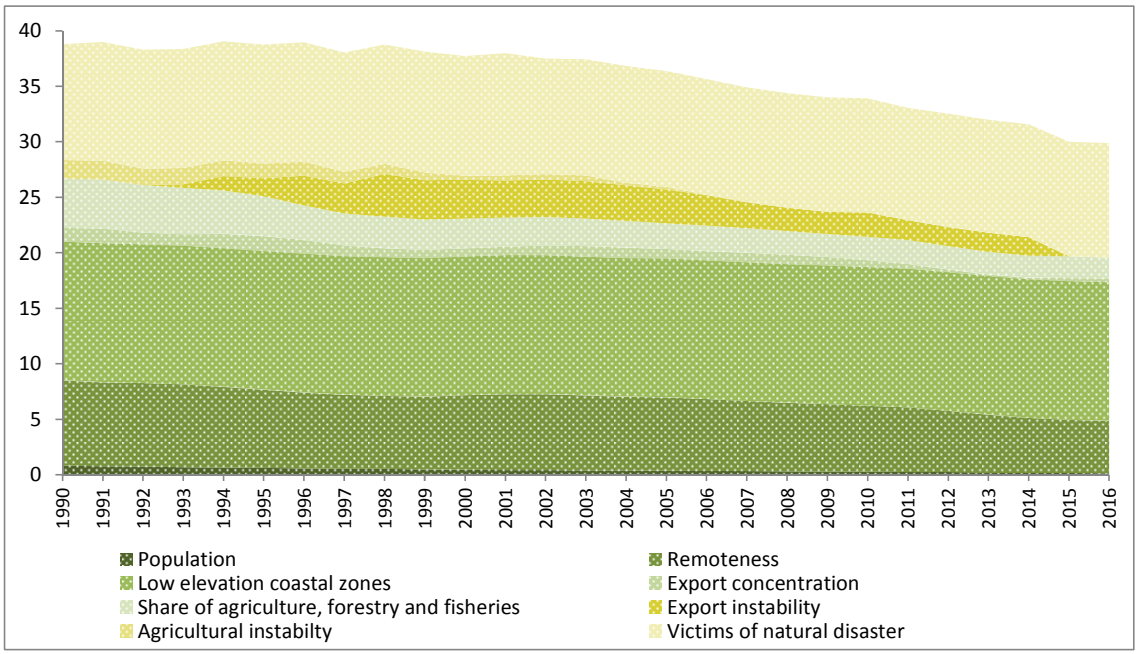
Source: CDP Secretariat

Figure B.10.3: HAI breakdown for Viet Nam



Source: CDP Secretariat

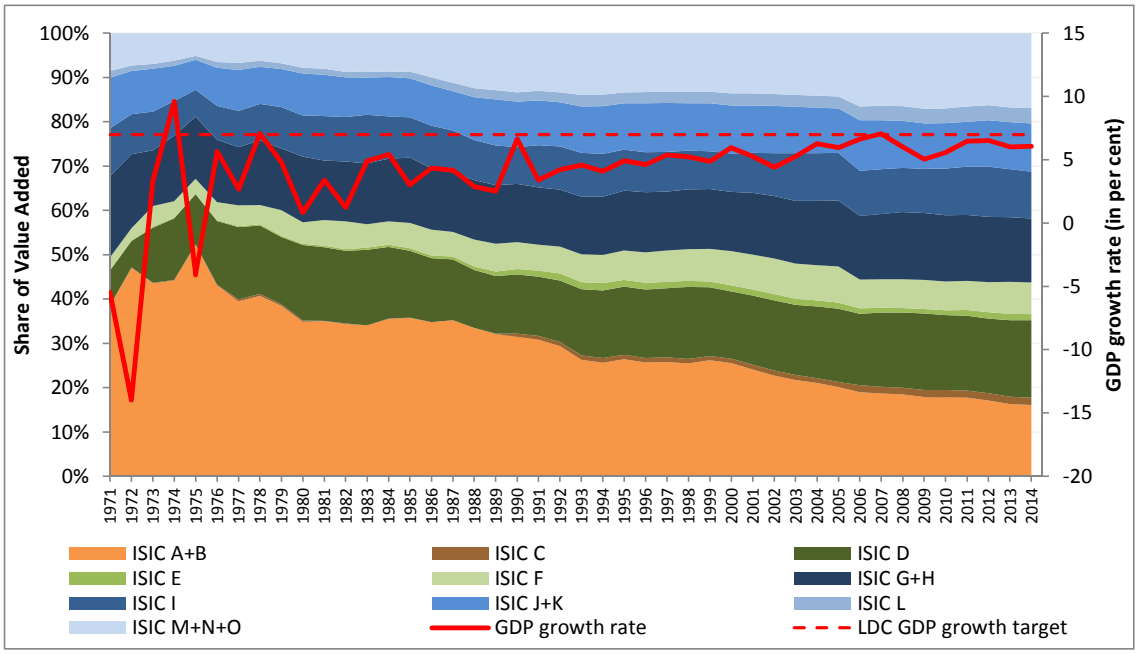
Figure B.10.4: EVI breakdown for Viet Nam



Source: CDP Secretariat

Bangladesh

Figure B.11.1 Sectoral change and economic growth in Bangladesh



Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.11.2: LDC criteria in Bangladesh

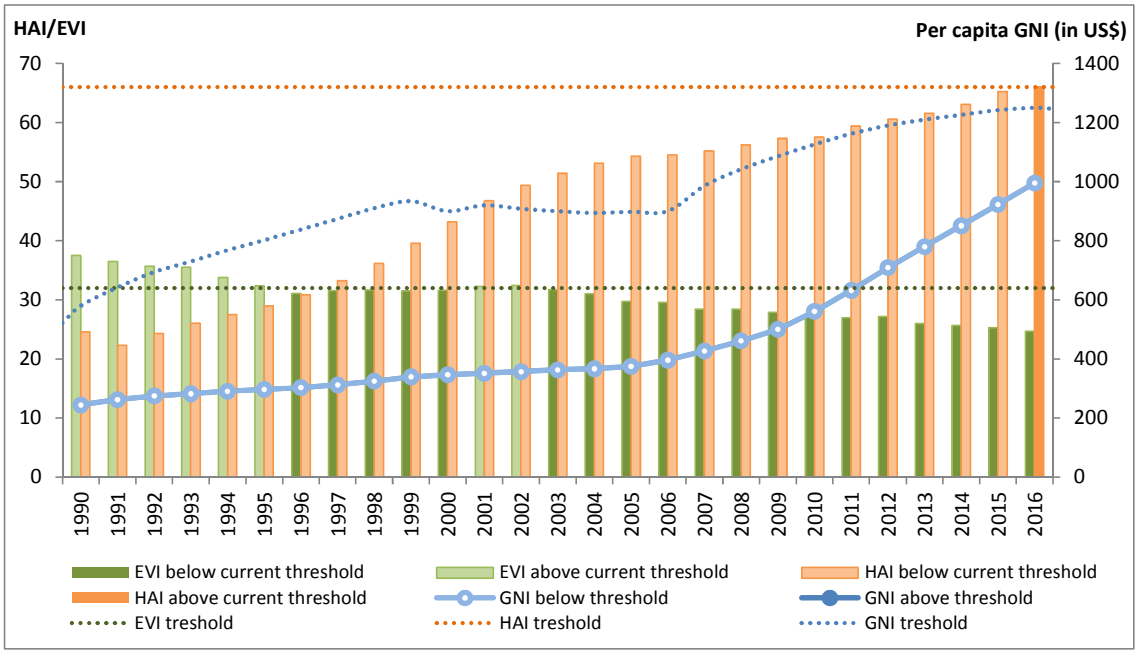


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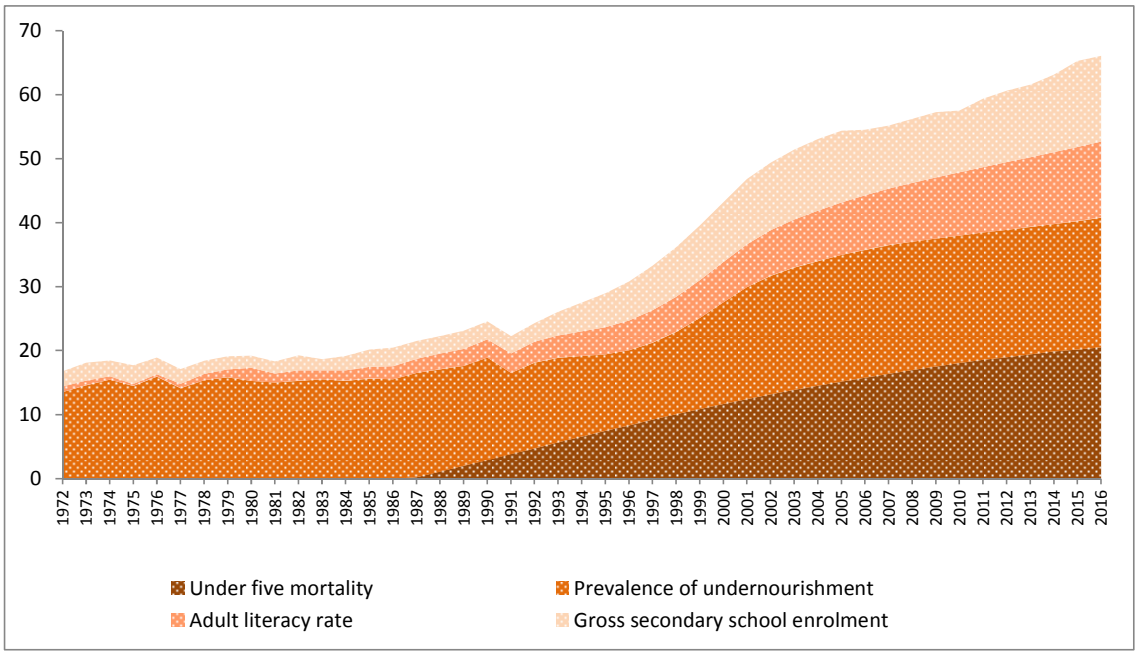
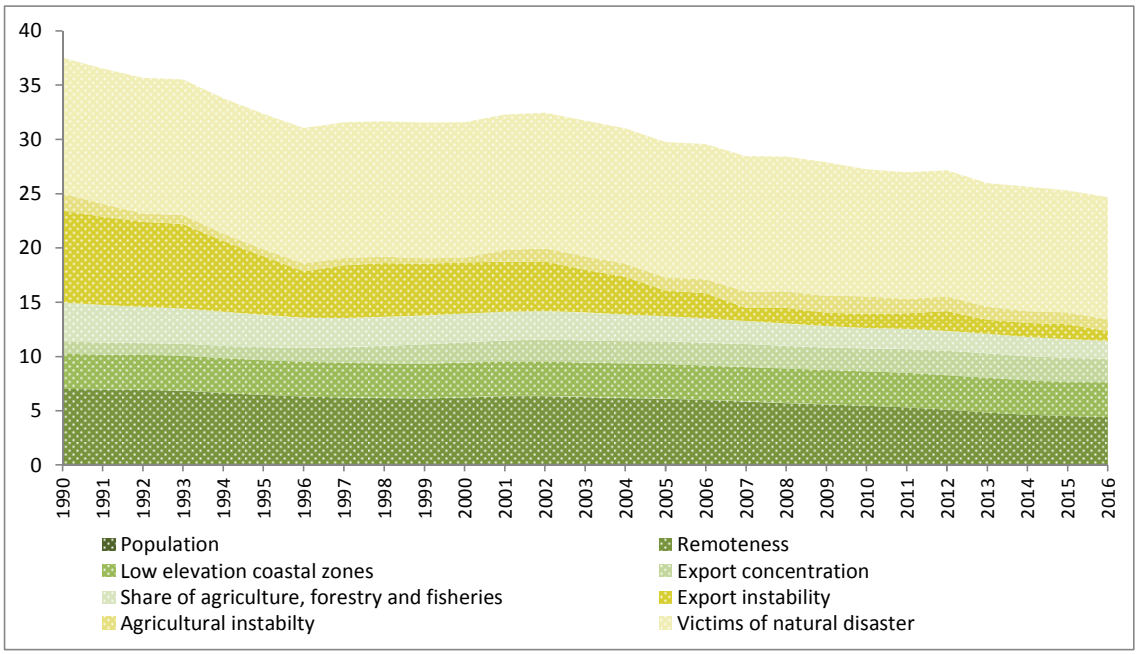
Figure B.11.3: HAI breakdown for Bangladesh



Source: CDP Secretariat

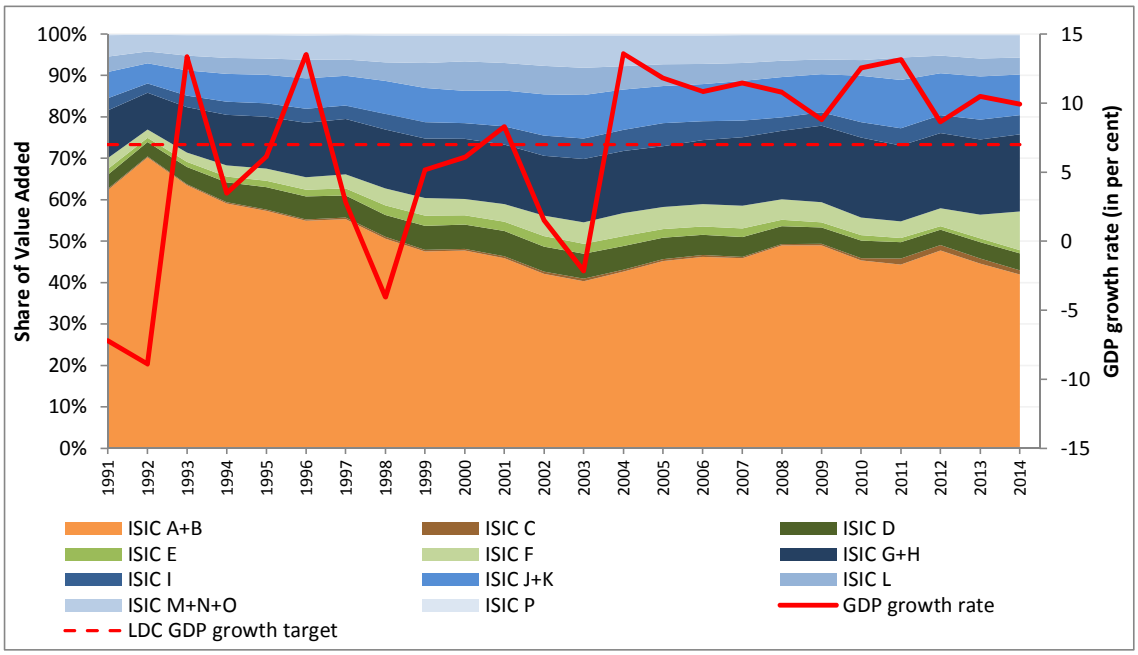
Figure B.11.4: EVI breakdown for Bangladesh



Source: CDP Secretariat

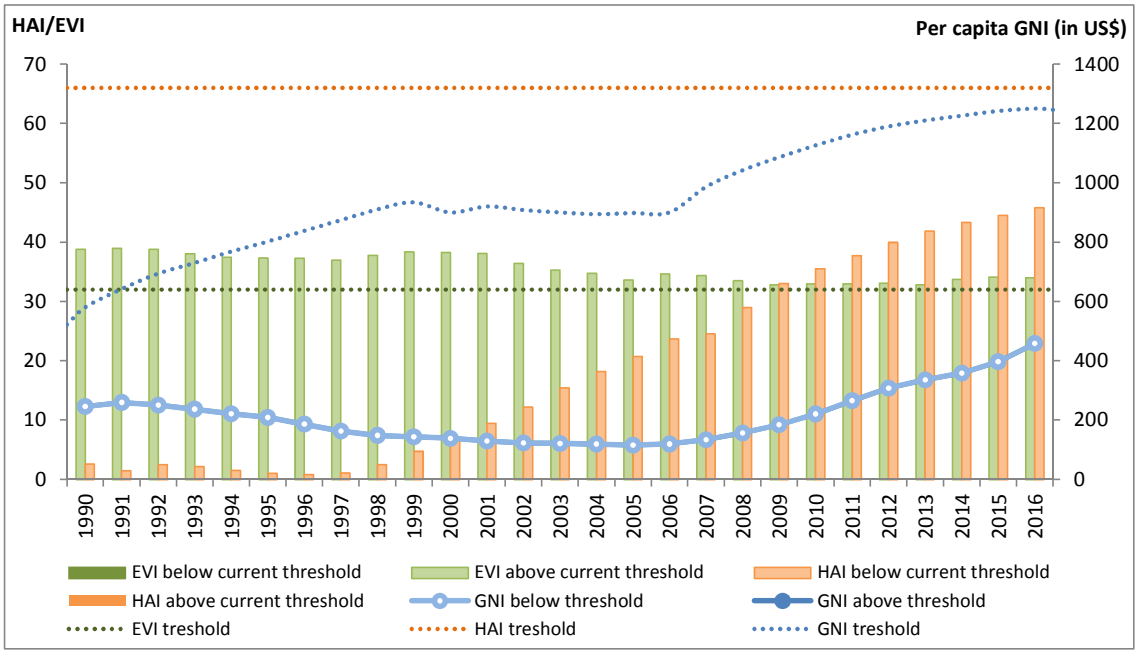
Ethiopia

Figure B.12.1 Sectoral change and economic growth in Ethiopia



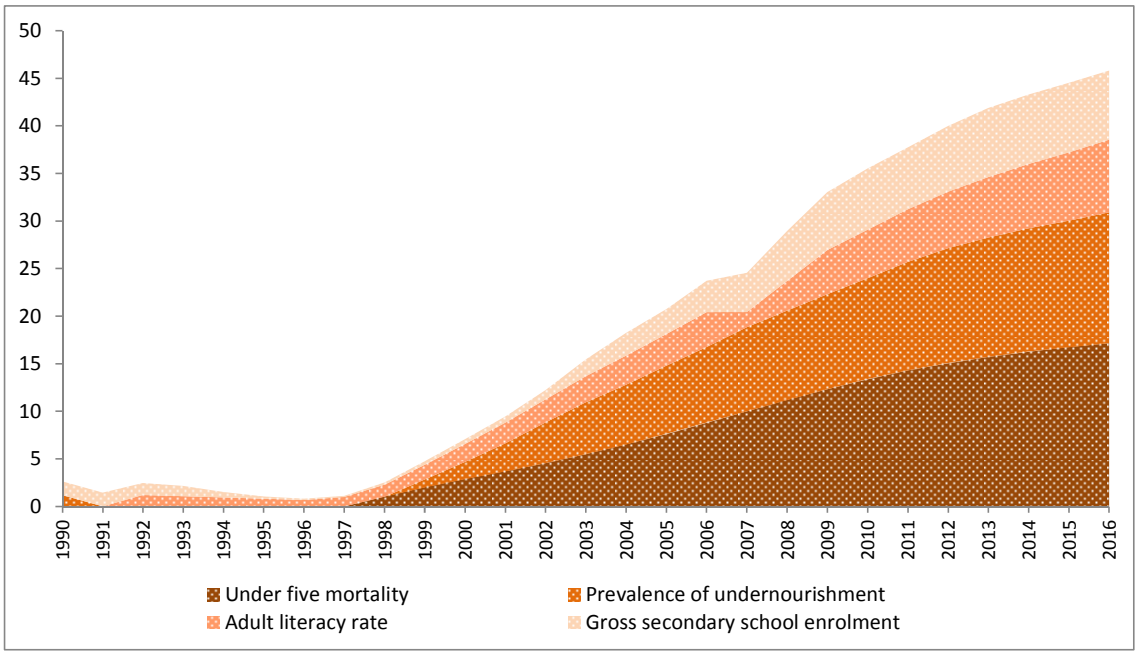
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.12.2: LDC criteria in Ethiopia



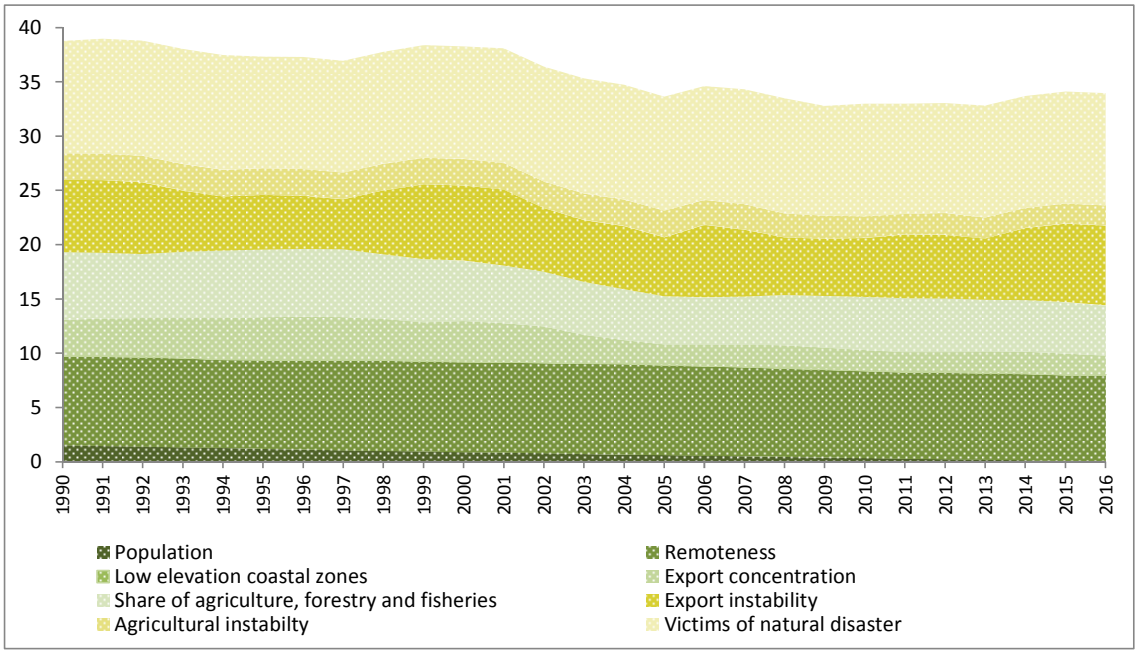
Source: CDP Secretariat

Figure B.12.3: HAI breakdown for Ethiopia



Source: CDP Secretariat

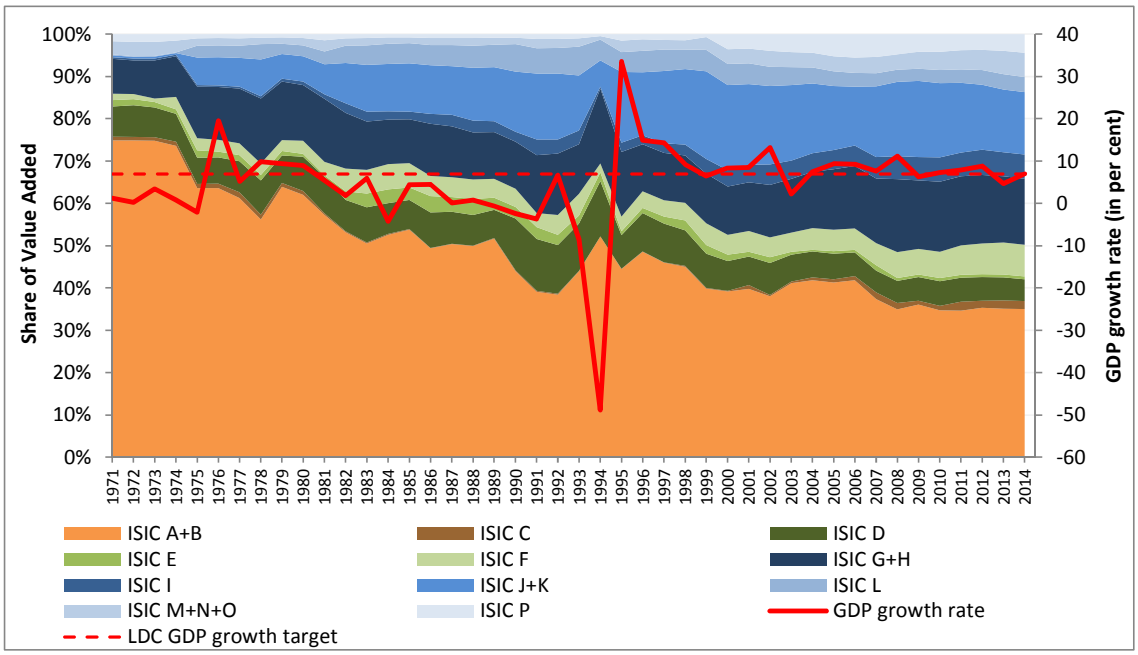
Figure B.12.4: EVI breakdown for Ethiopia



Source: CDP Secretariat

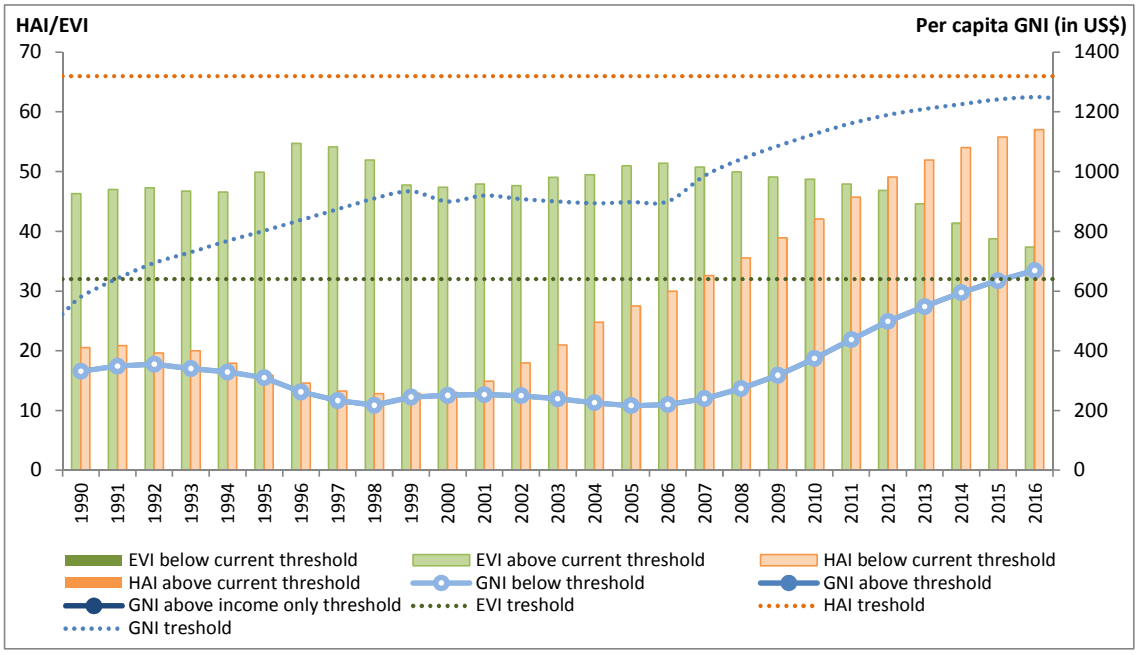
Rwanda

Figure B.13.1 Sectoral change and economic growth in Rwanda



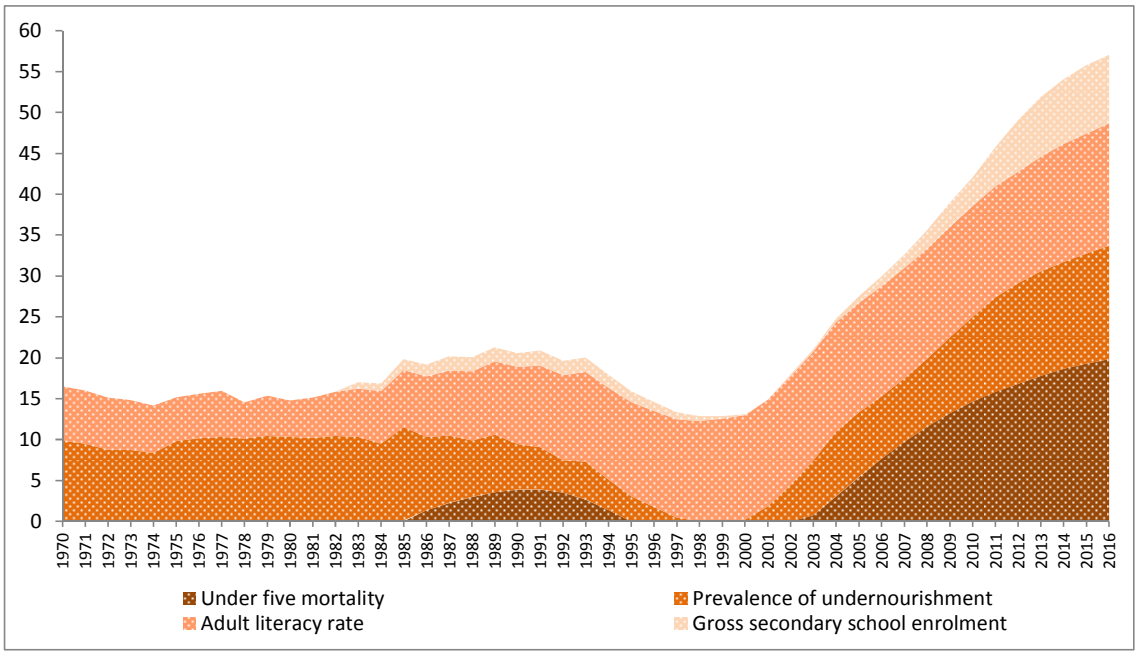
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.13.2: LDC criteria in Rwanda



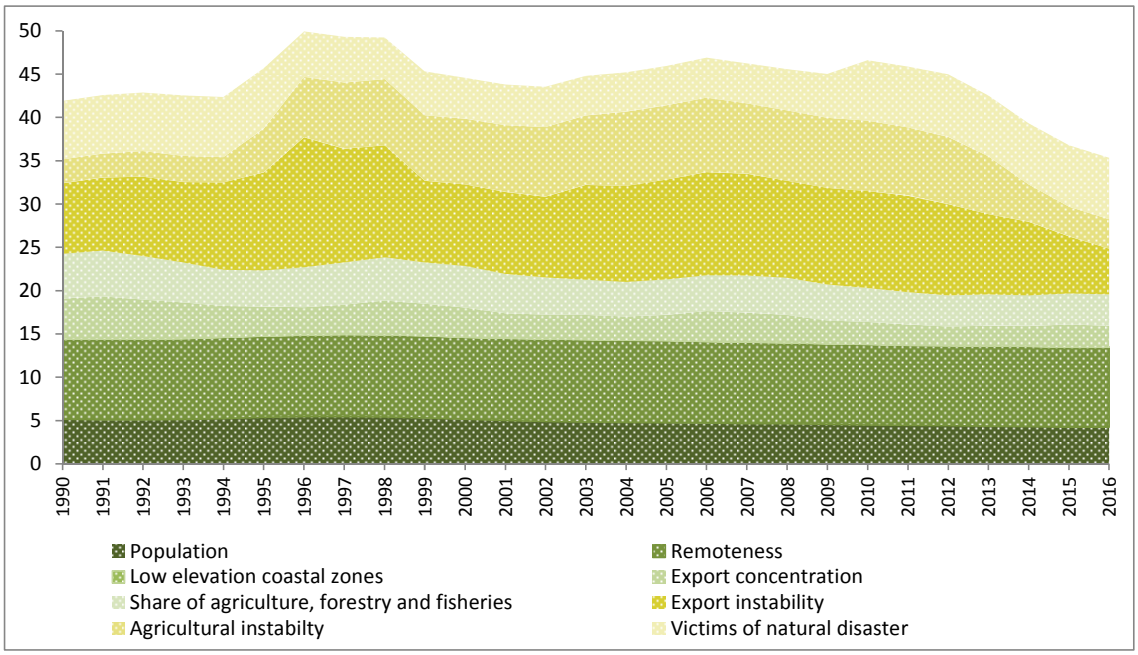
Source: CDP Secretariat

Figure B.13.3: HAI breakdown for Rwanda



Source: CDP Secretariat

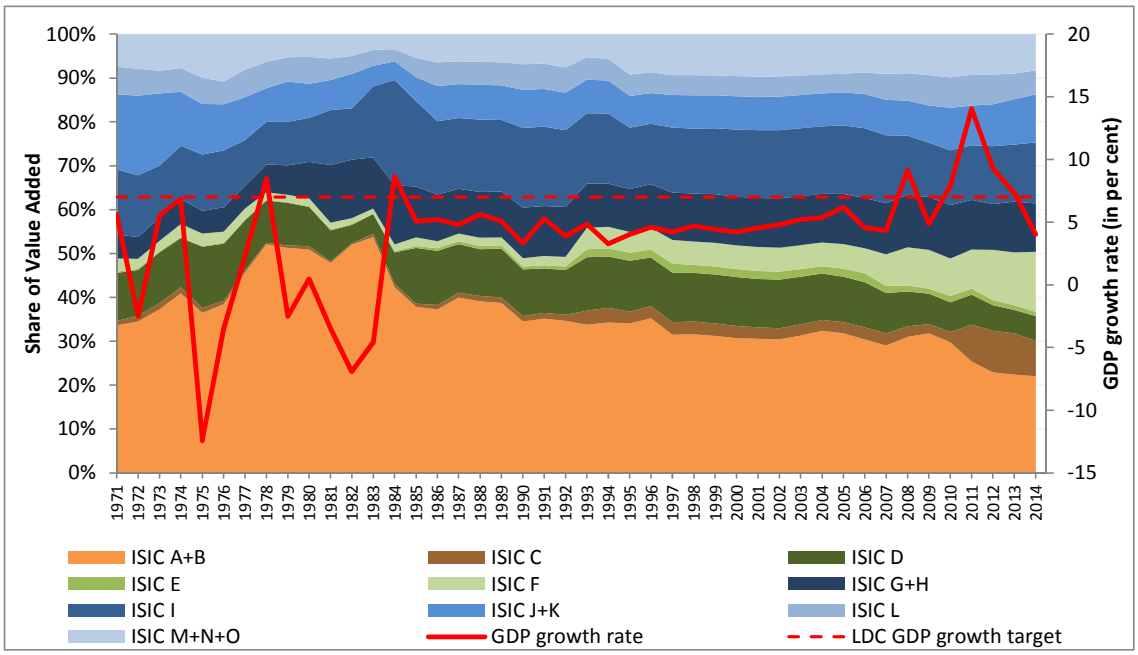
Figure B.13.4: EVI breakdown for Rwanda



Source: CDP Secretariat

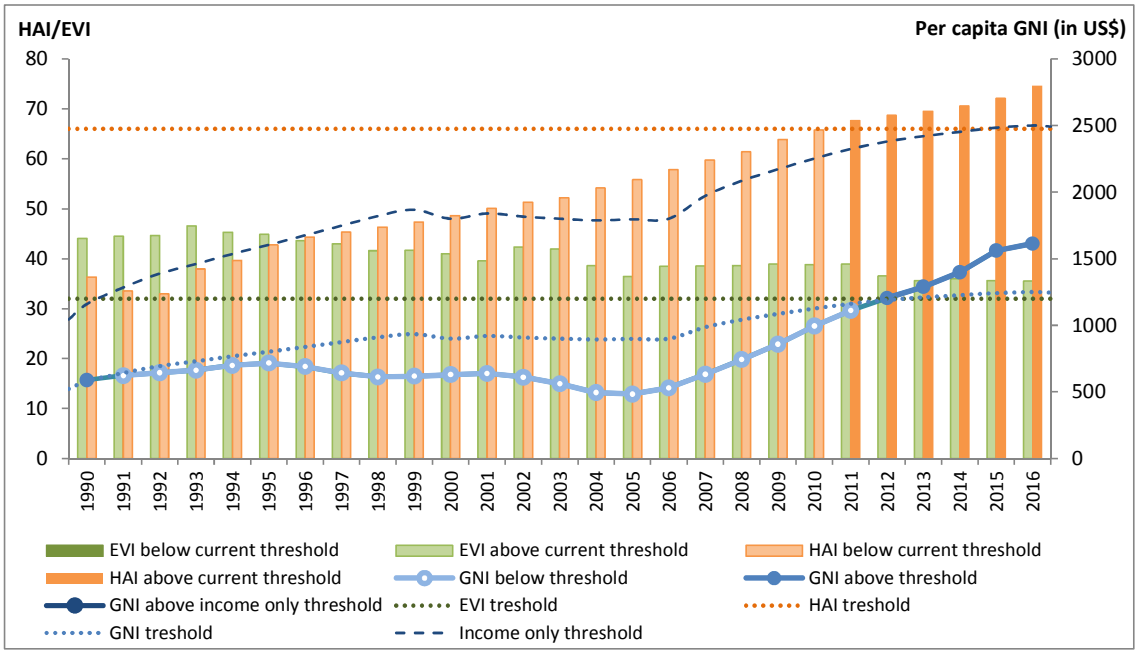
Ghana

Figure B.14.1 Sectoral change and economic growth in Ghana



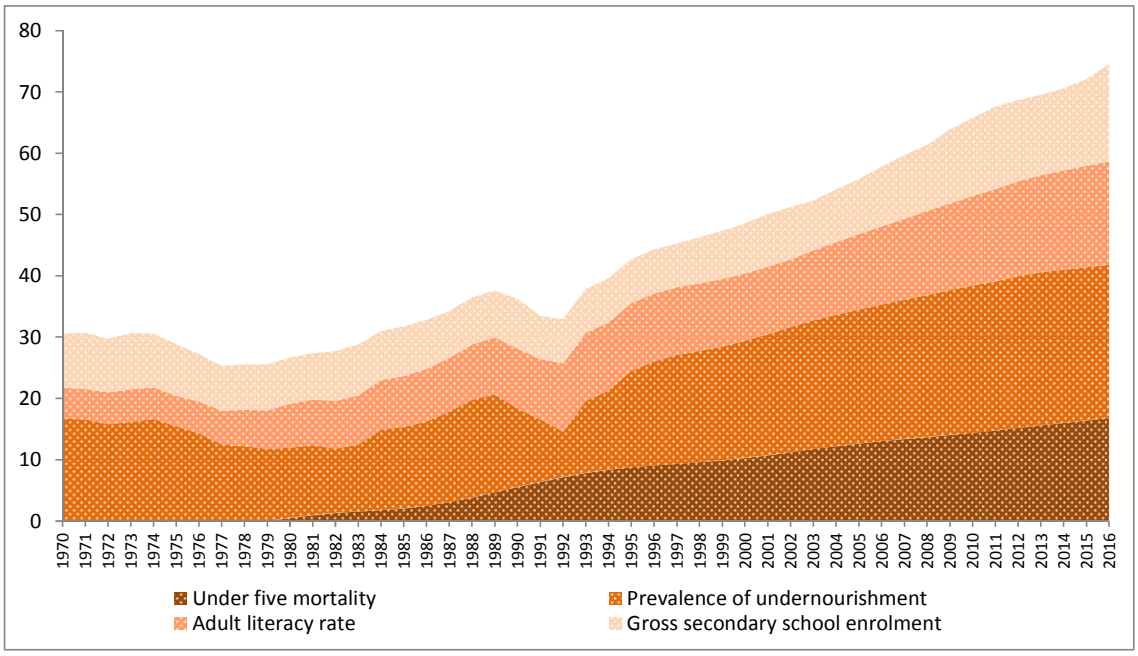
Source: CDP Secretariat based on UNSD; see page x for definition of ISIC codes.

Figure B.14.2: LDC criteria in Ghana



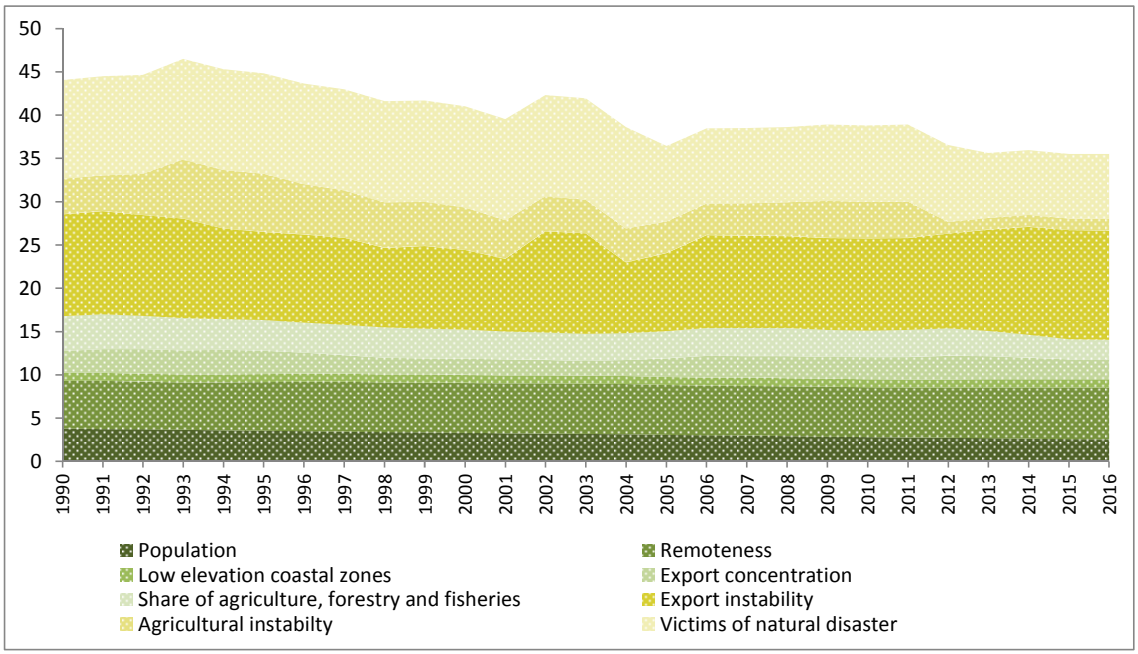
Source: CDP Secretariat

Figure B.14.3: HAI breakdown for Ghana



Source: CDP Secretariat

Figure B.14.4: EVI breakdown for Ghana



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