Graduated without passing? The employment dimension and LDCs’ prospects under the Istanbul Programme of Action

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10 September 2013
GRADUATED WITHOUT PASSING? THE EMPLOYMENT DIMENSION AND LDCs PROSPECTS UNDER THE ISTANBUL PROGRAMME OF ACTION

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September 2013

Abstract

Least Developed Countries’ (LDCs’) recent economic performance has sparked renewed optimism, although the remarkable trend in GDP growth has not been commensurate with employment creation and social development outcomes. Against this background, whilst the Istanbul Programme of Action for the LDCs (IPoA) implicitly acknowledges the link between structural transformation, employment creation, and inclusive growth, in practical terms its formulation is such that policy-makers’ attention is often captured by GDP growth targets (7 percent per year) and graduation prospects, i.e. the only two quantified targets in the IPoA.

Combining secondary labour force data, with different growth scenarios based on historical employment elasticities of growth, the paper tests whether achieving the IPoA target of 7 percent growth rate until 2020 would be adequate for Least Developed Countries (LDCs) to generate sufficient employment. Results show that, even if the IPoA target were achieved, a number of LDCs may not be in a position to productively employ all the new entrants in the labour market, unless their pattern of growth shifts towards more diversified employment-intensive sectors. In other words, the pattern of growth is as critical as its quantitative level. This conclusion highlights the need to put the employment dimension at the centre of LDC development prospects, over and beyond GDP growth targets and graduation scenarios.

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GRADUATED WITHOUT PASSING? THE EMPLOYMENT DIMENSION AND LDCs PROSPECTS UNDER THE ISTANBUL PROGRAMME OF ACTION

Giovanni Valensisi and Adrian Gauci

I. Introduction

Largely pulled by the improved performance of African countries, representing a total of 34 of the 49 economies in the Least Developed Countries (LDCs) category, the LDCs have experienced a significant growth turnaround since the mid-1990s, as recognized by a number of influential studies. This has taken on renewed emphasis in the late 2000s, since many LDCs especially in Sub Saharan Africa have also benefited from improvements in macroeconomic management, good governance, institutional reforms and reduction in armed conflicts. The economic performance varies among sub-regions (African, Asian, and Island LDCs), export specialization (oil and mineral exporters, as compared to other exporters), institutional quality (post-conflict and “fragile states”, as opposed to other LDCs), but the overall trend remains fairly strong across the whole group. Averaging over the 2000-2011 period, 11 out of the world top 20 growth performers are LDCs: Mozambique, Cambodia, Rwanda, Ethiopia, Chad, Bhutan, Afghanistan, Angola, Liberia, Myanmar, Equatorial Guinea. In addition to them, other 2 LDCs, Uganda and Laos, have

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1 The list of LDCs countries is reviewed every three years (last revision in March 2012) by the United Nations Economic and Social Council (ECOSOC) on the basis of the following three criteria:
(a) Per Capita Income;
(b) Human Assets criterion, involving a composite index based on indicators of nutrition, child mortality rate, school enrolment, and literacy;
(c) Economic Vulnerability criterion, involving a composite multidimensional index based on the instability of agricultural production, the share of the population victim of natural disasters, the instability of exports of goods and services, share of the population living in low-lying areas, share of agriculture, forestry and fisheries in GDP, merchandise export concentration, population (in logarithm), and remoteness.
Progress in each criterion is assessed against a lower-bound inclusion threshold, as well as an upper-bound graduation threshold, defined and updated periodically by the Committee for Development Policy. Currently the following countries are listed as LDCs: Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Laos, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Samoa, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, Tanzania, Vanuatu, Yemen and Zambia.
attained a growth rate exceeding 7 percent per year, a threshold commonly regarded as a prerequisite for exiting poverty and achieving internationally agreed development goals.\(^2\)

Such a growth acceleration, together with evidence that LDCs have weathered the 2009 global recession better than initially feared, has engendered newfound optimism for a region that used to be negatively stereotyped. This has led to a renewed rhetoric – partly intersecting the call for an African renaissance – emphasizing development objectives such as the graduation to middle income level, or out of the LDC category itself.

Yet, GDP figures give only a partial image of LDCs’ development process. They hide, for instance, the generalized sluggishness of structural change, the persistent (and sometimes even worsening) concentration of exports on primary commodities, and the structural balance of payment deficit for the majority of LDCs. Over the last decade, economic growth in the LDCs has been largely underpinned by extractive industries and services, but with few exceptions it has basically by-passed agriculture, and even more so manufacturing. This made it harder for the large number of people seeking jobs outside the agricultural sector to find adequate productive employment, thereby managing to exit extreme poverty. The proportion of people living on less than US$ 1.25 a day in the LDCs decreased from 64.6 percent in 1990 to 46.2 percent in 2010. With only two years to 2015, that is still about 14 percentage points off the MDG 2015 target of halving poverty levels from 1990 to 2015 (UN 2013). In light of this, it is argued that LDCs’ encouraging macroeconomic performance has not been matched by commensurate improvements in poverty reduction (UNCTAD, 2010; ECA, 2013 and Martins, 2013).

This mixed narrative is also reflected in the attitude taken by the international community, notably with the latest Programme of Action for the LDCs, adopted in May 2011 in Istanbul (Turkey) at the Fourth United Nations Conference on the Least Developed Countries.\(^3\) Whilst acknowledging the link between structural transformation, employment creation, and inclusive growth, in practical terms the formulation of the Istanbul Programme of Action (IPoA) is such that the attention is often captured by GDP growth and graduation prospects. Indeed, the only two quantified targets of the IPoA are to achieve a GDP growth of at least 7 percent per annum, and to enable half the LDCs to meet the criteria for graduation by 2020.

\(^2\) The GDP growth series on which this paragraph is based are drawn from the World Bank’s World Development Indicators database (consulted on 14/5/2013).

\(^3\) The IPoA is the successor of the Brussels Programme of Action for the LDCs, adopted in 2001, and like all previous Programmes of Action for the LDCs has a time horizon of ten years.
Given the absence of employment indicators amongst graduation criteria, and the difficulties to properly define and quantify progress on the structural transformation front, there is a risk that the employment dimension in the LDC discourse be overlooked, thereby jeopardizing much of the efforts towards inclusive and sustainable development. To assess whether this may be the case, the paper tests whether achieving the IPoA target of 7 percent growth rate would be adequate for LDCs to generate sufficient employment, so as to keep the pace of rising labour force and possibly re-absorb informal and vulnerable employed into more formal occupations.

Amidst the debate on the post-2015 development agenda (UN Task Team 2012; UN 2013; Martins and Lucci, 2013; ODI, DIE, and ECDPM, 2013; and World Bank 2013), the paper contributes to the ongoing discussion by focusing on the LDCs and their likely development prospects under the IPoA. After showing that conventional growth targets adopted by the international community are inadequate in terms of employment creation and therefore inclusive and sustainable growth in the LDCs, it argues that structural transformation and employment creation should be paid far greater attention in the post-2015 development agenda. Indeed, a similar argument lies at the heart of the African Common Position on the post-2015 development agenda (African Union Commission, 2013).

The paper is divided into four complementary sections. Section I provides a literature review that provides the theoretical underpinnings of growth and employment links. Section II explains the methodology and data used, whilst Section III analyzes LDCs’ labour market outcomes under a number of alternative scenarios. Section IV finally points towards some key policy recommendations emanating.

II. Literature Review and Relations with the Ongoing Debate

As recognized by a number of influential studies, after decades of stagnation and income divergence, since the mid-1990s the LDCs have experienced a significant growth turnaround, largely pulled by the resumption of growth in the African region (UNCTAD, 2010; ECA, 2010; Radelet, 2010; Arbache and Page, 2010; Mckinsey, 2012). Despite some variability across countries and sub-regions, the improved performance of LDCs appears to be fairly broad-based. Moreover, growth accelerations appear to have been accompanied by reduced variability of growth over time. In other words, growth collapses have also become less frequent, even in a region such as Sub-Saharan Africa, which used to be characterized
by heightened growth volatility and vulnerability to exogenous shocks (Fosu, 2001; Weeks, 2001; Arbache and Page, 2008 and 2010).

The sustained economic boom has undoubtedly been accompanied by a reduction of poverty incidence in the LDCs, with headcount ratios for extreme poverty (less than 1.25 USD /day) dropping from 61.3 percent in 1999, to 53.4 percent in 2005 and 46.2 percent in 2010 (UN 2013). Yet, the extent to which LDC growth has benefitted the poor is subject to debate. Several authors, whilst acknowledging the positive developments, argue that in comparison to LDCs’ remarkable growth performance, the outcomes in terms of poverty reduction have been relatively weak (Karshenas, 2010; ECA, 2013 and Martins, 2013); on the contrary, Sala-i-Martin and Pinkovskiy (2010) contend that Africa’s growth over the period 1995-2006 has significantly reduced both poverty and inequality.

From an empirical micro-founded perspective, much of this debate on the extent to which LDC growth has benefitted the poor boils down to whether one adopts a “relative” or an “absolute” point of view in the definition of “pro-poor growth”. In the former case, “pro-poor growth” is defined as a situation in which the distributional shifts accompanying economic growth favour the poor, meaning that poverty falls more than it would have if all incomes had grown at the same rate (McCulloch et al., 2000; Kakwani and Pernia, 2000). In the latter case, the growth process is said to be “pro-poor” if and only if poor people benefit in absolute terms, as reflected in the evolution of an appropriate measure of poverty (Ravallion and Chen, 2003). Leaning towards the “absolute approach”, Kraay (2004) utilizes a cross-sectional setting and estimates that most of the variation in changes in poverty during the 80s and 90s can be attributed to growth in average incomes, whilst the remainder variation is mainly explained by distributional changes, rather than differences in the sensitivity of poverty to growth in average incomes. In the same vein, Fosu (2011) finds that growth has on average been the major driving force behind declines or increases in poverty, albeit with substantial regional and country differences. The author also demonstrates that high initial levels of inequality limit the effectiveness of growth in reducing poverty, while for a given level of growth worsening inequality directly increases poverty.

Another important finding with regards to the growth-poverty nexus is that the impact of growth on poverty reduction is larger for sustained growth spells rather than for short-lived ones, whilst the positive impacts of inequality changes have opposite timing (Bourguignon
2004). These results point to the fact that, regardless of the level of growth achieved, sustained booms – such as the one of the last decade – tend to have positive effects on poverty reduction not only directly, but also by increasing the poverty elasticities to growth.

In the context of the trade-off between growth and inequality effects, the Economic Commission for Africa (ECA) investigated the rate of growth in per capita GDP required to meet the target of reducing extreme poverty by half. The calculations were based on changes in poverty over time due to growth in mean consumption expenditure, adjusted for changes in the poverty line and changes in inequalities. The weighted average rate of economic growth required to reduce poverty was estimated at 7 percent (ECA 1999). ECA (2004) extended this methodology to take into account how initial inequality influences the overall effectiveness of growth in reducing poverty and meeting the MDGs. The results reported show clearly that countries with high initial income inequality would need a higher acceleration in per capita GDP to meet the MDGs. Notwithstanding these caveats on initial inequality and distributional issues, the threshold level of 7 percent GDP growth is commonly regarded as an adequate target to achieve poverty reduction. As such, it has been largely adopted by the international community and developing countries’ policy-makers, including in the Brussels and Istanbul Programmes of Action for the LDCs.

From a more “developmentalist” perspective, a critical element for the analysis of the growth-poverty nexus is the pattern of structural dynamics, meaning those changes in the sectoral composition of output and labour force that take place alongside income growth, but mark the development process in ways that are radically different from the homothetic expansion postulated by the aggregate growth theory (Syrquin, 1989; Lin, 2009; and McMillan and Rodrik 2011). As is well-known, the defining feature of the “take off” is the decline in the agricultural contribution to GDP and employment, and the simultaneous emergence of a modern industrial and service economy, with ensuing acceleration of capital accumulation and growth. This is typically accompanied by other socio-economic processes including: (i) demographic transition from high rates of fertility and mortality to low rates of births and longer life expectancy; (ii) urbanization; (iii) human capital accumulation and

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4 Borrowing Syrquin’s words “...The transformation of the economic system... is a gradual process during which productivity has to increase in most sectors of the economy and, at the same time, the center of gravity shifts from lower to higher productivity units.”
improved education outcomes, (iv) rising productivity in both the agricultural and non-agricultural sectors, and (v) gradual narrowing of cross-sectoral productivity gaps.\footnote{On the issue of cross-sectoral productivity gaps refer to Syrquin (1989); Bhaduri (2003), Valensisi (2009) and McMillan and Rodrik (2011).}

In this perspective, the analysis of 14 country case studies, including five LDCs, is paradigmatic with respect to the differential impact of structural change on poverty reduction (World Bank \textit{et al.}, 2005).\footnote{The LDC countries analyzed in the study are Bangladesh, Burkina Faso, Senegal, Uganda and Zambia; non-LDC countries covered by the analysis include instead Bolivia, Brazil, El Salvador, Ghana, India, Indonesia, Romania, Tunisia, and Vietnam.} Beyond confirming the strong link between economic growth and the speed of poverty reduction – on average a 1 percent increase in GDP per capita was linked to a 1.7 percent drop in poverty – the analysis documents that in the African countries the deepest cuts in poverty derive from agricultural growth (and in particular export crops), improving the living standards of relatively poorer rural households.\footnote{In addition, the analysis of country studies identifies four broad policy options common to all successful efforts to reduce poverty, namely creating a conducive investment climate; expanding access to secondary and girls’ education; improving the access to infrastructural provision and designing appropriate labour market regulations. With respect to the latter point, two caveats emerge. Firstly, labour market regulations are just one of the policy elements required to strengthen employment creation, and should be complemented by efforts to enhance policy predictability, and institutional quality. Secondly, labour markets regulations have little impact if jobs are created in the agriculture sector due to different contractual status in rural areas with underemployment and informal labour remaining predominant.} Along similar lines, Warr (2002) and Ravallion and Chen (2004) find that the poverty elasticity of growth in the agricultural sector is significantly higher than the corresponding elasticity of growth in the rest of the economy. Using cross-country econometric evidence Christiansen \textit{et al.} (2011) analogously find that agriculture is significantly more effective in reducing poverty among the poorest of the poor, owing to the larger participation of poorer households to the agricultural sector, and the lower poverty reducing effect of non-agriculture in the presence of extractive industries.

Given that poor people typically lack access to capital and other productive assets, employment is bound to play a critical role in the growth-poverty nexus; all the more so in countries where extreme poverty is widespread, and the government is in no position to address this problem through redistribution (McKinley and Martins, 2010; and Ravallion, 2010). Indeed, Islam (2004) provides cross-country empirical evidence that for growth to be pro-poor, it needs to be accompanied by employment creation and rising productivity. Khan (2007) reaches a similar conclusion on the basis of 16 country case studies on the role of employment and growth in poverty reduction. In the same vein, a number of recent studies regard employment as a central dimension of inclusive and sustainable development.
(McKinley, 2010; ODI, DIE, and ECDPM, 2013; World Bank, 2013; and Ramos et al., 2013).

Overall, the literature appears to strongly agree on the fact that growth is indeed a major driving force behind poverty reduction and inclusive development, but its effectiveness in contributing to these objectives varies considerably as a function of initial inequality and of the structural pattern of growth. Hence, it is not only the pace of growth that matters, but also the associated structural dynamic. From this perspective, however, LDC progress since the mid Nineties looks considerably dimmer than aggregate growth rates would suggest.

GDP growth has in most cases been accompanied by rather sluggish structural change, a persistent — and sometimes even worsening — concentration of exports, and a structural deficit in the balance of payment for the majority of LDCs (UNCTAD, 2010; Valensisi and Davis, 2011; Ofa et al., 2012, among others). Consumption has been the main driver of economic expansion, while investment ratios, albeit improving, remain inadequate to redress LDCs’ chronic infrastructural gaps and sluggish capital accumulation, Furthermore, if exports provided a decisive impulse to aggregate demand in some of the fast-growing LDCs (especially oil and mineral exporters), their contribution is significantly weaker for the remaining LDCs. It is also sobering to note that imports of goods and service — that is leakages of aggregate demand — have often been growing faster than exports.

In terms of sectoral contributions to growth, LDCs’ economic thriving has been largely underpinned by the boom in capital-intensive extractive industries, and in a service sector encompassing high-productivity activities (such as telecommunication, business and financial services) as well as a large pool of lower productivity and often informal ones (such as transport and commerce). Conversely the expansion of agriculture, and even more so manufacturing, have in most cases been anaemic, making it harder for young and increasingly educated job-seekers to be productively employed. It is also worth noting that a similar pattern of labour reallocation, in which urban and newly-urbanized workers mostly move to the service sector or remain underemployed in the myriad of informal activities, typically has perverse effects on aggregate labour productivity and is reminiscent of “productivity-reducing structural change” (McMillan and Rodrik, 2011). Instead of moving from low-productive to highly-productive sectors, thereby enhancing the GDP per person

8 Though certain kinds of services also offer considerable scope for increasing returns and technological catch-up, thereby presenting an alternative development path to industrialization (Heintz, 2009), there is little support to the claim that these were the kind of services thriving in the LDCs.
employed, this labour reallocation perpetuates the dual nature of LDC economies, confining large segments of the labour force to informality and underemployment.

The optimistic rhetoric sparked by LDCs’ rapid growth rates, coupled with the fact that structural change issues do not lend themselves to be easily translated into an internationally-agreed development agenda with simple measurable targets, have been reflected in the attitude taken by the international community. This has led to a renewed emphasis on development objectives such as the graduation to middle income level, or out of the LDC category itself, while the structural transformation underlying GDP growth is paid limited attention in practical terms. Despite the call for a renewed attention to structural economics (Lin, 2009 and Rodrik, 2011) this limitation is evident also in the case of the IPoA. Whilst the Programme acknowledges the link between structural transformation, employment creation, and inclusive growth, in practical terms it is formulated in such a way that the attention is mostly captured by GDP growth and graduation prospects. Indeed, the only two quantified targets of the IPoA are to achieve a GDP growth of at least 7 percent per annum, and to enable half the LDCs to meet the criteria for graduation by 2020. Compared to its predecessor, the Brussels Programme of Action, the IPoA has even lost a more “structural” objective, namely the attainment of a 25 percent investment ratio on the part of the LDCs.

Given the absence of employment indicators amongst graduation criteria, and the difficulties to properly define and quantify progress on the structural transformation front, there is a risk that the employment dimension in the LDC discourse be overlooked, thereby jeopardizing much of the efforts towards inclusive and sustainable development. To assess whether this may be the case, the following sections test whether achieving the IPoA target of 7 percent growth rate would be adequate for LDCs to generate sufficient employment, so

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9 The point echoes Chang’s critique of the MDG framework “Without any vision of transformation in productive structure and the upgrading of the productive capabilities that make it possible, the vision of development behind the MDGs can only be described as ‘development without development’” (Chang, 2010).

10 Essentially, the graduation out of the LDC group has at its core the reduction of those structural features of vulnerability that justify the very existence of the LDC category itself. Accordingly, like in the case of inclusion in the LDC list, graduation out of the LDC category is assessed against a threshold level for each of the three criteria: Per Capita Income, Human Assets Index, and Economic Vulnerability Index. LDC countries are eligible for graduation if they exceed the upper-bound threshold level for at least two of the three criteria, an exception being made for “automatic graduation” of countries whose GNI per capita is more than twice the level of the graduation threshold. A country has to meet the graduation criteria in two subsequent triennial reviews of the list of LDCs before being recommended for graduation by the Committee for Development Policy.
as to keep the pace of rising labour force and possibly re-absorb informal and vulnerable employed into more formal occupations.

III. Data and Methodology

In order to assess the dynamics of LDCs’ labour supply, this paper uses LABORSTA forecasts of population and labour force participation rate by age class (which in turn rely on UNSD population projections). Conversely, the evolution of labour demand is simulated on the basis of various sets of historical employment elasticities to GDP growth, as provided by ILO’s Key Indicators of the Labour Market, 6th edition.\textsuperscript{11}

Some caveats are of order concerning the methodology utilized and three related challenges. First, as argued earlier, the employment effect of growth admittedly depends on a whole range of factors, from the regional and sectoral pattern of the economic expansion, to the simultaneous evolution of assets inequality, be it in terms of land, human capital and financial resources, etc.. As a consequence, applying historical employment elasticities to growth is but a simple approximation, which amounts to implicitly assuming that the pattern of growth remains constant over time. Whilst this \textit{ceteris paribus} assumption may seem a very stringent straightjacket, it is arguably a reasonable choice in contexts such the LDCs, where labour market data are scarce and patchy, and GDP forecasts are rarely disaggregated by sector.

A second potential concern relates to the notorious variability of the estimates of employment elasticities to growth (Kapsos, 2005), which may give rise to misleading interpretations. As a sort of robustness check to obviate to this problem, we utilize 2 different sets of employment elasticities to growth, spanning the period 2000-2008.

The third challenge stems from the prevalence of informal labour in most LDC economies: simulations based on official employment statistics may be biased, in so far as the latter do not adequately capture informal employment. The present paper attempts to address the issue by estimating a lower- and upper-bound for the incidence of informal/vulnerable employment, and incorporating each of them in specific scenarios, as described below.

What does emerge, in any case, is that the inclusion of informality reinforces the argument

\textsuperscript{11} Notice that in all databases used, over the period considered the available data for Sudan also encompass South Sudan.
that even a 7 percent GDP growth may not be sufficient to generate sufficient employment from here to 2020.

IV. Analysis and results

The present section analyses the forecasted dynamics of labour supply and compares them with the simulated labour demand that would emerge under the assumption that all LDCs meet the 7 percent growth target until 2020. At a fundamental level the dynamics of labour supply is predicated on the interplay of three conceptually distinct elements: the size of total population, its age-class structure, and the overall labour force participation rate, which in turn results from the weighted average of labour participation rates across age-classes. With respect to demography, it is well-known that LDCs are still at an early stage of demographic transition, and are thus characterized by a declining but still relatively rapid population growth, with a very young population structure, the so-called “youth bulge”. Figure 1 confirms that these characteristics are likely to prevail over the medium-term future (i.e. until 2020), and that they are particularly pronounced across African LDCs, which appear to be at a slightly earlier stage of demographic transition than Asian LDCs.

Figure 1

Demographic growth and age dependency ratios in LDCs; 2012-2020 average

Source: Authors computations based on Labourista (ILO).
To assess more formally the effects of population growth, age-structure, and labour force participation on labour supply it is convenient to utilize the following identity

\[ LF \equiv T_{ot.} P_{op.} \times \frac{W_{A.Pop.}}{T_{ot.} P_{op.}} \times \frac{LF}{W_{A.Pop.}}; \]

in which \( LF_t, T_{ot.} P_{op.}^t, \) and \( W_{A.Pop.}^t \) indicate the labour force, the total population and the working age population respectively, all at time \( t \). Taking the log-derivative and expressing the share of working age people in total population as the complementary to 1 of the age dependency ratio \( (adr_t) \) results in

\[ LF_t = g + (1 - adr_t) + \ell f pr_t; \]

which implies that the growth rate of total labour force \( LF_t \) equals the sum of demographic growth rate \( (g) \), the rate of growth of the working-age share of the population \( (1 - adr_t) \), and the rate of growth of the overall labour force participation rate \( (\ell f pr_t) \).

**Figure 2**

**Decomposition of forecasted labor force growth in LDC; 2012-2020**

Source: Authors computations based on LABORSTA (ILO).
Figure 2 depicts the result of the above decomposition for all the LDCs for which data is available. Three observations can be drawn:

1) Demographic growth is clearly the main driver of the forthcoming expansion in the labour force, and appears to exert a particularly sizeable effect in African LDCs. This reflects the relatively faster population growth in African LDCs, compared to Asian ones: on average 2.5 percent and 1.6 percent per year respectively.12

2) With few exceptions (Malawi, Rwanda, Tanzania and Zambia) forecasted changes in the population age structure contribute positively to the growth of LDCs’ labour force, owing to the generalized decline in age dependency ratios (mainly accounted for by a falling share of young people). This contribution to labour force growth is typically small, around 0.5 percent, but in the case of Angola, Bangladesh, Ethiopia and Nepal, where the share of young people in total population is expected to decline more sharply, thereby exerting a stronger impact in terms of labour force growth.

3) With the exception of Djibouti and Yemen, changes in labour force participation are expected to play a rather negligible role in boosting LDCs’ labour supply. Only in eight (mostly African) LDCs - namely Burkina Faso, Madagascar, Mozambique, Samoa, Somalia, Tanzania, Uganda and Zambia – is the labour force participation rate expected to witness a slight decline leading to the negative contribution to labour supply growth depicted in Figure 2.

Overall, the projections underscore the fact that LDC labour supply is expected to increase substantially over the medium-term, expanding at an average rate of 2.8 percent per year. Put differently, labour force across LDCs will grow by over 11 million people each year throughout 2020, with populous LDCs such as Bangladesh, Ethiopia or Democratic Republic of Congo witnessing an average annual increase of over one million workers from now to 2020.

Against this background, labour market outcomes across LDCs will crucially depend on whether economic growth will sufficiently stimulate labour demand, so as to match the forecasted expansion in the labour force. To answer this question, and in order to model future trends in labour demand, historical employment elasticities to growth are utilized, under the hypothesis that all LDCs meet the IPoA growth target of 7 percent per year. The

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12 Afghanistan and Yemen represent the exceptions to this pattern displaying, from 2013 to 2020, an average expected population growth rate of 2.9 percent per year. Besides, notice that the lack of data for three of the six Island LDCs (Kiribati, Timor Leste, and Tuvalu) undermines the comparison with African and Asian ones.
rate of growth of labour demand is accordingly obtained as the product between the historical employment elasticity to growth, and the postulated growth rate of 7 percent.

Even though ILO’s KILM database contains also earlier data, here two sets of employment elasticities are used to simulate labour demand: those corresponding to the 2000-2008 period, and the 2004-2008 one (i.e. at the apex of LDCs growth). This choice stems from two distinct reasons. On the one hand, as mentioned earlier, the mid-to-late 90s have arguably represented the turning point of growth trajectories in a number of LDCs, especially in Africa (Arbache and Page, 2010). It could hence be argued that the 2000-2008 window provides a more accurate “benchmark” for the construction of mid-term growth scenarios. On the other hand, post-2008 employment elasticities may conversely be misleading, in so far as they are likely to be affected by the impact of the global financial and economic crisis.13

The value of the employment elasticities utilized in the 2 alternative scenarios is reported in Table 1. In general, the elasticities displays considerable variability, both across LDCs and over time. Whilst such a variability – noted already by Kapsos, 2005 – is consistent with the importance of country-specific structural characteristics and time-varying policy frameworks, broad commonalities emerge in the relationship between growth and employment creation. With few exceptions the values of the employment elasticities to growth are positive and lower than 1. Their positivity implies that growth in GDP has typically exceeded the rate of increase of productivity (i.e. GDP per person employed).14 On the other hand, the fact that the elasticities are in most cases lower than one, entails that GDP growth is taking place as a result of both greater employment as well as productivity gains in terms of GDP per person employed.15

13 As a matter of fact, the ILO has preferred to treat post-2008 employment elasticities as non separately publishable, since the impact of the “great recession” made their estimation highly uncertain.
14 Negative values of employment elasticities to GDP growth, as in the case of Guinea Bissau and Mauritania for the 2000-2008 average, are rare but not theoretically untenable; a negative value essentially implies that the average labor productivity has increased faster than GDP.
15 In relation to the unusually high employment elasticity to growth for Eritrea, there are good reasons to interpret this value as a policy-induced outlier; more specifically, the high value of the employment elasticity is likely explained by contentious policies such as the National Service Programme, which have been likened to forced labor (see Kibreab, 2009 and Human Right Watch, 2013).
In addition, as was the case with poverty elasticities, structural dynamics appear to be key determinants of the employment elasticity to growth \textit{(ibidem)}. Relative diversification of the economy, as opposed to concentration in capital-intensive sectors (notably extractive industries), tends to be beneficial for employment creation. This can be seen in Figure 3, which presents the employment elasticities to growth and the sectoral contribution to growth in value added, referred to the period 2000-2008. Most oil and mineral exporters tend to

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Source: KILM data (Sixth Edition)
display low employment elasticities to grow, and that is especially the case of many of the fastest growing LDCs such as Angola, Equatorial Guinea, Mozambique and Sudan. Conversely, countries with a more diversified sectoral contribution to growth tend to have a higher employment intensity of growth. In particular, consistent with the literature reviewed earlier, the expansion of the agriculture and services sector seems to be accompanied by a more sustained employment creation. This is the case, for instance, in Benin, Burkina Faso, Burundi, Ethiopia or Togo.

Figure 3

![Sectoral contribution to growth in value added and employment elasticity to growth; 2000-2008](image)

Source: UN Statistic Division and KILM data (Sixth Edition)

On the basis of the above sets of employment elasticities to growth, two distinct scenarios for labour demand are constructed throughout 2020. In order to summarize the corresponding labour market outcome, Figure 4 compares the simulated employment creation effect to the forecasted increases in labour supply.
There are a number of observations that can be inferred from the above comparison. Notably, 11 LDCs out of 38 for which data is available display an “employment deficit” regardless of which scenario one looks at, suggesting that even a 7 percent annual growth may not be sufficient for them to generate sufficient employment. These countries are: Angola, Equatorial Guinea, Mali, Mauritania, Mozambique, Myanmar, Solomon Islands, Sudan, Uganda, Tanzania and Zambia. Moreover, other 8 LDCs represent “switching
cases”, owing to the significant changes in the values of the employment elasticities of growth over time. In other words, these countries may or may not be able to productively employ all new entrants in the labour market, depending on whether one uses the 2000-2008 employment elasticity to growth, or rather the 2004-2008 one. More precisely, Central Africa, Guinea Bissau, Haiti and Sierra Leone display an employment deficit only in scenario 1 (corresponding to the 2000-2008 employment elasticities to growth), whilst Ethiopia, Malawi, Niger and Rwanda only in scenario 2 (based on the 2004-2008 elasticities). This implies that, based on historical employment elasticities to growth, the IPoA growth target seems a pre-condition to productively employ new entrants in the labour market only in half of the 38 LDCs for which data is available.

**Informality and vulnerable employment**

In the context of the LDCs, one potential objection to the above simulation is that they are likely to be biased, since they do not take into account the widespread presence of informal or vulnerable employment. As anticipated earlier, this objection does not invalidate the main message of the present analysis, but rather can be expected to reinforce it, since informality makes it even harder to generate sufficient jobs to productively employ new entrants. In any case, the present sub-section attempts to explicitly incorporate informal and vulnerable employment into the analysis, at least to the extent permitted by the notorious data constraints.

Quantifying informal or vulnerable employment is extremely difficult, not only in view of the overall limitations of available labour data series, but also because of the intrinsically imprecise contours of informal sector and related working arrangements. Technically, informal employment concerns all those types of jobs that are not or only insufficiently covered by legal arrangements, such as jobs in the informal sector as well as informal jobs in formal enterprises. Vulnerable employment, on the other hand, is a broader concept encompassing own-account and contributing family workers (see ILO 2011, KILM Manuscript 8). Informal and vulnerable employment thus represent two related but imperfectly overlapping notions capturing the breadth of informal labour market arrangements. For the sake of this exercise, both the informal and vulnerable employment series are utilized, with the former being interpreted as the “lower bound”, and the latter as the “upper bound” of informality.
In terms of coverage, ILO’s KILM database contains data on the incidence of informal employment outside the agricultural sector for 11 LDCs, whilst data on the incidence of vulnerable employment cover 30 LDCs. In order to maximize data coverage, the latest available year is considered, and missing observations are imputed a value equivalent to the LDC average of the corresponding variable. The resulting incidence of informal/vulnerable employment are reported in Table 2, and broadly confirm the breadth of informality and, even more so, of vulnerable employment in the LDCs. Broadly speaking, roughly one LDC worker out of five is informally employed without considering informal jobs in agriculture; conversely, three LDC workers out of four are in vulnerable employment.

Informal/vulnerable employment are incorporated in the labour market scenarios by supposing that additional job creation – on top of that necessary to productively employ new entrants into the labour market – is required in order to re-absorb informal workers into more formal occupations. Accordingly, the simulated increase in the labour supply is now obtained from the sum of the forecasted increase in the labour force, plus the number of people in informal/vulnerable employment (in the latest available year, namely 2012). As before, this forecasted expansion in the labour supply is compared with the simulated increase in labour demand, derived on the basis of historical employment elasticities under the hypothetical 7 percent annual growth. The resulting net employment balances are depicted in Figure 5, where the left panel corresponds to an “augmented” scenario 1 and the right panel to an “augmented” scenario 2 (being based on 2000-2008 and 2004-2008 employment elasticities respectively).

16 Given that the incidence of informal employment is only reported for the non-agricultural sector, where possible the corresponding LDC average is combined with the country-specific non-agricultural employment share, to obtain the number of people in informal employment. If the non-agricultural employment share was also missing, the LDC average incidence of informal employment (on total employment) was used instead. Notice that, the above measurement convention implicitly amounts to consider all agricultural employment as “formal”, and indeed countries with a higher share of the labour force in agriculture (such as Burkina Faso, Burundi, or Ethiopia) appear to have an overall lower incidence of informal employment. For this main reason the incidence of informal employment is interpreted as the “lower” bound of informality.
Figure 5 essentially confirms that the objective of generating sufficient jobs to productively employ the new entrants, as well as re-absorb informal/vulnerable employment, is likely to prove extremely challenging for the LDCs, even in the optimistic hypothesis that they were all to meet the 7 percent growth target throughout 2020. Indeed, if one assumes that the
employment elasticities to growth remain at their 2000-2008 level (left panel), only 12 out of the 38 LDCs for which data is available would be able to re-absorb informal workers into more formal occupations, while simultaneously employing all new entrants.\textsuperscript{17} Besides, only one country, Eritrea (an outlier, as discussed in Footnote 15), would appear able to generate enough jobs to employ new entrants and re-absorbing vulnerable employment too. This compares to 23 LDCs which seemed capable of generating sufficient employment in the basic scenario 1.

Conversely, holding the employment elasticities to growth fixed at their 2004-2008 level (right panel), other 12 LDCs appear to display a positive balance between job creation and forecasted increase in the labour supply, taking into account informal employment.\textsuperscript{18} Finally, only three countries (Comoros, Eritrea, and Haiti) would appear capable, on the basis of the 2004-2008 elasticities, to simultaneously employ new entrants and re-absorb vulnerable employment. Again, this compares to as many as 23 LDCs which appeared to be capable of productively employ new entrants, under the basic scenario 2.

In conclusion, out of the 38 LDCs for which data is available, only 9 appear well-placed to generate sufficient jobs to simultaneously employ new entrants and re-absorb informal employment, regardless of the set of elasticities utilized. These are Benin, Burkina Faso, Burundi, Chad, Comoros, Eritrea, Guinea, Nepal, and Togo. All other LDCs are instead likely to display an “employment deficit”, once informal/vulnerable employment is duly accounted for.

\textsuperscript{17} These countries are: Benin, Bhutan, Burkina Faso, Burundi, Chad, Comoros, Eritrea, Ethiopia, Guinea, Lesotho, Nepal, and Togo.

\textsuperscript{18} In this case the countries at issue are: Benin, Burkina Faso, Burundi, Chad, Comoros, Eritrea, Guinea, Guinea-Bissau, Haiti, Madagascar, Nepal, and Togo. Notice once again the “switching cases” of Guinea-Bissau, Haiti, Madagascar, which have replaced, compared to the simulation based on the 2000-2008 elasticities, Bhutan, Ethiopia and Lesotho.
V. Policy considerations and relevance for the international debate

Admittedly the above scenarios should be interpreted with some degree of caution, in view of their simplifying assumptions – many of which actually necessary to obviate to data limitations. Yet, the overall reading of the findings is rather unequivocal. Judging from the recent trends in the relationship between growth and employment, as captured by the historical values of employment elasticities of growth, a considerable number of LDCs is...
likely to struggle generating sufficient employment to keep the pace with rising labour force throughout 2020, even if they were to achieve rapid economic growth, commonly associated with the international 7 percent target. Simultaneously re-absorbing informal/vulnerable employment into formal occupations, as required to ensure that the benefits of economic growth are shared more equitably and sustainably, would be even more challenging. Against this background, if imagining more rapid growth prospects for all the LDC does not appear very realistic, what is needed is a shift in the very pattern of growth capable of bringing about stronger employment creation.

A number of policy considerations can be drawn for the above situation. First, policies aimed at accelerating LDCs’ demographic transition and containing the expansion of working-age population have arguably a role to play in the LDCs, especially in light of the mounting pressure on natural resources, including most notably the declining availability of arable land and water resources, in per capita terms (Valensisi and Davis, 2011). The comparison between Asian and African LDCs is in this respect paradigmatic, and demonstrates that more restricted demographic growth and age-dependency ratios pose less of a challenge from the employment creation point of view. From this perspective, policies aimed at (i) broadening the access to family planning and reproductive health, as well as (ii) enhancing the pace of human capital accumulation, (iii) prolonging the duration of schooling, and (iv) aligning more closely school curricula with market needs, can all be viewed as necessary complements to more specific labour market interventions. It should be clear, however, that since demographic variables adjust rather slowly to policy changes, the above policies can hardly represent anything more than a long-run complement to more targeted efforts to strengthen the growth-poverty nexus through employment creation.

This brings to the second consideration, namely the need for more decisive interventions to strengthen the effect of growth on employment creation, captured in the present framework by the historical values of employment elasticities to growth. On average, these latter have not actually been low in the LDCs by international standards, but in general they remain inadequate vis-à-vis the rapid expansion of labour supply, especially if one takes into consideration the prevalence of underemployment and informal working arrangements. Moreover, in those LDCs where the boom has been driven by capital-intensive extractive industries – as typically happened in many of the fastest growing LDCs – the pattern of growth has proved unable to trigger significant job creation, despite the fact that labour
productivity in extractive sectors tends to be far higher than in the rest of the economy (McMillan and Rodrik, 2011). Against this background, a greater focus on labour-intensive and higher-productivity sectors is warranted if growth is to simultaneously generate sufficient jobs, and trigger “productivity-enhancing structural change”, i.e. labour reallocation from low-productivity occupations to higher productivity ones, thereby contributing to boost GDP per person employed.

Agriculture plays in this respect a pivotal role, not least because it still employs approximately 60 percent of LDC labour force, mainly as relatively poor small-holder and subsistence farmers. As structural transformation proceeds, most of these workers will ultimately seek jobs elsewhere in the economy, mainly as a result of wages and productivity differentials (pull factor), but also as a consequence of negative shocks (push factors), and as a strategy to diversify income sources. In the interim – consistent with Arthur Lewis’ description of dual economy – the dynamics of agricultural sector are bound to influence the rest of the economy, mainly by altering the pace of urbanization and labour reallocation, exerting multiplier effects on the rest of the economy, and boosting the availability of food products (a wage goods, whose relative price has second-round effects on the labour market). In light of this, raising agricultural productivity and generating off-farm employment opportunities should be regarded as two objectives lying at the core of development strategies for inclusive growth and poverty eradication. Fostering the adoption of more sustainable land, forestry and water management techniques, along with a much-needed upgrading of machinery and rural infrastructures, could bring in additional benefits, since smallholder-farmers have potentially a lot to gain from a more sustained creation of rural employment, and from relieving the pressure on marginal lands. This, in turn, could alleviate those push factors that result in rapid urbanization, with its associated challenges.

Alongside with agricultural development, it will be critical to diversify the economic structure spurring the emergence of higher-productivity employment opportunities in manufacturing, as well as formal services. Given the large productivity gaps across sectors, this process could ideally allow to absorb those workers who leave low-productivity agriculture and seek jobs elsewhere, while in the process reaping the benefits of overall productivity gains. In this respect, bolstering light manufacturing and transformation industries, to enhance value addition to the primary commodities produced by the LDCs, appears to be a promising avenue to kick-start this structural transformation. Yet, it will be
important for LDCs to move beyond this step, and use their static comparative advantages as a springboard to take advantage of increasing returns and dynamic gains from trade (Rodrik, 2011). This may in turn require targeted industrial policies, capable of redressing those market failures which hamper structural transformation (informational asymmetries, search costs, coordination issues, increasing returns, credit market failures), without being captured by rent-seeking behaviours.

In conclusion, without intending to deny that economic growth is indeed a major driver of social development and poverty reduction, the present analysis suggests that the very pattern of growth is as critical as its quantitative level. Indeed, structural dynamics are a key determinant of the extent to which the benefits of growth are shared equitably, in primis through employment opportunities. In this respect, the inadequacy of conventional growth targets, unless complemented by other considerations, highlights the need to put structural transformation and employment at the centre of LDC development prospects. Beyond the LDCs, the same argument is relevant in the context of the ongoing discussions about the post-2015 development agenda, and concur with the idea that structural transformation and employment creation should be paid far greater attention in the post-2015 development agenda.

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