Working paper

Employment in a post-2015 framework:

Proposals for monitoring indicators

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Abstract

The key objective of this paper is to stimulate a debate on potential employment indicators for a post-2015 framework. As the discussions around a post-2015 agenda intensify, we offer concrete and innovative proposals to improve the monitoring of employment outcomes in a future development framework. This paper is divided into three main sections, each of them with clearly defined objectives. First, we briefly reassess the key strengths and weaknesses of relevant MDG indicators, which are an important and necessary starting point. Second, we identify a broader range of indicators that might be able to capture major employment challenges. Third, we provide a suggestive list of monitoring indicators for a post-2015 framework, which includes re-endorsing certain aspects of the current MDG framework, suggesting modifications to the current indicators, and proposing entirely new indicators. We attempt to put forward some innovative proposals, even if some of these still require further technical work.

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1. Introduction

In 2008, a new employment target was officially incorporated into the Millennium Development Goals (MDGs) framework: *Achieve full and productive employment and decent work for all, including women and young people* (Target 1.B). Four employment indicators were also added. Their inclusion ultimately recognises the importance of employment as a key dimension of wellbeing and human development. The fact that the new employment target was placed under MDG 1 is not surprising, since employment is the main mechanism through which economic growth translates into poverty reduction. Productive employment also promotes other important objectives, such as social cohesion, citizen empowerment, and personal dignity and fulfilment.

With the MDGs deadline approaching, several institutions and development practitioners have been considering the potential scope, content and format of a post-2015 global development agreement. This paper contributes to that body of work by proposing indicators that could improve the monitoring of employment outcomes. In order to better structure the discussion around these issues, we consider three key areas of analysis: (i) quantity of employment; (ii) quality of employment; and (iii) access to employment opportunities.

Quantity of Employment. The creation of a sufficient number of employment opportunities is vital to absorb new entrants in the labour market, especially in countries with large young populations. Given the growing concerns about *jobless growth* patterns, a post-2015 framework will need to adequately capture the level of employment and the pace of employment creation.

Quality of Employment. It is also essential to provide useful insights on the quality of jobs. This can be approached from a variety of angles, including the level of remuneration (e.g., wages), security (e.g., existence of a contract), regularity (e.g., seasonal and part-time work), safety, and even social security (e.g., provision of health and unemployment insurance). In addition to this individual perspective, we can also think about the types of jobs that might deliver greater benefits for the broader economy and society.[1] For instance, jobs created in sectors with high productivity potential contribute to the crucial process of structural transformation, while jobs created in deprived or conflict-affected areas are likely to generate high social payoffs. Since employment is a fairly broad, complex and sometimes subjective area of analysis, some difficult choices will need to be made in terms of choosing a small number of aspects to be reflected in a future monitoring framework.

Assess to Employment Opportunities. Even if a significant number of good jobs are being created in the economy, disadvantaged groups of society – such as the poor, youth, women and ethnic minorities – might not be able to gain access to them. It is thus important that a post-2015 framework captures these potential inequities, possibly by providing disaggregated information on several employment indicators.

Table 1 provides a schematic presentation of these dimensions with a tentative classification of the employment-related MDG indicators. It underlines the different facets of the employment challenge and the need to assess the current set of indicators as complementary to each other.

[1] The World Bank (2012) proposes a typology of job challenges: agrarian economies, urbanising countries, formalising countries, countries with high youth unemployment, ageing societies, resource-rich countries, small island nations, and conflict-affected countries. While these are not mutually exclusive categories, the typology can help us think through the types of jobs that are needed in specific country contexts.

Table 1: Key Employment Dimensions

	Aggregate Level (Entire population)	**Disaggregated Level** (Inclusion/Access)
Quantity (Number of Jobs)	◆ Employment-to-population ratio	◆ Employment-to-population ratio by sex ◆ Youth unemployment rate
Quality (Type of Jobs)	◆ Share of vulnerable work	◆ Share of vulnerable work by sex ◆ Working poverty rate
Other	◆ Labour productivity growth	◆ Share of women in wage employment in the non-agricultural sector

Note: Assessment based on current monitoring indicators. See http://mdgs.un.org/unsd/mdg/Data.aspx

This paper is structured as follows. This section presented the broad context and rationale for the paper. Section 2 provides a critical assessment of the strengths and weaknesses of the existing MDG target and indicators. Section 3 broadens the scope of analysis and reconsiders the employment challenges faced by developing countries. This is supported by a brief investigation of alternative employment-related indicators. Section 4 makes specific proposals with a view to improve the monitoring of key employment trends in a post-2015 framework. Section 5 concludes.

2. Employment in the MDG Framework

In 2007, the MDG framework was revised to include four new targets – with effect from January 2008. Among these was a new target on employment. Under MDG 1, Target 1.B seeks to *Achieve full and productive employment and decent work for all, including women and young people*. Until then, there was a target on youth employment under MDG 8 – *In cooperation with developing countries, develop and implement strategies for decent and productive work for youth* (old Target 16) – which was dropped in the 2007 revision.[2] The indicators on youth unemployment are now a complement to the official list of MDG indicators.

Overall, the 2007 revision recognised the crucial role that employment plays in fostering human development, especially in the context of MDG 1. The imperative of generating productive employment and decent work in order to overcome poverty and hunger is therefore explicitly acknowledged. This follows from the fact that labour is the main asset for the majority of poor people around the world and thus the main way to overcome deprivation – which explains the currency of the term 'working out of poverty'. The inclusion of this target implies that the rigorous monitoring of employment dynamics is essential to assess progress towards MDG 1 (Sparreboom and Albee, 2011).

The origin of the employment **target** can be traced back to the World Summit for Social Development, held in Copenhagen in 1995. At the Summit, governments committed themselves to 'promoting the goal of full employment as a basic priority of our economic and social policies, and to enabling all men and women to attain secure and sustainable livelihoods through freely chosen productive employment and work'.[3] In addition, its Programme of Action stated that 'full and adequately and appropriately remunerated employment is an effective method of combating poverty and promoting social integration'. The Summit thus provided the key elements for the subsequent work that led to the formulation of the current employment target, which can be decomposed into three different elements:

- Quantity of Employment: 'Full (…) Employment (…) For All'
- Quality of Employment: 'Productive Employment and Decent Work'
- Access to Employment Opportunities: 'Including Women and Young People'

The fact that the target incorporates quantitative, qualitative and equity aspects is an important strength. It avoids some of the criticisms levelled at other MDG targets, such as the lack of focus on quality (e.g., Target 2.A on full primary education) and the general absence of inequality considerations. In addition, the target is framed in a positive way (i.e., increase a desirable outcome), rather than seeking to reduce the prevalence of a negative outcome. *Full employment* requires that all people that are available, capable and willing to work are able to do so. *Productive employment* can be defined as employment that provides an adequate income to the worker and her/his dependents. *Decent work* relates to (productive) work which is carried out in conditions of freedom, equity, security and human dignity.[4] Productive employment can thus be considered as a component of decent work.

[2] See http://unstats.un.org/unsd/mdg/Resources/Attach/Indicators/OfficialList2003.pdf
[3] See http://social.un.org/index/Home/WorldSummitforSocialDevelopment1995.aspx
[4] See www.ilo.org/public/english/bureau/dgo/speeches/somavia/1999/seattle.htm and www.ilo.org/global/topics/decent-work/lang--en/index.htm.

However, it seems clear that the target lacks the simplicity and measurability of other MDG targets. It also lacks a timeframe. As a comparison, Target 1.A aims to halve the proportion of people with incomes lower than a dollar a day between 1990 and 2015, while Target 1.C aims to halve the proportion of people who suffer from hunger in the same timeframe. This is a significant drawback, since it can be argued that the main appeal and strength of the MDG framework relates to its concrete and time-bound targets.

The employment challenge is particularly complex, not only due to its multiple facets, but also because it varies across different contexts. This suggests that there is a possible trade-off between the level of specificity and global relevance. It could be argued that there is limited scope to improve the current MDG target, and that perhaps efforts should be focused on devising a set of indicators that more adequately reflect its objectives. Alternatively, its current content could inspire the formulation of a **full-fledged employment goal**. Then, a set of employment targets that reflect the priorities of the employment agenda could be developed – along the three dimensions suggested above.[5]

There are four **indicators** to monitor the employment target, and a further employment-related indicator to monitor MDG 3 on gender equality.[6] As stated above, there are also some complementary indicators, which focus on youth unemployment. In this section, we briefly analyse their scope, strengths and weaknesses, with a view to improve the monitoring of employment outcomes in a post-2015 framework. This section partly draws on ILO (2012a), ILO (2009), and Sparreboom and Albee (2011). Table 2 at the end of the section provides a brief summary of our analysis.

- Growth rate of labour productivity (GDP per person employed) [Indicator 1.4]
- Employment-to-population ratio [Indicator 1.5]
- Proportion of employed people living below the poverty line [Indicator 1.6]
- Proportion of own-account and contributing family workers in total employment [Indicator 1.7]
- Share of women in wage employment in the non-agricultural sector [Indicator 3.2]

2.1. Growth rate of labour productivity (GDP per person employed)

This indicator provides a link between total output (GDP) and employment by measuring the growth of GDP per person employed – i.e. labour productivity growth. Labour productivity is often seen as a precondition to sustainably raise living standards, since it tends to be associated with an economy's capacity to generate (productive) employment and increase wage levels.[7] Increases in labour productivity can be accounted by several factors, including: (i) increased efficiency in the use of labour; (ii) increased use of other inputs, such as physical, natural or human capital; (iii) labour moving to more productive activities (structural transformation).[8]

[5] This could present some practical benefits, although this paper will not explore that possibility into much detail but will rather focus on potential employment indicators. See Annex 5 for a survey of current employment-related proposals.
[6] These indicators are also important to monitor the ILO's Decent Work Agenda, and could be seen in the context of a 'fuller set of proposed Decent Work Indicators' (ILO, 2009).
[7] According to economic theory, labour productivity determines wage levels. However, the relationship is certainly not automatic. For instance, Luebker (2011) finds that differences in the level of labour productivity explain (only) about 65 per cent of wage variation across countries – for a sample of more than 100 countries. Moreover, the growing gap between productivity growth and wage growth in developed countries (especially the US) has been widely reported.
[8] Given the interdependence between the different inputs, low labour productivity may not necessarily reflect low labour efficiency, but possibly the lack of complementary inputs (e.g., physical capital).

While it is unlikely that economic and social development can take place in the absence of productivity growth, this is not a sufficient condition to achieve socially desirable outcomes. In particular, the ILO (2009) suggests combining this indicator with the employment-to-population ratio (see below) to ensure that productivity growth is accompanied by employment growth. This is because the indicator does not provide information on the quantity of employment – despite the fact that total employment determines labour productivity. For instance, a resource-rich country might exhibit high labour productivity growth owing to an increase in GDP that does not generate any additional employment – due to the high capital-intensity of the sector. Moreover, the indicator does not provide insights on the quality of employment (e.g., types of jobs) and inclusiveness (since it cannot be disaggregated by sex, age or income status).

2.2. Employment-to-population ratio

This indicator measures the proportion of the working age population that is employed.[9] A low ratio suggests that a significant proportion of the population that could be working is not in employment. This may be due to high unemployment or inactivity (e.g., discouraged workers or students). The indicator can be disaggregated by specific population characteristics (e.g., sex and age) to provide useful insights on disparities in the access to employment opportunities. Indeed, the employment-to-population ratio for young people is included in MDG monitoring reports, although not in the official list of MDG indicators. The indicator tries to capture the economy's capacity to provide employment and, when combined with information on economic growth, can provide insights on the extent of pro-employment growth.

Nevertheless, the interpretation of this indicator is not particularly straightforward. While a low ratio usually suggests an underutilisation of the labour force, a high ratio does not provide an unambiguous signal (Elder, 2011). For instance, many poor countries have high employment-to-population ratios because the vast majority of people cannot afford to be out of work. Low household incomes and the lack of safety nets (e.g., unemployment insurance) means that the labour force is virtually all employed, while staying in education tends to be costly – especially when considering the potential income forgone. In these cases, labour participation and employment rates are high, regardless of the quality of employment. Hence, a declining ratio might actually constitute a positive development, if it is due to young people staying longer in education.[10] Moreover, the lack of insights on the quality of employment constitutes another important drawback of this indicator, which requires it to be complemented by other (qualitative) indicators.

2.3. Proportion of employed people living below the poverty line

This indicator provides an estimate of the proportion of employed persons that live in households in which per capita consumption/income is below the poverty line. It provides an important link between employment (labour market status) and income poverty, and is often used as a proxy for income-related underemployment, and thus the lack of productive employment and decent work.

[9] The working age population is usually defined as people above 15 years old, although some countries use different lower and upper bounds – e.g., due to differences in work eligibility and retirement ages.

[10] The ILO (2009) suggests four general 'rules' for this indicator: (i) ratios should be lower for youth than for the overall population, since young people are more likely to be in education, and thus excluded from the economically active population – i.e., labour force; (ii) ratios for women might be lower than those for men, since women are less likely to participate in the labour market (at least in some countries); (iii) the ratios should neither be too low nor too high, since very high ratios usually indicate an abundance of low quality jobs; and (iv) increases in the ratios should be moderate, since sharp increases could be the result of decreases in productivity.

The ILO (2012a) suggests that working poverty depends on:

- The income (in cash and kind) derived from labour,
- The intra-household dependency ratio (i.e., number of people each worker needs to support),
- The labour income of other employed members of the household, and
- Non-labour related income, such as public and private transfers.

In principle, the indicator should be computed through cross-tabulations between household income and labour market status from household surveys, and further disaggregation (e.g., sex and age) might be possible. However, due to limited access to household surveys, the number of working poor is sometimes estimated by multiplying the poverty headcount ratio by the total number of employed persons. These estimates are based on simplifying assumptions that may not hold – especially relating to poverty homogeneity. For instance, the formula implicitly assumes that the poverty rate of the working-age population is equal to that of the population as a whole, and that the labour force participation and employment rates for the poor are the same as that for the population as a whole (ILO, 2012a). This is an important limitation of this indicator, since it can lead to some biases.[11] Moreover, since poverty is measured at the household level and employment at the individual level, issues of intra-household inequality (or group differences) may not be measurable. Finally, the poor/non-poor dichotomy masks the vulnerability of those living just above the poverty line.

2.4. Proportion of own-account and contributing family workers in total employment

This indicator provides a measure of vulnerable employment, which is based on standard categories of employment status. To a certain extent, it also provides a proxy for informal work from an individual perspective. In practice, the indicator combines two categories of workers that are more likely to lack formal work arrangements and access to social protection. These are self-employed workers without employees (i.e., own-account workers) and contributing family workers (i.e., unpaid family workers). Vulnerable employment is often associated with poverty, precarious work and economic vulnerability, since these forms of employment tend to be poorly paid, less secure, and more susceptible to be affected by economic conditions. The indicator can be disaggregated (e.g., by sex or age) in order to provide a richer amount of information on the employment vulnerability of different groups.

Self-employed workers with employees (i.e., employers), wage and salary workers (i.e., employees), and members of producer's cooperatives are only indirectly captured by this indicator (ILO, 2009). This implicitly presumes that workers in these categories are not in a vulnerable position. However, there is significant heterogeneity within each category (e.g., regular versus casual wage employment), which may not be adequately captured by this classification. For instance, wage labourers in agriculture tend to be a particularly vulnerable group. In addition, the assumption that own-account workers are more vulnerable than wage workers is perhaps more relevant in developing countries characterised by segmented labour markets, surplus labour, and weak labour

[11] Kapsos (2011) suggest that, on the basis of available data for 15 sub-Saharan African countries, macro-based estimates are likely to overestimate micro-based estimates in the region (by about 8.6 percentage points). Correcting the assumption that the poverty rate of the working age population and the population as a whole are the same brings both estimates closer.

market institutions.[12] In developed countries, own-account professionals might actually be better-off than wage workers. Finally, some studies have suggested that own-account work might be overestimated in developing countries due to unrecorded wage labour in rural areas (Sender et al, 2005).

2.5. Share of women in wage employment in the non-agricultural sector

This indicator captures the degree to which women have access to wage and salaried work in the industry and service sectors (i.e., non-agricultural sector). It provides an insight on women's ability to access better employment opportunities – i.e., formal employment outside agriculture. Inclusion in the labour market results in positive outcomes in terms of autonomy, self-reliance and decision-making power within the household. Provided that some conditions are met – such as similar labour participation and employment rates – we would expect the indicator to be close to 50 per cent (i.e., gender parity).

The drawback of this indicator is that it does not provide direct information on the quality (or quantity) of employment. The indicator is mainly focused on gender disparities (i.e., inclusiveness) for a specific employment status in the non-agricultural sector. However, in countries where these better opportunities are scarce, its ability to provide information on women's employment situation is considerably limited. For instance, the indicator might show gender parity, even when the economy is not able to generate an adequate number of good jobs for women and men alike. Qualitative aspects are also not fully captured, such as (gender) wage differentials, work conditions, and social protection.

2.6. Other indicators

There are a number of complementary employment indicators, which make especial reference to youth unemployment. The four indicators below provide insights on inclusion, and can be further disaggregated by sex. The unemployment rate is a measure of unutilised labour supply. In technical terms, it includes those who were (a) without work; (b) currently available for work; and (c) actively seeking work during the reference period.

- Youth unemployment rate (15-24)
- Ratio of youth unemployment rate to adult unemployment rate
- Share of youth unemployed to total unemployed
- Share of youth unemployed to youth population

Unfortunately, the unemployment rate does not have an unambiguous interpretation. Low unemployment rates can be found in poor countries, since in the absence of safety nets people cannot afford to be unemployed. In these cases, people are more likely to be (under-)employed, rather than unemployed. In addition, there might be some definitional issues of what constitutes unemployment as well as the age brackets used.

[12] It is usually assumed that wage employment provides higher and more stable incomes, while self-employment is usually associated with informal and precarious working conditions (vulnerable work). Nonetheless, rising farming incomes can also be extremely effective in reducing poverty and income disparities.

2.7. Summary

The analysis conducted above suggests that the current MDG employment-related indicators need to be considered in tandem, as they illustrate different dimensions of the employment challenge (Table 2). Individually, they are fraught by their coverage and technical limitations. Moreover, the interpretation of some monitoring indicators is not particularly straightforward, especially when making comparisons across countries (e.g., employment-to-population ratio and unemployment rates). Finally, it could also be argued that some issues are absent or not adequately reflected. The following sections will investigate to what extent the current set of indicators could be improved.

Table 2: MDG Employment-Related Indicators

Indicator	Description	Dimensions	Strengths	Weaknesses
Growth rate of GDP per person employed	Labour productivity growth	n/a	Links economic growth and employment.	Lacks information on the quantity and quality of jobs.
Employment-to-population ratio (by sex)	Employment rate	Quantity & Inclusion	Measures employment creation.	Ambiguous interpretation of high values and trends.
Proportion of employed people living below $1.25 (PPP) per day	Working poverty	Quality & Inclusion	Links poverty and employment; proxy for under-employment.	Intra-household assumptions; poor/non-poor dichotomy.
Proportion of own-account and contributing family workers in total employment (by sex)	Vulnerable work	Quality & Inclusion	Proxy for job quality.	Heterogeneity within categories; possibly overestimated.
Share of women in wage employment in the non-agricultural sector	Gender parity	Inclusion	Measures women's access to (better) employment.	Limited information on the quantity and quality of jobs.
Youth unemployment (several)	Youth unemployment	Quantity and Inclusion	Measures youth's lack of access to employment.	Concept not very useful in poor countries

Sources: Authors' assessment

3. The Employment Challenge

This section provides a brief overview of the most significant employment challenges facing developing countries, while referring to a broader set of existing monitoring indicators. In particular, we assess whether some of the ILO's Decent Work Indicators (with the respective codes in brackets) are able to better reflect current and future employment challenges. This section partly draws on ILO (2012b).

3.1. Quantity of Employment: 'Full (…) Employment (…) For All'

The creation of sufficient employment opportunities is fundamental to absorb new entrants in the labour market, especially in countries with large young populations. It is therefore important to capture the pace of employment generation, possibly by measuring employment growth adjusted for demographic dynamics. This is what the MDG indicator **employment-to-population ratio** (EMPL-1) attempts to do, despite the weaknesses previously noted. An important complement would be the **labour force participation rate** (EMPL-5), which includes both the employed and unemployed in the numerator – thus providing an indirect measure of the economically inactive, such as students.

The **unemployment rate** (EMPL-2) is another indicator that may provide useful information about labour market conditions, although its interpretation is fairly limited in poor countries. In these cases, the **time-related underemployment rate** (TIME-4) could effectively complement standard measures of employment generation. The criteria for time-related underemployment are: (i) willingness to work additional hours; (ii) availability to work additional hours, and (iii) having worked below a threshold of working hours. However, the threshold of working time might need to be determined at the national level (ILO, 2012b). For instance, Sugiyarto (2007) proposes a methodology to determine the cut-off point for time-related underemployment using a labour force survey from Indonesia. An indicator on **labour underutilisation** (EMPL-11) is currently being developed by the ILO and would provide an alternative measure to the unemployment rate (e.g., by adding unemployment and time-related underemployment).

In addition, **employment elasticities** could enable us to better understand the relationship between economic growth and employment generation at the aggregate and sector levels. For instance, the KILM database (6th Edition) shows that the employment intensity of growth has declined in the 2000s, when compared to the 1990s, in several regions – including sub-Saharan Africa, the Middle East, and Latin America and the Caribbean. Unfortunately, the indicator has been dropped in the latest edition.

The importance of analysing the quantitative dimension of employment (as well as its interpretation) may depend on a country's level of development. For instance, the vast majority of the working-age population in poor countries is classified as employed. This partly arises from the fact that poor people can seldom afford to be unemployed (especially in the absence of social protection) or be in full-time education (in which case they would not be classified as being part of the labour force). Therefore, employment growth tends to follow closely the rate of population growth. In these cases, the main focus ought to be placed on the quality of employment and the ability of vulnerable groups to access these better employment opportunities. Nonetheless, in many developing countries there are growing concerns about their economy's inability to produce a sufficient number of jobs.

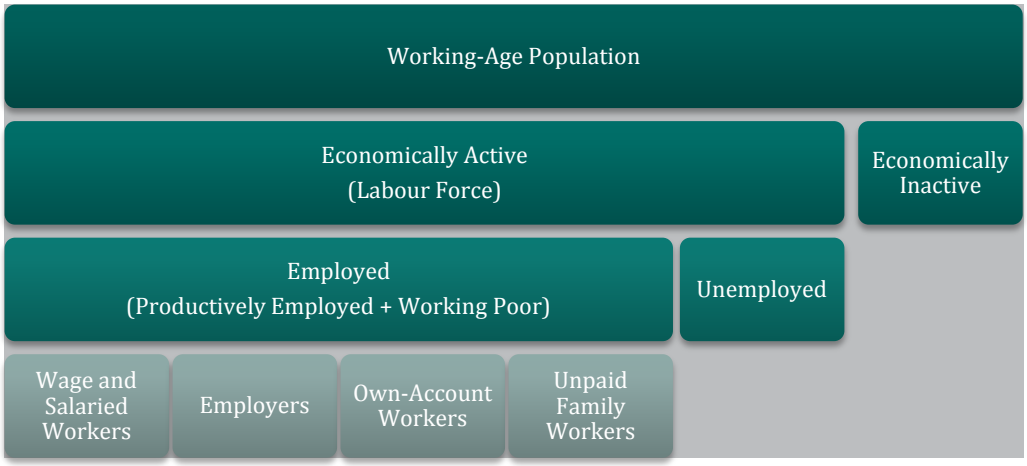
3.2. Quality of Employment: 'Productive Employment and Decent Work'

As mentioned before, most poor people in developing countries work. However, this work is often undertaken in low productivity sectors, provide inadequate earnings, lack security (e.g. contract arrangements) and can occur under unsafe conditions. Improving the quality of employment is essential to ensure that employment outcomes translate into better living standards.

While measures of the quantity of employment tend to be fairly tangible (even if the definition of a job might be controversial and not always clear – e.g., housework), measuring the quality of employment is bound to be challenging. In fact, the degree of objectivity can vary considerably. The concepts of productive employment and decent work are good starting points.

In order to obtain a measure of *productive employment*, it is perhaps better to identify what it does not include. The ILO (2012a) defines the deficit of productive employment as the sum of working poverty and unemployment, reflecting the fact that the challenges associated with the lack of productive employment may take a different form depending on the context in which it occurs. Unemployment can be seen as an extreme form of underemployment, since the person is not engaged in any economic activity. Moreover, working poverty is likely to be a result of people performing unproductive jobs, most likely due to the lack of better employment opportunities (or access to those opportunities). It is important that the income derived from employment is sufficient to provide a decent living standard for the worker and their dependents – thus covering the basic needs of the household. In situations where people cannot count on systems of social protection and alternative sources of income, the deficit of productive employment takes the form of working poverty (ILO, 2012a). Therefore, the current MDG indicator **working poor rate** (EARN-1) is a key component of this definition of productive employment, and a proxy for income-related underemployment.

Figure 1: Labour Market and Employment Status of the Working Age Population



Note: The economically inactive population includes students, retired workers, discouraged workers, sick or disabled persons, those caring for family members, etc.
Source: Adapted from ILO (2012a)

However, we can also view productive employment from an aggregate (rather than individual) perspective. In that case, we could use the MDG indicator **growth rate of labour productivity** (CONT-3) as a starting point. In order to make it more informative, we could compute the level and

growth of labour productivity at the sector level. For this, we would need to obtain figures on employment by branch of economic activity (CONT-6) and the corresponding GDP figures.

Decent work, on the other hand, is a multidimensional concept that encapsulates the aspirations of people in their working lives. According to the ILO, 'it involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.'[13] It thus encompasses a wide range of discrete areas, including productive employment. Here, we focus on earnings and security.

- Earnings

Jobs should provide a decent and fair remuneration to workers. The working poor rate (EARN-1) provides a proxy for low labour earnings, but it relies on income data at the household (rather than at the individual) level.[14] This means that working poverty might be caused by factors other than low pay (e.g., number of dependents), while other sources of income might mask low labour earnings (e.g., remittances and government transfers) – see section 2.3.

An alternative approach would be to focus on wages/salaries, although the obvious downside is that it does not capture self-employment income. For example, the **low pay rate** (EARN-2) provides information on the proportion of paid employees (i.e., wage workers) working for low wages – defined as less than two-thirds of the median hourly wage. This indicator provides a measure of wage inequality, although the cut-off point seems fairly arbitrary. Moreover, the cut-off might be unrealistic for some developing countries, since the value could be below the absolute subsistence minimum – in which case the minimum living wage could be used (ILO, 2012b).

Finally, information on **average real wages** (EARN-4) could be potentially useful, especially in order to compare it with labour productivity trends.

- Security

In addition to the level of earnings accrued from labour, it is important to have stability and security at work. A number of key concepts can be used to define employment situations that undermine job security, such as informal employment, vulnerable work and precarious work.

Informal employment is a major contributor to the lack of security at work, and is often associated with low pay. Although informality can be defined at the enterprise level by the status of its activities (unregistered) or by its size (number of employees), our concern is with informality at the individual (worker) level. Informal jobs can be found in formal sector enterprises, informal sector enterprises, and households. Informal workers lack a formal work arrangement (i.e., a contract), which means that they are not recognised, regulated or protected by national labour legislation. They are also unlikely to be covered by adequate social security (e.g., unemployment insurance) and representation mechanisms (e.g., unions) that give them 'voice' at work, thus undermining their fundamental rights.

[13] See www.ilo.org/global/topics/decent-work/lang--en/index.htm
[14] Actually, household income is usually estimated from data collected on household consumption/expenditure.

The **informal employment rate** (EMPL-4) can be a useful indicator, although it is quite difficult to effectively measure the level of informality.[15] This is partly due to the amount of information required, but also because the formal-informal dichotomy often fails to capture the heterogeneity across formal-informal boundaries (Weeks, 2006). Proxy indicators are often used, such as the MDG indicator on the **proportion of own-account workers and contributing family workers in total employment** (EMPL-9) – also known as vulnerable work.[16]

Formal employment may also, albeit to a lesser degree, lack stability and security. The **precarious employment rate** (STAB-1) is the share of employees whose contract of employment (verbal or written) is of relatively short duration or whose contract can be terminated on short notice. This often includes casual workers, short-term workers and seasonal workers. Finally, the **subsistence worker rate** (STAB-3) measures the proportion of workers engaged in subsistence production of goods or services – i.e., production that constitutes the predominant consumption of the household. Subsistence workers face particular challenges since their work depends on land rights, water resources and favourable climatic and environmental conditions (ILO, 2012b).

- Other Issues

There are other important aspects that could also be considered. For example, the extent of child labour could be evaluated through the **child labour rate** (ABOL-1). Job safety and hazardous work could be gauged through the **occupational (fatal) injury frequency rate** (SAFE-1).

3.3. Access to Employment Opportunities: 'Including Women and Young People'

Ensuring equal access to productive employment opportunities is vital to enable all segments of the population to participate in and benefit from the economic process. However, there is often significant *inequality of opportunity*, which then translates into *inequality of outcomes*. This aspect is closely related to the inclusiveness dimension of the employment challenge, and is an important complement to the previous two. Certain groups of society have been found to be particularly disadvantaged, including the poor, women, youth, ethnic minorities and migrant workers. Therefore, the level of inclusion of the economic process should be assessed by disaggregating standard employment and income data by specific labour force characteristics – such as income, gender, age, ethnicity, etc.

The poor are often unable to gain access to productive employment opportunities, and thus cannot fruitfully benefit from the economic process. To a large extent, this is because they face disproportionate (and mutually reinforcing) obstacles when compared to the rest of the population, which create a negative vicious cycle. They may lack the social capital that could connect them to better employment opportunities (i.e., networks), and may even be physically distant from where good jobs are being created. They are also far more likely to lack the resources that would enable

[15] There are two separate but related concepts of informality: *employment in the informal sector* (firm-based definition) and *informal employment* (job-based definition). Household surveys capture the latter, and are likely to provide more information about job quality. According to the ILO (2009b: 62), *informal employment* includes the following: (i) own-account workers employed in their own informal sector enterprises; (ii) employers working in their own informal sector enterprises; (iii) contributing family workers, irrespective of whether they work in formal or informal sector enterprises; (iv) members of informal producers' cooperatives; (v) employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; (vi) own-account workers engaged in the production of goods exclusively for own final use by their household, if they are considered employed given that the production comprises an important contribution to total household consumption.

[16] This requires information on the status in employment (EMPL-8).

them to become more productive – such as credit and infrastructure (in the case of self-employed workers), and adequate skills and good health (in the case of employees). As a group, the poor traditionally hold precarious, low-paid, and sometimes even hazardous jobs. Measures of time-related and income-related underemployment, in addition to job security, are particularly useful to understand the challenges facing the poor. Many of these issues have been mentioned above, such as the working poverty rate (EARN-1), although further disaggregation of employment indicators by (household) income would be useful. For instance, this could include an investigation of which sectors and occupations the poor are traditionally employed in.

Women also tend to face significant barriers in the labour market. Labour participation rates for women remain lower than for men in most countries of the world. Although this gap has been narrowing, there are still numerous obstacles that contribute to gender inequality in employment – often reflecting social constraints. Women are more likely to be in low-paid jobs (often in the informal sector), and receive lower wages/salaries for similar jobs (wage discrimination). Barriers to increased participation and better remuneration for women can also be due to the time allocation differentials in housework activities. In addition to the current MDG indicator – the **share of women in wage employment in the non-agricultural sector** (EQUA-4) – other potentially useful indicators include **occupational segregation by sex** (EQUA-1) and the **gender wage gap** (EQUA-3).[17] Occupational segregation attempts to identify the types of jobs that are female/male dominated (e.g., managers), while the gender wage gap provides insights into possible wage differentials by measuring the relative difference between the average hourly pay for men and women. Finally, we could assess the **female share of employment by economic activity (ISIC)** (CONT-10).

Participation rates for young people (15-24 years) are also considerably lower than their counterparts. Although this may reflect the fact that young people are more likely to be in education (thus outside the labour force), it may also be due to barriers to entry in the labour market – such as the lack of networks and limited work experience. Despite the weaknesses of the unemployment rate, it might be useful to investigate the **youth unemployment rate** (EMPL-6) or **youth not in education and not in employment** (NEET) (EMPL-3) in some country contexts. Moreover, young people are often trapped in part-time and temporary employment in developed countries, while in developing countries they are predominantly in unpaid family work or informal activities (ILO, 2012c). This could be assessed by disaggregating relevant employment variables by age groups.

In addition to the poor, women and young people, there are other segments of the population that also tend to be disproportionately unable to gain access to productive and decent employment opportunities. For example, people with disabilities are less likely to be in employment, while older people can suffer from age discrimination. The Washington Group's short questionnaire to assess disability and UNDESA's recommendations on disaggregating data by age groups could be particularly useful in this regard.[18] The ILO is currently developing a measure for **employment of persons with disabilities** (EQUA-8).

[17] The major occupational groups are: (1) Managers; (2) Professionals; (3) Technicians and associate professionals; (4) Clerical support workers; (5) Service and sales workers; (6) Skilled agricultural, forestry and fishery workers; (7) Craft and related trades workers; (8) Plant and machine operators, and assemblers; (9) Elementary occupations; and (0) Armed forces occupations. See the International Standard Classification of Occupations, 2008 (ISCO-08) – which groups jobs by similarity of tasks and duties.

[18] See http://unstats.un.org/unsd/demographic/products/dyb/techreport/ageandsex.pdf and http://unstats.un.org/unsd/methods/citygroup/washington.htm

Ethnic minorities and migrants are also likely to experience significant discrimination in the labour market. For example, migrant workers are often a vulnerable group due to their legal status and the usually precarious conditions of their occupations. Monitoring their labour market status is therefore important to uphold their rights, and could be accomplished by including appropriate questions in household questionnaires. The ILO is currently developing a measure of **discrimination by race/ethnicity/of indigenous people/of (recent) migrant workers/rural workers** (EQUA-6) and a measure of **dispersion for sectoral/occupational distribution of (recent) migrant workers** (EQUA-7).

In conclusion, inequalities in the labour market are often prominent among certain population groups – especially relating to gender, age, ethnicity and disability – and may lead to their exclusion from productive and quality employment. It is thus important to either disaggregate standard employment indicators by these individual characteristics or even develop alternative measures.

3.4. Labour Market Policies and Institutions

Indicators that reflect policy stances and the regulatory environment can be used to complement the outcome indicators mentioned above. In this sub-section, we will consider three main aspects: active labour market policies, passive labour market policies, and employment legislation and institutions.

Active labour market policies are aimed at supporting the unemployed (and underemployed) in making transitions to new jobs. They can operate at three levels: labour supply, labour demand, and labour market matching. The first set of policies is intended to increase the employability (and productivity) of workers by improving their skill levels – and possibly building up work experience. These may entail training and re-training schemes as well as apprenticeships. The second set of policies aims to support employment generation, especially through direct job creation (e.g., public works programmes), incentives for private sector employers (e.g., wage subsidies and tax incentives), and promotion of self-employment (e.g., assistance for start-ups). Finally, the third set of policies aims to connect employment opportunities and jobseekers, mainly by providing public employment services – through job centres or labour exchanges – which provide job search assistance. Active labour market policies can be either universally applied or targeted to specific vulnerable groups (especially those struggling to gain access to productive employment opportunities). A potentially useful policy indicator could measure the share of public resources devoted to labour market policies – e.g., public expenditure on active labour market programmes as a percentage of total government expenditure.

Passive labour market policies predominantly provide temporary income security. They may include unemployment insurance, severance pay (i.e., redundancy compensation), and early retirement (for those without work).

Finally, employment laws regulate several aspects of the contractual relationship between employees and employers – mainly by defining legal rights and obligations. They usually relate to the protection of jobs – with laws on individual and collective dismissals (e.g., notice periods, requirements, and protection against wrongful dismissal) – and employment standards (e.g., types of contract, minimum wage, maximum hours, health and safety, child labour, discrimination, etc.). Labour market institutions play a crucial role in monitoring and regulating labour relations (e.g., collective bargaining arrangements). In this regard, a constructive tripartite social dialogue – between employees (or their trade unions), employers (or employers' organisations) and governments – is crucial to reinvigorate the ailing social contract. It could be argued that many

countries have experienced slow real wage growth in the past few decades – despite rising labour productivity – partly because of the weakening of labour market institutions. Well-functioning labour market institutions are essential to ensure that economic gains are fairly distributed between labour (wages) and capital (profits). However, the effectiveness of labour market policies is intrinsically dependent on the level of formality, since employment legislation usually only affects labour relations that are covered by formal arrangements.

Some indicators in the area of social dialogue and workers' representation include the **trade union density rate** (DIAL-1) and the **collective bargaining coverage rate** (DIAL-3). The first indicator provides information on the proportion of workers that are members of an independent workers' organisation (i.e., unionisation) and the potential influence of these trade unions. The second indicator provides information on the reach of collective bargaining agreements by calculating the proportion of workers whose pay and/or conditions of employment are (directly or indirectly) determined by one or more collective agreement(s).

The statutory minimum wage (L4) is set through national employment legislation in order to protect low-paid workers. This wage floor is often disaggregated by occupation or sector. The **minimum wage as percentage of median wage** (EARN-5) provides an insight into the relative level of minimum wages. However, in the poorest countries this could be more meaningful if measured in relation to a poverty line, rather than the median wage.

The indicator on **public social security expenditure (percentage of GDP)** (SECU-2) might be useful to assess a government's policy stance, although social security includes expenditures other that those directly related to employment. Unemployment insurance (L3) is an important component of social security, which provides temporary income support for those that have lost their jobs. An indicator on the **share of unemployed receiving regular periodic social security unemployment benefits** (SECU-9) is expected to be developed in the future. Pensions (L16) are another key component of social security, with growing importance in countries that are undergoing fast demographic transitions – i.e., population ageing. Two main indicators could be used: the **share of population above the statutory retirement age benefiting from an old-age pension** (SECU-1), and the **share of economically active population contributing to a pension scheme** (SECU-4). Another indicator will be devised by the ILO at a later stage: **ratio of average old-age pension received to minimum wage** (SECU-10).

4. Indicators for the Post-2015

This section offers concrete proposals to improve the monitoring of employment outcomes in a post-2015 framework. This includes re-endorsing certain aspects of the current MDG framework, suggesting modifications to the current indicators, and proposing new indicators. We also take into consideration the fact that there is strong heterogeneity across countries with regard to the nature and magnitude of the employment challenge. To the extent possible, we aim to generate new statistics and test the proposed indicators with existing data. Before we start, it is important to recall that the four employment indicators introduced in 2008 were designed to (ILO, 2009):

- Provide relevant and robust measures of progress towards the new target of the Millennium Development Goals (i.e., Target 1.B);
- Be clear and straightforward to interpret and provide a basis for international comparison;
- Be relevant and link to national-level country monitoring systems;
- Be based on ILO international standards, recommendations and best practice in labour statistics, information and analysis; and
- Be constructed from well-established data sources which enable consistent measurement over time.

This section will bear in mind these objectives.

4.1. Data sources

In terms of collecting information on employment issues, the main sources of primary data include labour force surveys (LFS), multi-topic household surveys with an employment module, population censuses, establishment census and surveys, and administrative records. Since employment data is seldom collected on a regular basis in most developing countries (e.g., yearly), information from these different sources is often combined. However, the use of different concepts and (geographical and population) coverage may significantly undermine their comparability.

Labour force surveys are conducted at the household level and are probably the best source of employment data. These are usually nationally-representative and collect detailed employment information. LFS can therefore be particularly useful in monitoring changing conditions in the labour market (including self-employment), and also have the advantage of being relatively short and simple – thus easily administered to large samples. Other types of household surveys – such as income and consumption surveys, demographic and health surveys (DHS), Living Standards Measurement Studies (LSMS) and Multiple Indicator Cluster Surveys (MICS) – often include an employment module, and can be particularly useful to combine information across different dimensions, such as employment and household income. However, these are more complex instruments that, despite providing detailed information on individual and household characteristics, may not cover all relevant aspects of employment.

Population censuses cover the entire population, but are limited in terms of the depth of relevant information collected and are only carried out every 10 years. Establishment surveys, on the other hand, are conducted at the firm level and tend to provide more reliable data on earnings, skills, occupation and industry (ILO, 2009). However, their coverage is usually limited to formal enterprises in urban areas and they do not provide data on self-employment. Finally, administrative

records – such as social insurance records – are also likely to only cover large private enterprises and the public sector.

In addition to these challenges regarding coverage and scope, different questionnaire designs can also affect comparability across surveys. For example, Bardasi et al. (2010) examine the role of proxy respondents (responses answered by another household member) and screening questions and find that depending on the survey design, labour force participation rates vary as much as 10 percentage points between surveys. Shorter questionnaires generate lower participation rates for women and lower wage employment estimates for both men and women. Similarly, proxy responses lead to lower female working hours and lower male employment in agriculture. This suggests that it is important to standardise data collection methods, especially given the range of instruments currently used to provide data on employment issues.

Meanwhile, it is essential to compile and harmonise data from different sources in order to provide regular and reliable internationally comparable statistics. This is vital to meaningfully track progress in a post-2015 development framework. For information on secondary sources of data, see Annex 3.

Box 1: Required Types of Survey Questions

Types of survey questions required to obtain vital information on employment characteristics:

- Branch of economic activity (industry);
- Occupation and status in employment;
- Job permanency (permanent, temporary, seasonal, occasional, etc.);
- Earnings and hours of work;
- Social security and pension coverage;
- Rights at work.

4.2. Applications with macro data

Growth and Employment. While high and sustained **economic growth** is a necessary ingredient to generate more and better employment opportunities, it is certainly not a sufficient condition for success. For instance, many countries in sub-Saharan Africa have registered remarkable economic growth rates in the last decade, but employment outcomes have not improved at a commensurate rate. Therefore, the **type of growth** matters for employment creation (e.g., employment intensity of growth), the quality of jobs created, and who can access these improved opportunities. Ideally, economic growth should take place in sectors that are relatively employment-intensive and should be accompanied by increases in labour productivity in order to contribute to the overall goal of poverty eradication (Islam, 2004; Kapsos, 2005). It should also be sensitive to regional issues (e.g., where the poor live). The proposals presented below predominantly focus on the growth-employment nexus, and provide an initial attempt to devise indicators that flesh out the linkages between different types of economic growth and decent employment outcomes.

4.2.1. Adjusting GDP

Gross Domestic Product (GDP) is the most widely reported indicator of economic progress and wellbeing. Despite its many limitations, it has withstood the test of time and continues to be perceived as the best available proxy for how a nation is performing. Nonetheless, there have been numerous attempts to adjust, complement or even replace GDP as a measure of wellbeing or economic welfare (Bleys, 2012). A major effort was undertaken by the Commission on the Measurement of Economic Performance and Social Progress, which produced a document that

became known as the Stiglitz-Sen-Fitoussi report. Bleys (2012) and Bandura (2008) provide a useful review of alternative measures of progress, aimed to better capture a wide-range of areas – from (individual) wellbeing and (national) economic welfare to (environmental) sustainability.

However, we have a particular interest in devising indicators that provide a better measure of economic and social progress by incorporating an employment dimension. In particularly, we intend to apply a 'discount factor' to macroeconomic measures of economic performance (e.g., GDP growth) when these do not deliver commensurate employment gains. Below we present a few tentative options.

- Depreciation of the human capital stock

The Adjusted Net National Income (aNNI) is an increasingly popular indicator, which is now reported by the World Bank's World Development Indicators.[19] The aNNI departs from the GNI by taking into account the consumption of fixed capital (i.e., depreciation) as well as the depletion of natural resources (the adjustment factor). In the same spirit, we could argue that poor employment outcomes undermine and deplete the stock of human capital. In the case of labour, it is not necessarily the overuse of resources that damages the prospects for future growth, but its underutilisation. Let us start from the basic national accounts identity (final expenditure approach):

$$Y = C + I + G + NX$$

where Y is total GDP, C household consumption, I gross private investment, C government consumption and gross investment, and NX net exports (i.e., exports minus imports). By adding net foreign factor income ($NFFI$) and subtracting the depreciation of fixed capital we obtain Net National Income (NNI) – see Hamilton and Ley (2010). Finally, by subtracting the depreciation of natural capital (i.e., natural resource depletion), we obtain $aNNI$. In order to simplify the exposition, we can call d the depreciation of both physical and natural capital.

$$aNNI = C + I + G + NX + NFFI - d$$

What one could do, at this point, is to expand this measure of capital depreciation in order to incorporate human (and social) capital – which would lead to a *fully-adjusted NNI* ($ANNI$). The rationale is that the lack of productive employment and decent work undermines a person's ability to become a productive member of society – not only in the short-term, but also in the longer-term. Unemployment, underemployment, precarious work, low pay and the lack of social protection have long-lasting negative implications for both the individual and society. They affect economic and psychological wellbeing, and erode human capital (skills) as well as social capital (social cohesion). Hence, they can undermine labour productivity and even cause people to leave the labour force (e.g., discouraged workers).

Since physical capital (k), labour (l), and natural resources (n) are key factors involved in the production process, a meaningful adjustment of NNI must also include the potential depreciation of the labour stock – d_l – which is intrinsically linked to employment characteristics.

$$ANNI = C + I + G + NX + NFFI - d_k - d_n - d_l$$

[19] The World Bank (2011) provides information on the calculation of Adjusted Net Savings, which is closely related to aNNI.

In terms of its computation, one could start by devising a measure of human capital in which the labour force is adjusted for their skill level. Following Gosh and Kraay (2000) we have,

$$K_l = L * e^{rs}$$

where K_l is the stock of human capital, L is the labour force (i.e., number of economically active people), e the exponential function, r the returns to education (e.g., 10 per cent), and s the average years of schooling.[20] Once we obtain a proxy for the human capital stock we can then focus on calculating the depreciation value using the perpetual inventory method,

$$K_{l,t} = (1 - \delta) * K_{l,t-1} + I_{l,t} \quad \text{or} \quad (K_{l,t} - K_{l,t-1}) = I_{l,t} - \delta * K_{l,t-1}$$

where K_l is the stock of human capital at time t, I_l is the accumulation of human capital stock (either through increases in the labour force and/or skill levels), and δ the annual rate of depreciation. The depreciation rate can then be related to a measure of labour underutilisation: 0 under full-employment and positive values proportionally related to the lack of productive employment. The last term of the equation above would provide the basis for calculating d_l in the *ANNI* equation.

- Underutilisation of labour

An estimate of the lack of productive employment could also be incorporated in the concept of *potential output*. Potential output measures the value of output that an economy would be able to produce if all factors of production were fully employed.[21] If actual GDP is below the production potential, then it suggests that resources are being underutilised. Analysing the potential output gap would provide valuable information for policy-makers, both in terms of long-term challenges, as well as the need for counter-cyclical policies for smoothing short-term fluctuations (i.e., business cycles).

As previously mentioned, the ILO (2012a) defines the deficit of productive employment as the sum of working poverty and unemployment.[22] Since for many developing countries underemployment constitutes a significantly larger challenge than unemployment, a focus on the lack of productive employment is warranted. Moreover, while unemployment can be considered an extreme case of labour underutilisation – since a person is not engaging in any type of economic activity – underemployment also hinders potential output. We can then try to incorporate these insights into a measure of capacity (under)utilisation to estimate potential output and the output gap.

One could start with a generalised (aggregate) production function, such as the variable elasticity of substitution (VES) or the constant elasticity of substitution (CES). The Cobb-Douglas and the Leontief production functions are special cases of these more generalised specifications – where the factors of production are imperfect substitutes and perfect complements, respectively. In practice, measures of potential output traditionally rely on the Cobb-Douglas production function,[23] which we could specify it as,

[20] Alternative, the construction of the human capital stock could follow Nehru et al. (1993).
[21] However, sometimes this concept is interpreted as the level of output that is sustainable in the long-run. Under this definition, actual output can sometimes be above potential output (reflecting an overuse of resources).
[22] Kakwani and Son (2006) proposed a new measure of unemployment that included both the unemployed and those earning incomes below the subsistence level.
[23] See World Bank (2010: 69): 'Potential output is the level of output attained when the entirety of the capital stock and effective labor supply is employed'.

$$Y = A * (k * K)^{\alpha} * (l * L)^{1-\alpha}$$

where *k* and *l* represent the level of utilisation of capital and labour, respectively. These parameters vary between 0 (idleness) and 1 (full capacity utilisation). We could obtain key parameter estimates from empirical studies and then calculate potential output as,

$$Y^{p} = A * (K)^{0.3} * (L)^{0.7}$$

The rationale is that potential (i.e., maximum) output would be equivalent to actual output plus a measure of forgone output due to the underemployment of factors (especially labour). The output gap can then be calculated as a ratio of potential output – i.e. $(Y^{p} - Y)/Y^{p}$.

Alternatively, we could empirically test a variant of the Okun's law – which relates output growth and the unemployment rate – by incorporating a measure of underemployment. We could replace the employment-unemployment dichotomy by a more nuanced concept: the lack of productive employment, which includes unemployment and a proxy for underemployment. For instance, in the case of time-related underemployment, a person working part-time but keen to work full-time would count as half-unemployed.

- Income inequality

Another alternative is to adjust the level of household consumption – in the spirit of the Index of Sustainable Economic Welfare (ISEW). The innovation here is that we incorporate information about the distribution of income. For instance, we can add an adjustment term – 1 minus the Gini coefficient – to incorporate the effect of income inequality on measures of aggregate economic wellbeing. In the extreme case of full inequality (i.e., one individual accounts for all the consumption), the adjustment term becomes 0 and erases *C* from the GDP measure. In the extreme case of full equality (the level of consumption is the same across all citizens), the term becomes 1 and allows *C* to feature in its entirety.

$$Y_{adj} = C * (1 - Gini) + I + G + NX$$

Since the majority of income accruing to poor households is derived from labour, there is probably a good relationship between (overall) income inequality and inequality in labour earnings. This adjustment can be particularly significant in poor countries, since the share of consumption in total GDP is traditionally quite large.

❖ **A possible indicator for the post-2015 would be an adjusted GDP indicator, which would provide more reliable information on the link between economic growth and employment conditions (i.e., inclusive or pro-employment growth).**

4.2.2. Decomposing GDP per capita growth

In order to further explore the link between GDP growth and employment, we can decompose GDP per capita growth into growth associated with changes in the size of the working-age population, the employment rate, and output per worker. The starting point is the following equation,

$$\frac{Y}{N} = \frac{A}{N} * \frac{E}{A} * \frac{Y}{E}$$

where *Y* is total GDP, *N* the total population, *A* the working-age population, and *E* is total employment. This approach assesses the contribution of the employment rate (i.e., employment-to-population ratio) and output per worker (i.e., labour productivity), thus relating to MDG indicators 1.4 and 1.5. In addition, it has the advantage of taking into account changes in the population structure, and can also provide a useful complement to employment elasticities.

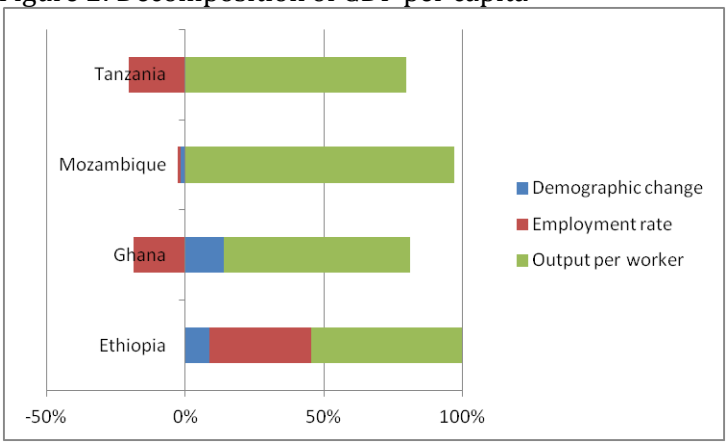
In cases where growth is partly accounted for by changes in the population structure, it suggests that the country is benefiting from a demographic dividend, as its share of working-age population in total population is increasing – thus, less dependents per working-age adult. In terms of its interpretation, a value of 22.5 per cent – see Ghana in Table 3 – would mean that, *ceteris paribus*, the process of demographic transition alone would have generated per capita growth equivalent to nearly a quarter of the actual observed growth. GDP per capita can also vary due to changes in the employment rate and output per worker (productivity). A negative contribution of the employment rate suggests that, had the employment rate not declined, GDP per capita growth would have been higher. If this is due to young people staying in education for longer, it should be seen as a short-run cost that enables an investment for the future. Moreover, the importance of productivity growth has been highlighted before, although it is important to further investigate the sources and distribution of these benefits (which is done below). Finally, it should be noted that this exercise does not provide much information on the quality of employment.

Table 3: Decomposition of GDP per capita

Country	Period	GDP per capita growth	% Contribution of		
			Demographic Change	Employment Rate	Output per worker
		Δ(Y/N)	Δ(A/N)	Δ(E/A)	Δ(Y/E)
Ethiopia	1999-2005	23.8	8.7	36.7	54.6
Ghana	1998-2005	17.6	22.5	-30.0	107.5
Mozambique	2003-2008	28.6	-1.6	-1.4	103.0
Tanzania	2000-2006	27.7	-0.1	-34.0	134.1

Source: Martins (2012)

Figure 2: Decomposition of GDP per capita



Source: Martins (2012)

This methodology can also be computed with sectoral data (rather than aggregates). This requires disaggregating both GDP and employment data, which are usually available for the three broad sectors: agriculture, industry and services. Disaggregating it further may require access to micro data (i.e., household surveys). The UN reports GDP data at a fairly disaggregated level, but detailed

employment data is more difficult to access. LABORSTA does provide it for some countries, but it may not be internationally comparable – due to different national definitions, such as working age thresholds. We may then need secondary sources that provide standardised information.

At a reasonable level of disaggregation, this methodology would provide extremely useful information on the sectoral contributions to changes in GDP per capita, the employment rate (level and growth), and productivity growth (including insights on structural transformation). The top level of the International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 3 is reported below. However, these codes are often further aggregated into a more manageable number – usually between 6 and 10 categories.

Box 2: International Standard Industrial Classification

A. Agriculture, hunting and forestry	J. Financial intermediation
B. Fishing	K. Real estate, renting and business activities
C. Mining and quarrying	L. Public administration and defence; compulsory social security
D. Manufacturing	M. Education
E. Electricity, gas and water supply	N. Health and social work
F. Construction	O. Other community, social and personal service activities
G. Wholesale and retail trade	P. Private households with employed persons
H. Hotels and restaurants	Q. Extra-territorial organizations and bodies
I. Transport, storage and communications	

Source: http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2&Lg=1&Top=1

Table 4 and Figure 3 provide an example of such an exercise for South Korea. During the period 1970-1990, GDP per capita grew by nearly 250 per cent in real terms – i.e., more than three-fold. We can decompose this growth performance to assess the individual contributions of within-sector productivity growth, changes in employment, and inter-sectoral shifts. This analysis can support the identification of sectors that can be both employment-intensive and a source of significant productivity growth. The data suggests that demographic dynamics contributed to 20 per cent of the increase in GDP per capita growth, while changes in the employment rate accounted for 7 per cent. Within-sector productivity growth contributed the largest share (45 per cent), although 'structural change' also provided a sizeable contribution (28 per cent).

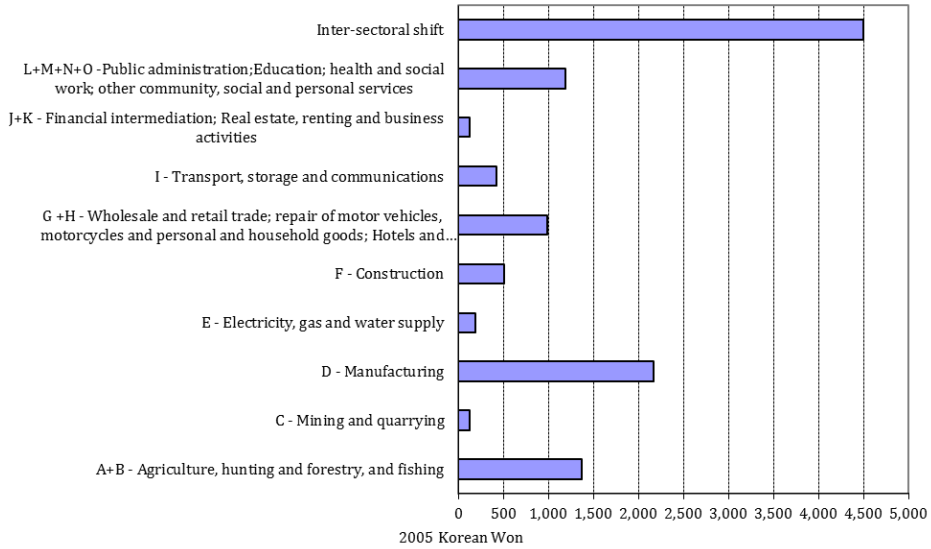
Table 4: Contributions to GDP Per Capita Growth in South Korea (1970-1990)

	Contribution of			**Total (%)**
	Within sector changes in output per worker (%)	**Changes in employment (%)**	**Inter-sectoral shifts (%)**	
Agriculture, hunting and forestry, and fishing	8.64	-24.48	16.46	0.62
Mining and quarrying	0.80	-0.57	-0.35	-0.12
Manufacturing	13.69	13.20	-3.84	23.05
Electricity, gas and water supply	1.20	0.14	0.22	1.56
Construction	3.22	4.19	3.68	11.09
Wholesale and retail trade; hotels and restaurants	6.24	6.63	-1.94	10.93
Transport, storage and communications	2.65	1.57	-0.36	3.85
Financial interm.; real estate, business activities	0.76	3.69	13.16	17.60
Public admin.; education; health and social work	7.50	2.33	1.29	11.12
Sub-Totals	***44.70***	***6.71***	***28.31***	***79.72***
Demographic component				**20.28**
Total				100.00
Change in GDP per capita (1970-1990)				247.40

Note: Calculated through JoGGs
Source: Employment data from OECD's STAN Database for Structural Analysis. GDP data from UNdata National Accounts Official Country Data database

Since structural change is often seen as an essential precondition for raising living standards and achieving long-term sustainable development, one could monitor the contribution of this component to GDP per capita growth. The data can also be presented in an alternative format. For example, if a country's GDP per capita grew by 6 per cent and the contribution of structural change was estimated to be 33 per cent, then we could say that structural change accounted for 2 percentage points of GDP per capita growth. This would avoid overplaying cases where a high relative contribution of structural change (e.g. 66 per cent) corresponds to low GDP per capita growth (e.g. 2 per cent), thus making data more comparable across countries.

Figure 3: Decomposition of Growth in Output per Worker for South Korea (1970-1990)



Note: Calculated through JoGGs
Source: Employment data from OECD's STAN Database for Structural Analysis. GDP data from UNdata National Accounts Official Country Data database

❖ **A possible indicator for the post-2015 would be the 'contribution of structural transformation to GDP per capita growth'.**

4.2.3. GDP and Labour Earnings

In principle, GDP can be calculated through an income approach – i.e., the sum of the incomes earned through the production of goods and services. Total income is usually divided into three main components: compensation of employees, net taxes on production and imports (i.e., government income), and property income (which includes interest, profits and rents). Compensation to employees includes wages and salaries (paid in cash or in-kind), as well as employers' social contributions that benefit employees (such as social security and pensions). However, it can be quite difficult to compute GDP through this approach. This is partly because the income approach relies on surveys or administrative records that often only cover (large) corporations. This makes it difficult to collect reliable information on incomes (e.g., compensation to employees and profits). Data on the **labour share of GDP** (CONT-8) – also known as the 'wage share' – has been provided by the ILO's Global Wage Reports, but its developing country coverage is fairly poor. The WDI does report a variable entitled 'compensation to employers', but it only covers the government sector. Moreover, this indicator fails to account for labour-related self-employment income, which is traditionally included as capital income. It would thus be useful to consider

incorporating measures of self-employment income, which can be considerable in the poorest countries (Guerriero, 2012).

Despite these difficulties, it would still be particularly useful to identify the amount of income accruing to labour (as a factor of production) and how the share of labour income in total income is changing. For instance, it has been reported that for the past 30 years this share has been declining in many (developed) countries, partly as a result of globalisation and a weakening of the social contract.

- **A possible indicator for the post-2015 would be the 'share of labour earnings in gross national income (GNI)'.**

4.3. Applications with survey data

Employment and Poverty. Employment earnings are the most important source of income for poor households. These can take the form of wages/salaries or self-employment proceeds. It is therefore important to better understand the relationship between specific labour and individual characteristics and labour earnings (or household income). We now use raw data from household surveys to examine whether interesting employment indicators can be derived from these primary data sources. Possible variables to cross-tabulate include: labour market status, status in employment, sector of employment, wage, working hours, household income, level of education, and job security (e.g., contract, health insurance, social security, and unionisation).

4.3.1. Employment Status, Sector of Employment and Informality

Table 5 provides a simple cross-tabulation of standard categories of employment status and economic sectors for Ghana. This type of exercise can provide a wealth of information about the employment characteristics of the labour force.[24] It can also track employment dynamics with the analysis of additional (comparable) surveys. In terms of its interpretation, we can read the values as the percentage of workers in industry X that have employment status Y. For example, 2.7 per cent of workers in agriculture and fishing received a wage or salary in 2005, compared to 1.4 per cent of workers in 1991. Alternatively, we could present the data as the distribution of workers in a specific employment status by economic sector – e.g. the percentage of wage and salaried workers in the agriculture and fishing sector.

[24] The employment status is used to define informal employment, which represents the sum of self-employed workers with no employees (own-account workers) and contributing family workers.

Table 5: Employment Status per Economic Sector (% Total Employment) in Ghana

Industry classification	Wage & salaried worker			Self-employed with employees			Self-employed w/o employees			Family worker			Other		
	1991	**1998**	**2005**	**1991**	**1998**	**2005**	**1991**	**1998**	**2005**	**1991**	**1998**	**2005**	**1991**	**1998**	**2005**
Agriculture and fishing	1.4	2.6	2.7	9.3	12.4	10.4	52.0	49.5	40.9	34.5	33.5	46.0	2.9	2.0	0.0
Mining	66.7	92.1	75.5	16.7	7.9	14.0	11.9	0.0	3.6	4.8	0.0	6.2	0.0	0.0	0.7
Manufacturing	19.2	14.2	18.5	62.6	47.0	61.9	8.5	26.8	2.7	4.7	8.9	9.5	5.1	3.2	7.4
Electricity and utilities	91.7	66.7	69.1	8.3	33.3	13.2	0.0	0.0	8.1	0.0	0.0	2.4	0.0	0.0	7.2
Construction	66.7	46.8	53.0	28.1	38.3	32.4	1.0	5.3	4.1	0.0	1.1	1.7	4.2	8.5	8.9
Commerce	5.7	7.1	13.6	80.8	75.8	71.4	7.4	7.9	5.0	4.1	7.9	7.9	2.0	1.4	1.9
Transp., storage & comm.	77.3	69.2	72.9	14.8	15.8	12.4	4.5	9.8	3.2	0.0	3.0	2.2	3.4	2.3	9.4
Financial & real estate	95.2	91.7	76.0	4.8	8.3	18.1	0.0	0.0	2.4	0.0	0.0	1.9	0.0	0.0	1.6
Services: Public admin.	97.5	97.8	98.7	0.6	0.0	0.8	1.2	0.0	0.0	0.0	0.0	0.4	0.6	2.2	0.0
Other services	74.2	59.5	65.6	18.9	33.3	20.2	3.6	1.3	2.5	0.7	1.0	1.7	2.6	4.8	8.6
TOTAL	**9.2**	**14.3**	**15.1**	**20.0**	**30.4**	**26.1**	**41.0**	**32.0**	**26.2**	**26.9**	**20.9**	**30.4**	**2.8**	**2.4**	**2.0**
Total excl. Agric. & fish.	34.2	28.4	34.3	53.8	52.1	50.5	6.2	10.9	3.6	3.0	5.9	6.2	2.8	2.7	5.1

Notes: Calculated through ADePT software (Labour Module). The 2005 survey includes 'domestic employees', although this was a fairly negligible category. Data refers to primary job only.
Source: Ghana Living Standards Surveys. GLSS III (1991-92), GLSS IV (1998-99) and GLSS V (2005-06) were obtained from World Bank SHIP Harmonized Dataset.

The presentation above is the basis for the share of wage employment in non-agricultural employment indicator (EMPL-10), which measures the proportion of employees in the non-agricultural sector.[25] The basic rationale for this indicator is that employees are likely to be less exposed to economic risks than self-employed workers in the same sector (ILO, 2012). This statistic can provide a useful proxy for informality outside the agricultural sector, and thus the lack of decent work opportunities. A post-2015 target could aim to increase the share of (regular) wage employment in these sectors – i.e., industry and services.

The drawback of this measure is that it assumes that all wage employment is necessarily a formal job. Although data is usually limited to test this assumption, some household surveys – notably labour force surveys – include questions that assess the level of formality and job security. Surveys may include questions on the existence of a contract (written or verbal), the type of contract (regular/permanent vs. casual/temporary), the provision of health insurance, and social security coverage. For instance, the Ghana Living Standards Surveys (GLSS) contain information on the existence of a work contract (Table 6). However, they do not provide sufficient information to calculate the precarious employment rate (STAB-1) because they do not inquiry about the duration of the contract – a factor that can be a source of large job insecurity.[26] It is also worth noting that, given the low share of wage employment in Ghana (15 per cent in 2005), these statistics relate to a fairly small number of workers (i.e., paid employees).

[25] The MDG framework includes a related indicator – 'share of women in wage employment in the non-agricultural sector' (EQUA-4) – although it is not a disaggregation of this indicator (the numerator is the same, but not the denominator).
[26] As previously stated, this is the share of employees whose contract of employment is of short duration or can be terminated on short notice - which often includes casual workers, short-term workers and seasonal workers.

Table 6: Share of Employees with a Work Contract in Ghana

Industry classification	Employees with work contact (%) 1991	1998	2005
Agriculture and fishing	53.1	17.5	19.0
Mining	78.6	85.7	48.6
Manufacturing	54.1	36.1	36.2
Electricity and utilities	81.8	0.0	77.7
Construction	38.1	17.6	21.1
Commerce	28.8	20.0	20.8
Transp., storage & comm.	41.3	43.6	23.0
Financial & real estate	80.0	63.6	63.6
Services: Public admin.	80.5	80.0	89.4
Other services	71.0	75.4	72.2
TOTAL	**61.3**	**52.2**	**46.6**

Notes: Calculated through ADePT software (Labour Module). Data refers to primary job only.
Source: Ghana Living Standards Surveys. GLSS III (1991-92), GLSS IV (1998-99) and GLSS V (2005-06) were obtained from World Bank SHIP Harmonized Dataset.

It could be possible to standardise some survey questions on specific components of job quality and protection for waged and salaried employees and to complement the informality indicators with this information, making it more relevant to different country contexts.[27]

In the case of the agricultural sector, it would be useful to investigate the subsistence worker rate (STAB-3) – i.e., the proportion of employed persons engaged in the production of goods that are the predominant consumption of the household – although it remains difficult to estimate precisely the share of family output that is self-consumed. 'Subsistence work' is probably the less stable and secure form of employment, since it is exposed to considerable risks (e.g., high vulnerability to idiosyncratic shocks).

Finally, a post-2015 framework could include a target aiming to eliminate types of unacceptable work, such as forced and child labour.[28] In order to capture this information, it would be necessary to apply survey labour modules to all members of the household and to adapt sampling procedures to ensure sufficient coverage (given the clandestine nature of forced labour). To determine child labour rates (ABOL-1) it is essential that surveys contain information on the number of hours worked and the information could be complemented with school attendance indicators. To uncover forced labour rates (ABOL-4), questions on involuntariness or deception in the employment recruitment, penalties or coercion at work and trafficking have been developed by the ILO.[29]

- **Possible target for the post-2015 could be focused on reducing informality outside agriculture and subsistence work in the agriculture sector. Possible indicators could include the 'share of (regular) wage employment in non-agricultural employment', the 'precarious employment rate', and the 'subsistence worker rate'.**

[27] See Lugo (2007) for proposals to capture occupational hazards and time-related under-/over-employment.
[28] The ILO defines child labour as all children between the ages of 5 and 14 who are in economic activity, excluding those between 12 and14 years old who spend less than 14 hours a week on their jobs, unless their activities or occupations are hazardous by nature or circumstances. In addition, it includes children between 15 and 17 years old in hazardous work.
[29] www.ilo.org/public/libdoc/ilo/2011/111B09_351_engl.pdf

4.3.2. Employment Earnings

A closer look at employment earnings is essential to evaluate the relationship between employment and income poverty. Wage levels and its distribution can be obtained from surveys and with this information we can calculate indices for the aggregate economy, specific sectors and population groups. Wage inequality indicators such as the wage Gini, ratios between wage or population categories,[30] and low pay rate (EARN-2) can be easily computed. Reporting units may differ between countries and even individuals within a country, thus requiring a standardisation of wage data. Table 7 shows the monthly wage quintile distribution by sector in Ghana (alternatively, we could construct wage brackets that somehow relate to the poverty line). This provides information of the sectoral composition of each wage quintile. For instance, while in 1991 about 27 per cent of wages in the bottom quintile (low wages) were in agriculture and fishing, in 2005 this share had reduced to 16.3 per cent.

Table 7: Monthly Wage Quintile Distribution by Sector in Ghana

		Wage quintiles					
		Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Total**
Agriculture and fishing	**1991**	27.0	20.9	11.5	8.1	5.8	14.8
	1998	31.3	16.0	7.8	4.5	5.1	13.2
	2005	16.3	12.6	11.2	6.0	3.1	10.0
Mining	**1991**	1.5	1.1	1.0	0.8	6.2	2.1
	1998	0.0	0.0	0.6	2.3	17.4	4.3
	2005	2.9	1.4	2.9	2.5	5.0	3.0
Manufacturing	**1991**	13.1	12.5	7.7	8.5	8.9	10.2
	1998	17.5	11.2	12.0	6.0	11.2	11.8
	2005	13.1	12.4	14.6	9.9	10.9	12.2
Electricity and utilities	**1991**	0.0	1.5	1.4	0.8	0.4	0.8
	1998	0.0	1.2	1.2	1.5	0.0	0.7
	2005	0.6	0.9	0.4	0.6	1.9	0.9
Construction	**1991**	3.6	7.2	5.9	5.3	3.1	5.0
	1998	7.2	6.5	9.0	3.8	5.1	6.4
	2005	5.2	4.7	7.0	11.1	2.7	6.2
Commerce	**1991**	15.7	6.5	3.5	5.3	5.8	7.4
	1998	15.7	13.0	9.0	3.0	7.3	9.8
	2005	20.8	21.5	15.5	9.5	6.9	14.9
Transportation, storage & communications	**1991**	15.3	8.7	10.8	9.3	7.7	10.5
	1998	8.4	6.5	13.8	12.8	16.9	11.7
	2005	15.2	14.8	12.9	12.7	10.7	13.3
Financial, insurance & real estate	**1991**	0.7	1.1	3.5	4.5	5.4	3.0
	1998	0.6	5.9	2.4	3.0	14.0	5.4
	2005	1.5	5.7	4.0	5.6	8.6	5.0
Services: Public administration	**1991**	5.1	8.0	14.0	15.9	17.4	12.0
	1998	0.6	5.3	6.6	11.3	5.1	5.5
	2005	1.2	4.8	8.6	11.2	12.7	7.6
Other services	**1991**	17.9	32.3	40.6	41.5	39.4	34.2
	1998	18.7	34.3	37.7	51.9	18.0	31.1
	2005	23.2	21.3	23.0	30.9	37.3	27.1

Notes: Calculated through ADePT software (Labour Module). Data refers to primary job only.
Source: Ghana Living Standards Surveys. GLSS III (1991-92), GLSS IV (1998-99) and GLSS V (2005-06) were obtained from World Bank SHIP Harmonized Dataset.

The main limitation of this exercise is the limited coverage of wage data. Not only it excludes self-employed workers – a large category in many developing countries – but sometimes information is

[30] These may include: wage/earnings inequality (percentile ratio P90/P10) (CONT-11), lowest over median wage quintile, female to male wage, etc.

only collected for certain geographical areas (e.g., urban surveys). Moreover, when comparing wage data over time, some caution is required. A change in average wage levels can be the result of a change in the composition of the wage-earner segment of the labour force, rather than changes in earnings of those who remain employed throughout (ILO, 2013). If the distribution of those that remain employed is not random, this can bias wage estimates.

- **A possible target for the post-2015 would be to reduce wage inequality. Indicators could include the 'wage Gini', 'low pay rate', and the 'ratio between the 50th and 10th percentile of wages (D5/D1)'**

Considering the limitations of wage data and the relatively small size of wage employment in developing countries, information about earnings of the self-employed is essential. However, there are relatively few examples of collecting reliable and comparable data on incomes for the self-employed in the non-agricultural sector. In this case, a simple set of direct questions regarding profits/incomes from self-employment would be useful (Lugo, 2007).

Alternatively, we can cross-tabulate employment characteristics (such as employment status) with household per capita income. In fact, this is how the working poverty rate (EARN-1) is calculated. When using aggregate household income/consumption data, the 'working poor' include all employed persons that live in poor households. Given the lack of information on self-employment and household businesses, in addition to incentives to under-report incomes (McKay, 2000; Deaton, 1997), expenditure-based measures are more commonly used.

Table 8 provides a cross-tabulation of employment status (including unemployment) and expenditure/income categories for India. This type of disaggregation provides interesting insights as to whether different levels of household income are associated with different types of jobs. The data suggest that the vast majority of workers that live in poor households (i.e., households with per capita incomes below $1.25) tend to be either own-account workers or casual/temporary wage workers (46.7 and 42.1 per cent, respectively). As we gradually move to wealthier households, workers are more likely to be in regular/permanent wage employment or even be employers themselves.

Table 8: Employment Status, Unemployment and Income (India, 2005)

Per capita exp./income (2005$ PPP)	Self-Employed		Wage Employment		Unemployed	Total
	Own-Account Workers	Employers	Casual / Temporary	Regular / Permanent		
<$1.25	**46.7**	**0.2**	**42.1**	**8.5**	**2.5**	**100.0**
	32.7	*6.0*	*51.3*	*20.1*	*28.4*	*35.8*
$1.25-$2	**55.3**	**0.8**	**28.7**	**12.2**	**3.0**	**100.0**
	41.5	*21.8*	*37.4*	*31.2*	*37.0*	*38.4*
$2-$4	**53.8**	**2.8**	**14.5**	**24.8**	**4.0**	**100.0**
	22.7	*45.1*	*10.7*	*35.5*	*27.8*	*21.5*
$4-$10	**37.4**	**8.1**	**4.2**	**45.4**	**5.0**	**100.0**
	2.9	*24.2*	*0.6*	*12.1*	*6.4*	*4.0*
>$10	**29.1**	**11.9**	**2.4**	**53.2**	**3.4**	**100.0**
	0.2	*2.9*	*0.0*	*1.2*	*0.4*	*0.3*
Total	**51.1**	**1.3**	**29.4**	**15.1**	**3.1**	**100.0**
	100.0	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*

Notes: Values in bold measure the employment composition per income group, while the values in italic measure the income composition per type of employment. Moreover, income groups are defined as 'poor' (<$1.25); 'near poor or vulnerable' ($1.25-$2); 'lower middle class' ($2-$4); 'middle middle class' ($4-$10); and 'upper middle class and rich' (>$10).
Source: Compiled from ADB (2010)

Moreover, we can assess the income composition of each employment category (values in italic). For instance, we observe that about three-quarters of own-account workers live in households with per capita incomes below $2 (32.7 and 41.5 per cent, respectively). On the other hand, two-thirds of workers in regular/permanent wage employment live in households with incomes between $1.25 and $4 (31.2 and 35.5 per cent, respectively). These two sets of values can also be contrasted with the (column and row) totals in order to evaluate whether these groups are under- or over-represented in each category. For example, the poor are over-represented in the casual/temporary wage employment category (51.3 versus 35.8 per cent) but under-represented in the regular/permanent wage employment category (20.1 versus 35.8 per cent). In fact, it does not matter how we read it (rows or columns), since the ratios are the same – e.g., for casual/temporary wage employment, 51.3/35.8 is identical to 42.1/29.4.

This type of analysis provides more detailed and reliable information on working poverty. If we have comparable data for other years, we will also be able to scrutinise the rich pattern of employment dynamics – such as which types of jobs are being created, and who is able to access these employment opportunities. Although this approximation to measuring working poverty makes important assumptions about dependency ratios and intra-household distribution of resources, it is usually more comprehensive than a wage-based measure that only covers a small share of the working population.

- **A possible target for the post-2015 would be to reduce working poverty. Indicators could include the 'share of economically active people living in poor households (<$2)'**.

4.3.3. Household and Individual Characteristics

Monitoring the ability of disadvantaged groups of society to gain access to (productive) employment opportunities requires a disaggregation of data by relevant household and individual characteristics. For instance, it is known that the youth, women, migrants, ethnic minorities and people with disabilities tend to face disproportionate barriers that undermine their participation in the labour market. The indicators presented above – on employment status, economic sector,

informality, wages and earnings – could therefore be disaggregated by age groups and gender in order to uncover potential disparities.[31] For example, Table 9 disaggregates the information supplied in Table 5 and reports for women only.

Table 9: Share of Women in Wage Employment by Economic Sector in Ghana

Industry classification	Share of Women in Wage Employment (%)		
	1991	1998	2005
Agriculture and fishing	13.4	8.5	24.0
Mining	7.1	0.0	26.7
Manufacturing	29.4	32.5	22.6
Electricity and utilities	27.3	0.0	11.0
Construction	6.3	22.7	4.4
Commerce	45.6	48.5	38.1
Transp., storage & comm.	6.6	4.3	9.0
Financial & real estate	22.5	18.2	19.2
Services: Public admin.	28.9	27.3	24.3
Other services	37.1	35.9	37.8
TOTAL	**27.0**	**25.5**	**26.3**
Total excl. Agric. & fish.	28.7	27.4	26.6

Notes: Calculated through ADePT software (Labour Module). The 2005 survey includes 'domestic employees', although this was a fairly negligible category. Data refers to primary job only.
Source: Ghana Living Standards Surveys. GLSS III (1991-92), GLSS IV (1998-99) and GLSS V (2005-06) were obtained from World Bank SHIP Harmonized Dataset.

However, this type of disaggregation only provides a simple snapshot of the labour market situation – since these values need to be contrasted with those for men. An alternative approach is to use **ratios of indicators** in order to assess whether a specific groups is disproportionately affected. For instance, instead of computing employment rates for women and men separately and then comparing the results, one could calculate a ratio of employment rates to provide a straightforward marker of parity. Naturally, this could be applied to any population groups (e.g., migrants vs. indigenous population). If the ratio of the employment rates equals 1, then we would have full parity – this would mean that the employment rates are the same, and are independent of the size of specific populations and/or level of participation in the labour market. This could also be applied to the shares of wage employment in the non-agricultural sector – to evaluate access to good jobs.

Table 10 provides an illustration of the usefulness of these ratios with a hypothetical example. Looking at the share of young people in total employment suggest that the youth is severely underrepresented in the labour force (25 per cent). However, it is also true that young people are underrepresented in the broader population – representing 40 per cent of the working-age population – which complicates comparisons. An alternative approach would be to compute the ratio of both employment rates, which has a clear interpretation: young people are half as likely to be employed when compared to adults (0.5). The ratio will point to parity in the labour market only if the employment rates for both youth and adults are the same. This can be particularly useful when comparisons involve relatively small population groups.

[31] For example, more than 12 per cent of the world's young population are unemployed, with over a-quarter of youth unemployed in North Africa and the Middle East. In developed countries, young people are often trapped in part-time and temporary employment, while in poorer countries they are mostly in unpaid family work (ILO, 2012b).

Table 10: Ratios of Employment Variables

	Youth (15-24)	Adult (25+)	Total (15+)	Youth (% Total)	Ratio (Y/A)
Working Age Population	400	600	1,000	40.0	0.7
Employed	120	360	480	**25.0**	0.3
Employment Rate (%)	30.0	60.0	48.0	62.5	**0.5**

Table 11 provides another example using median earnings by gender in Ghana. The ratio of male to female median wage provides a simple and straightforward measure of inequality in the labour market.

Table 11: Median Nominal Wage in Ghana

	1991	1998	2005
Total Population	20,000	120,000	690,000
Male	20,000	140,000	755,000
Female	19,600	84,000	500,000
Ratio (Male to Female)	**1.02**	**1.67**	**1.51**

Notes: Calculated through ADePT software (Labour Module). Data refers to primary job only.
Source: Ghana Living Standards Surveys. GLSS III (1991-92), GLSS IV (1998-99) and GLSS V (2005-06) were obtained from World Bank SHIP Harmonized Dataset.

- **A possible target for the post-2015 would be to lower disparities in employment opportunities. Indicators could include the ratio of employment/participation rates for disadvantaged groups, the ratio of the shares of wage employment in the non-agricultural sector for disadvantaged groups, and the average wage ratios of vulnerable groups.**

5. Conclusion

To our knowledge, there have been few practical proposals on how to better reflect employment challenges in a post-2015 framework (see Annex 5). This paper tries to fill this vacuum. It started by providing a critical assessment of the strengths and weaknesses of the existing MDG target and indicators on employment. It then investigated the scope for alternative employment-related indicators and presented a few (hopefully) innovative ideas. This section concludes by illustrating how employment targets and indicators could be incorporated in a post-2015 development framework, as well as putting forward some broader recommendations.

Employment in a Post-2015 Framework

This paper predominantly focused on how desirable employment outcomes could be better reflected in a post-2015 framework. Although it also covered a few possible policy indicators – especially relating to labour market policies and institutions – there are certainly more policy areas that could have be considered. For instance, Martins and Lucci (2013) have argued that potential goals, targets and indicators on global policies or 'enablers' – such as macroeconomic coordination, finance, and trade – should incorporate employment considerations (Table 12). This is because, in addition to domestic policies, these key areas of international cooperation have considerable potential to support (or undermine) the achievement of desirable employment outcomes.

Table 12: Employment in a Post-2015 Framework

Issue	Coordination, Standards & Regulations	Goals & Targets	Type of Indicators	Data Collection
Employment (Target 1B)	ILO	Global & National	Output & Outcome	ILO & World Bank
Macroeconomic Coordination	G20 & UN	Global	Input & Process	UN & IMF
Finance (Target 8A)	G20 & UN	Global	Input & Process	UNCTAD & IMF
Trade (Target 8A)	WTO & UNCTAD	Global	Input & Process	UNCTAD & WTO

Notes: Input (policy measure or agreement); process (implementation progress); output (short-term result); and outcome (key objective).
Source: Martins and Lucci (2013)

Table 13 summarises our key proposals. The first set of indicators is meant to scrutinise the quality of economic growth. The *Fully-Adjusted Net National Income (ANNI) growth* provides a useful measure of inclusive and sustainable growth by taking into consideration the underutilisation of labour and depletion of natural resources. The indicator extends the *aNNI* reported by the WDI by adding the (lacking) human capital dimension. The *contribution of structural transformation to growth in GDP per capita* provides a measure of the extent to which GDP per capita growth has been achieved by moving labour from low-productivity sectors (e.g., subsistence agriculture) to higher productivity sectors (e.g., manufacturing or modern services). Although within-sector productivity growth and changes in employment levels are also important, the pace of structural change is likely to provide stronger insights on employment dynamics in the poorest countries. For instance, this variable implicitly accounts for employment generation – which is not necessarily the case of

within-sector productivity growth – since there is both job destruction and job creation as workers move from one sector to another. Finally, the *share of labour earnings in total income* can provide vital insights on how income is distributed among factors of production. Although national income can accrue to labour (i.e., wages), land (i.e., rent) and capital (i.e., interest and profits), a focus on labour income is warranted given concerns that real wage growth is lagging behind other forms of income as well as productivity growth.

Table 13: Proposals on Key Employment Indicators for a Post-2015 Framework

	Strengths	Weaknesses
Improving the Inclusiveness of Growth		
• *Fully-Adjusted* Net National Income (ANNI) growth (%)	Adjusts GNI by taking into account the depreciation of capital, depletion of natural resources and underutilisation of labour.	Requires estimates on physical, natural and human capital stocks, as well as their depreciation rates.
• Contribution of *structural transformation* to growth in GDP per capita (percentage points)	Captures the need to move labour from low-productivity to higher-productivity sectors/activities.	Neglects contribution of within-sector productivity increases and changes in employment levels.
• Share of labour earnings in total income (% GNI)	Monitors the proportion of national income accruing to labour (versus capital income).	Currently difficult to estimate.
Promoting Productive Employment		
• Productive employment (% total employment) [a] [g]	Excludes both unemployment and underemployment.	Requires an internationally-agreed definition of underemployment.
• Share of wage employment in the non-agricultural sector (% total employment in the non-agricultural sector) [a] [g]	Proxy for 'good jobs' outside agriculture.	Overlooks precarious jobs within wage employment.
• Subsistence worker rate [a] [g]	Captures one of the most vulnerable forms of employment – subsistence farming.	Potentially difficult to define and estimate (multiple occupations in rural areas).
• Ratio between the 50th and 10th percentile of wages [a] [g]	Measures wage inequality.	Less relevant in countries with a low share of wage employment.
• Share of economically active people living in poor households (<$2 a day)	Proxy for income-related underemployment.	Affected by intra-household dependency ratio and non-labour incomes.
Ensuring Equal Access to Opportunities		
• Employment rate ratio for vulnerable groups [a] [g] [m] [e] [d]	Useful comparator for different population groups.	Ambiguous interpretation of high values and trends.
• Ratio of the shares of wage employment in the non-agricultural sector for vulnerable groups [a] [g] [m] [e] [d]	Measures access to better employment opportunities.	Limited information on the quantity or quality of jobs.
• Average wage ratios of vulnerable groups [a] [g] [m] [e] [d]	Measures pay discrimination across population groups.	Less relevant in countries with a low share of wage employment.

Note: [a] disaggregated by age, [g] disaggregated by sex, [m] disaggregated by migration status, [e] disaggregated by ethnicity (minorities), and [d] disaggregated by disability.

The second set of indicators focuses on productive employment, and most indicators can be disaggregated by age and sex. *Productive employment* subtracts both unemployment and underemployment from the labour force. This variable has an obvious appeal, although it may require an internationally-agreed definition of underemployment – e.g., despite its weaknesses, the ILO's definition of unemployment is widely accepted. The *share of wage employment in the non-*

agricultural sector provides an estimate of the proportion of 'good jobs' outside agriculture. Although wage employment is not always better than other forms of employment, economic and social development usually entails a shift from own-account and family work (considered as vulnerable forms of employment) towards wage or salaried employment. In order to capture working conditions in the agricultural sector, the *subsistence worker rate* could be used, as it measures the proportion of employed persons engaged in the production of goods that are the predominant consumption of the household. The *ratio between the 50th and 10th percentile of wages* can be a useful measure of wage inequality, although it may only be relevant in countries with a significant share of wage employment. Finally, and despite its computational problems, the *share of economically active people living in poor households* is probably the most feasible approach to measure income-related underemployment.

The third set of proposed indicators monitors access to employment opportunities. The employment rate (i.e., employment-to-population ratio) can be disaggregated by several vulnerable groups – e.g. youth, women, migrants, ethnic minorities and people with disabilities – in order to provide useful insights on employment discrimination. However, *employment rate ratios* could provide a more straightforward way to scrutinise disparities between vulnerable groups and the broader society. The *ratio of the shares of wage employment in the non-agricultural sector for vulnerable groups* could measure to what extent specific groups of the population are disproportionately excluded from good employment opportunities. Finally, *average wage ratios of vulnerable groups* provide a comparative measure of wage discrimination.

In terms of setting specific targets for these indicators, several approaches could be considered. The MDGs followed a 'top-down' approach in the sense that they were derived by extrapolating historical global trends into the future. However, these targets were unrealistic for some regions and countries, since they did not take into consideration their particular circumstances and historical trends.[32] Therefore it would probably be more appropriate to set employment targets at the national level, especially because employment challenges vary considerably across countries – as suggested by ILO et al. (2012). Ensuring national ownership of a future development framework will be crucial for its relevance and success, although it is still unclear if it is possible to combine the appeal of having global targets and the need for national-relevant targets.

Further Recommendations

- Improving the frequency and quality of employment data

Despite its central role in determining economic and social outcomes, there is a chronic scarcity of employment statistics across developing countries. For instance, only 93 out of 161 developing countries have at least two data points reported on the employment-to-population ratio – one of the most common and straightforward employment indicators.[33] Data is particularly scarce in sub-Saharan Africa and Oceania. Labour force surveys and other household surveys are not conducted regularly and, even when they are, the information captured is sometimes insufficient to compute key indicators to track employment dynamics. In order to effectively track labour market trends and be useful for policy-making, employment data needs to be collected more frequently. This can be done through labour force and firm-level surveys, as well as ensuring that other data sources incorporate an adequate employment module. In addition to increasing the frequency of data

[32] Although an unintended application of the MDG targets, global targets have often been used to assess regional and country performance.
[33] http://mdgs.un.org/unsd/mdg/DataAvailability.aspx

collection, it is important to improve the quality of the data collected (e.g., through better survey design). It would be particularly useful to investigate whether new instruments and technologies (e.g., mobile phones) could provide some valued-added in increasing the amount of data available for tracking employment dynamics.

- Strengthening efforts to standardise/harmonise employment data

Employment definitions can vary significantly across countries – and even within countries across time. For instance, while 'labour force' often refers to people (employed or unemployed) between the ages of 15 and 64, some countries have used different age brackets. This can lead to considerable discrepancies, especially in countries with large young or elderly populations. The labour market treatment of specific population groups – such as the military, religious orders, seasonal and part-time workers, and first-job seekers – can also differ across countries (in terms of their inclusion or not in the labour force). Other potentially problematic issues include the use of different time threshold (e.g., for defining full-time work), as well as the definition of unemployment. Finally, there might inconsistencies in terms of employment status (e.g., definitions of self-employment) and sector of activity (e.g., different ISIC revisions). Hence, a significant effort needs to be placed in standardising/harmonising raw national data in order to improve the consistency and comparability across (and even within) countries. The recent World Development Report on Jobs benefited from a major effort to standardise the employment modules of hundreds of household surveys (LSMS, LFS, etc.) within the I2D2 database. The ILO has also undertaken considerable steps to improve the consistency of employment data – see KILM and ILOSTAT.

- Improving public access to employment data

In order to improve policy-making and stimulate a more fruitful debate around employment issues, it is essential that data is accessible to interested users. At the moment, many countries and organisations do not allow raw data to be publicly available. While this may be understandable (not the least from a data protection perspective), there are ingenious ways to circumvent this concern. For instance, PovCal uses an online interface that allows users to submit queries that perform calculations on raw data. If a similar approach were to be used for employment data, then the richness of information on employment would be dramatically increased. In particular, this would allow the user to perform basic cross-tabulations to better understand the specific characteristics of the labour force.

- Increasing financial resources devoted to research and policy work on employment issues.

There is a dearth of empirical and policy-relevant research on employment issues in low-income countries. Much of what is known about labour market dynamics and the impact of policy interventions emerges from studies undertaken in advanced and emerging economies. However, the specific labour market characteristics of the poorest countries mean that it is unlikely that these lessons are relevant for their specific context. A few initiatives have been recently launched in order to fill this gap – such as the GLM-LIC and the research commissioned for the WDR 2013 – although much more needs to be done. Boosting the resources available for organisations like the ILO, the World Bank and regional institutions (e.g., UNECA and AfDB) is crucial to expand the knowledge-base on employment issues.

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Annex 1: Employment in the MDGs

Box 3: Employment-Related MDG Targets and Indicators

Goal 1: Eradicate extreme poverty and hunger

Target 1.B: Achieve full and productive employment and decent work for all, including women and young people

Indicator 1.4: Growth rate of GDP per person employed
Indicator 1.5: Employment-to-population ratio
Indicator 1.6: Proportion of employed people living below $1 (PPP) per day
Indicator 1.7: Proportion of own-account and contributing family workers in total employment

Goal 3: Promote gender equality and empower women

Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Indicator 3.2: Share of women in wage employment in the non-agricultural sector

Source: UN (2008)

Table 14: MDG Indicators 1.4 and 1.5

Indicator	1.4: Growth rate of GDP per person employed (%)		1.5: Employment-to-Population ratio (%)		
	2001	**2011**[p]	**1991**	**2000**	**2010**
World	0.6	2.1	62.2	61.2	60.2
Developing Regions	1.4	4.3	64.1	62.8	61.6
Northern Africa	1.3	1.5	41.6	40.6	43.1
Sub-Saharan Africa	0.9	1.5	62.5	62.5	63.6
Latin America & Caribbean	-1.5	2.0	56.4	58.5	61.4
Eastern Asia	5.8	7.4	74.5	73.0	70.6
Southern Asia	1.6	3.9	58.1	56.4	54.0
South-Eastern Asia	1.0	3.0	68.0	66.9	66.7
Western Asia	-3.0	1.6	47.6	44.5	44.3
Oceania	-3.2	4.3	67.2	67.8	68.6
Caucasus & Central Asia	7.7	3.4	56.3	56.4	57.8
Developed Regions	1.3	0.8	56.6	55.9	55.0
LDC	3.0	1.4	69.6	68.6	68.9
LLDC	3.6	2.6	66.7	66.8	68.4
SIDS	-2.3	1.9	54.9	55.5	57.7

[p] Preliminary estimates
Source: UN (2012)

Table 15: MDG Indicators 1.6 and 1.7

Indicator	1.6: Employed people living below $1.25 (PPP) per day (% employment)			1.7: Own-account and contributing family workers (% employment)		
	1991	**2000**	**2011[p]**	**1991**	**2000**	**2010**
World	38.9	26.4	14.8	54.4	52.8	49.6
Developing Regions	50.8	33.5	18.2	67.5	64.0	58.8
Northern Africa	4.2	2.5	0.8	37.5	32.7	30.6
Sub-Saharan Africa	55.2	55.2	37.7	82.1	80.7	76.5
Latin America & Car.	8.6	7.0	3.3	34.8	35.9	31.9
Eastern Asia	66.2	30.3	7.9	66.2	58.4	49.9
Southern Asia	50.1	45.2	34.7	80.9	79.8	77.1
South-Eastern Asia	51.3	31.1	10.9	67.8	65.2	62.1
Western Asia	2.4	2.0	1.5	42.7	35.1	26.9
Oceania	42.1	34.3	26.4	73.7	73.5	76.8
Caucasus & C. Asia	14.7	21.3	5.5	46.4	55.2	42.7
Developed Regions	0.1	0.1	0.0	11.3	11.3	10.2
LDC	63.9	57.9	39.6	85.7	85.1	81.5
LLDC	48.4	46.9	30.5	74.3	77.0	72.2
SIDS	17.4	17.2	15.1	32.3	35.4	37.2

[p] Preliminary estimates
Source: UN (2012)

Table 16: MDG Indicator 3.2

Indicator	3.2: Percentage of employees in non-agricultural wage employment who are women			
	1990	**2000**	**2005**	**2010**
World	35.1	37.5	38.4	39.6
Developing Regions	28.8	31.6	32.6	33.9
Northern Africa	19.2	18.9	18.6	19.2
Sub-Saharan Africa	23.8	28.1	30.0	32.5
Latin America	36.4	40.3	41.4	42.9
Eastern Asia	38.1	39.7	40.9	41.9
Southern Asia	13.3	17.1	18.1	19.7
South-Eastern Asia	34.6	36.9	36.8	37.7
Western Asia	14.9	16.8	17.5	18.6
Oceania	33.4	35.6	35.1	36.2
Caucasus & C. Asia	43.6	44.2	45.3	45.5
Developed Regions	44.3	46.3	47.1	48.1

Source: UN (2012)

Annex 2: Basic Employment Concepts

$$Working\ Age\ Population = Economically\ Active + Economically\ Inactive$$

$$Economically\ Active = Employed + Unemployed$$

$$Participation\ Rate = \frac{Economically\ Active}{Working\ Age\ Population} * 100$$

$$Employment\ Rate\ = \frac{Employment}{Working\ Age\ Population} * 100$$

$$Unemployment\ Rate = \frac{Unemployment}{Economically\ Active} * 100$$

$$Labour\ Productivity = \frac{GDP}{Labour}$$

$$Labour\ Intensity = \frac{Labour}{Capital}$$

$$Employment\ Elasticity = \frac{Employment\ Growth}{GDP\ Growth}$$

Annex 3: Secondary Data Sources

Yearbook of Labour Statistics (ILO)

The ILO's Yearbook of Labour Statistics (LABORSTA) has been a key source of labour market statistics for over 60 years. The data is collected by the ILO's Department of Statistics and covers the characteristics of the working population and conditions of work throughout the world. The data is also published electronically at http://laborsta.ilo.org. Table 17 provides a list of the main indicators included in the database. It should be noted that the majority of these indicators provide a gender breakdown. LABORSTA will be gradually replaced by ILOSTAT, which was launched in December 2012 (beta version).

Table 17: Main Indicators in the Laborsta Database

Table	Description
Economically active population	
Table 1A	Total and economically active population, by age group
Table 1B	Economically active population, by level of education and age group
Table 1C	Economically active population, by industry and status in employment
Table 1D	Economically active population, by occupation and status in employment
Table 1E	Economically active population, by industry and by occupation
Employment	
Table 2A	Employment, general
Table 2B	Employment, by economic activity
Table 2C	Employment, by occupation
Table 2D	Employment, by status in employment
Table 2E	Paid employment, by economic activity
Table 2F	Paid employment in manufacturing
Unemployment	
Table 3A	Unemployment, general
Table 3B	Unemployment, by age group
Table 3C	Unemployment, by level of education
Table 3D	Unemployment, by economic activity
Table 3E	Unemployment, by occupation
Hours of work	
Table 4A	Hours of work, by economic activity
Table 4B	Hours of work in manufacturing
Wages	
Table 5A	Wages, by economic activity
Table 5B	Wages in manufacturing
Labour cost	
Table 6A	Labour cost in manufacturing
Occupational injuries	
Table 8A	Cases of injury with lost workdays, by economic activity
Table 8B	Rates of occupational injuries, by economic activity
Table 8C	Days lost, due to occupational injury, by economic activity
Strikes and lockouts	
Table 9A	Strikes and lockouts, by economic activity
Table 9B	Workers involved in strikes and lockouts, by economic activity
Table 9C	Days not worked in strikes and lockouts, by economic activity
Table 9C	Rates of days not worked in strikes and lockouts, by economic activity

Source: http://laborsta.ilo.org. Other tables include: Consumer Price Indices (7A-7F); Household Income and Expenditure Statistics (H1-H7); International Labour Migration Statistics (M0-M9 and MA-MC).

Key Indicators of the Labour Market (ILO)

The ILO's Key Indicators of the Labour Market (KILM) is a database that incorporates country-level data on 20 key indicators from 1980 onwards. The KILM was launched in 1999, and is under the responsibility of the Employment Trends unit (EMP/TRENDS), which is part of the Economic and Labour Market Analysis Department (EMP/ELM) of the Employment Sector. The biennial releases of KILM are available electronically at http://kilm.ilo.org and as a free interactive software tool. Table 18 provides a description of the main indicators in the KILM database.

Table 18: Indicators in the KILM Database

Table	Description
Participation in the world of work	
Table 1a	Labour force participation rate (ILO estimates; by sex and age group)
Table 1b	Labour force participation rate (national estimates; by sex and age group)
Table 13	Inactivity (ILO estimates, by sex and age group)
Employment indicators	
Table 2a	Employment-to-population ratio (ILO estimates, by sex and age group)
Table 2b	Employment-to-population ratio (national estimates, by sex)
Table 3	Status in employment (by sex)
Table 4a	Employment by sector (by sex)
Table 4b	Employment by 1-digit sector level (ISIC-Rev.4, 2008) (by sex)
Table 4c	Employment by 1-digit sector level (ISIC-Rev.3, 1990) (by sex)
Table 4d	Employment by 1-digit sector level (ISIC-Rev.2, 1968) (by sex)
Table 5a	Employment by occupation (ISCO-88, by sex)
Table 5b	Employment by occupation (ISCO-68, by sex)
Table 6	Part-time workers (by sex, age group)
Table 7a	Employment by hours worked per week (by sex, age group and status)
Table 7b	Annual hours actually worked per person
Table 8	Employment in the informal economy (by sex)
Table 12	Time-related underemployment (by sex and age group)
Unemployment indicators	
Table 9	Total unemployment (by sex)
Table 10	Youth unemployment (by sex)
Table 11	Long-term unemployment (by sex and age group)
Educational attainment	
Table 14a	Labour force by level of educational attainment (by sex and age group)
Table 14b	Unemployment by level of education attainment (distribution; by sex)
Table 14c	Unemployment by level of education attainment (rate; by sex and age group)
Table 14d	Illiteracy (by sex and age group)
Wages and labour costs	
Table 15	Average monthly wages
Table 16a	Hourly compensation costs of employees in manufacturing
Table 16b	Hourly compensation costs of production workers in manufacturing
Performance and poverty indicators	
Table 17	Labour productivity
Table 18a	Poverty and income distribution
Table 18b	Working poverty (national estimates, by sex and age group)

Notes: Employment elasticities are reported in the 6th Edition (2009), but not in the 7th Edition (2011)
Source: http://kilm.ilo.org

The KILM differs from LABORSTA both in terms of scope and content.[34] First, while LABORSTA is the main source of nationally-reported labour statistics, the KILM supplements this data with information from other sources (e.g., OECD). This is done when other sources appear to be more accurate or complete and provide a better scope for international comparability. Second, the KILM reports series that are more comparable across time and countries, since it is not restricted to using the national data 'as reported'. Third, while some indicators are provided in both the LABORSTA and the KILM, the full list of indicators is not identical. Moreover, the KILM also publishes imputed estimates and combines them with real data to construct new indicators such as working poverty.

Hence, the KILM strives to provide a harmonised (internationally comparable) set of labour market trends, as well as offer a more complete cross-country representation of labour statistics. For example, KILM Table 1a is a 'complete' dataset for labour force participation rates, as well as the economically active population and total population, for over 200 countries over the period 1980-2009. An econometric model has been used to generate estimates for the missing data (Kapsos, 2007; KILM, 2009). Table 19 provides an overview of data availability in the KILM database, by indicator. KILM#1 and KILM#2 have the best coverage, with data for nearly all the countries in the sample. However, while KILM#8 and KILM#14 appear to have good coverage, missing/unreported data makes the series rather patchy.

International Income Distribution Database (World Bank)

The World Bank's International Income Distribution Database (I2D2) represents a significant effort to compile and harmonise micro level data from nearly 100 countries.[35] The database consists of already existing datasets that have been collected, standardised and maintained by the World Bank's Development Economics Group (DEC). Most country datasets are labour force surveys, budget surveys or living standards measurement surveys, and all are nationally representative. The data includes four modules of consistently defined and coded variables: (i) demographic variables, (ii) education variables, (iii) labour force variables, and (iv) household per capita consumption (Gindling and Newhouse, 2012). The I2D2 has been recently used to produce the World Development Report 2013 on Jobs, and can enrich the analysis of employment dynamics by using freshly complied and harmonised data.

Other Databases

The ILO's Global Wage Database contains wage data collected from national sources for 178 countries. The indicators available include average wages, median wages, the share of labour compensation in GDP, the Gini coefficient of wages, the ratio of top to bottom wages, and the proportion of workers with low pay. The ILO also maintains a number of databases on employment legislation. For example, NORMLEX is an information system that contains information on international labour standards and on national labour and social security laws. The Employment Protection Legislation Database (EPLex) contains information on the employment termination laws in about 85 countries. The Database of Conditions of Work and Employment Laws (TRAVAIL) contains comprehensive legal information on the regulatory environment of working time, minimum wages and maternity protection in more than 100 countries.

[34] See http://kilm.ilo.org/2011/download/GuidEN.pdf
[35] See www.iza.org/conference_files/worldb2012/margolis_d168.pptx

Table 19: Availability of KILM data, worldwide and by regional and subregional groupings

Region	Max. Count	KILM Indicator #																	
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Developed Economies & EU	**46**	**45**	**44**	**39**	**40**	**38**	**35**	**36**	**2**	**44**	**41**	**36**	**31**	**36**	**37**	**36**	**28**	**37**	**10**
European Union	28	28	28	28	27	28	27	27	2	28	28	27	22	27	27	27	20	28	10
North America	2	2	2	2	2	2	1	2		2	2	2	2	2	2	2	2	2	
Western Europe (non-EU)	6	5	5	3	3	3	3	3		5	4	3	3	3	3	3	2	3	
Other Developed Economies	10	10	9	6	8	5	4	4		9	7	4	4	4	5	4	4	4	
Central & SE Europe & CIS	**22**	**20**	**20**	**15**	**17**	**13**	**8**	**9**	**11**	**17**	**14**	**6**	**3**	**18**	**19**	**18**		**18**	**21**
Central & SE Europe (non-EU)	10	8	8	6	6	5	4	4	3	9	6	4	1	6	7	6		6	9
CIS	12	12	12	9	11	8	4	5	8	8	8	2	2	12	12	12		12	12
Asia & Pacific	**44**	**43**	**43**	**30**	**34**	**33**	**7**	**13**	**8**	**40**	**34**	**1**	**5**	**34**	**32**	**17**	**6**	**15**	**24**
South Asia	8	8	8	7	7	6	2	5	4	8	7		1	8	7	4	1	4	8
East Asia	7	7	7	5	6	6	2	3		6	6	1	1	6	7	5	3	4	3
Pacific Islands	18	17	17	9	11	12	1	2		16	13		1	9	7	1			4
South-East Asia	11	11	11	9	10	9	2	3	4	10	8		2	11	11	7	2	7	9
Latin America & Caribbean	**47**	**47**	**45**	**41**	**44**	**37**	**30**	**29**	**19**	**44**	**42**	**16**	**16**	**35**	**41**	**16**	**3**	**17**	**25**
Caribbean	27	27	26	23	26	20	12	11	2	25	23	9	2	16	22	7		5	7
South America	12	12	11	10	10	9	10	10	10	11	11	1	8	11	11	5	2	9	10
Central America	8	8	8	8	8	8	8	8	7	8	8	6	6	8	8	4	1	3	8
Africa	**55**	**55**	**55**	**40**	**40**	**21**	**8**	**7**	**19**	**45**	**33**	**3**	**6**	**53**	**52**	**18**		**25**	**50**
Sub-Saharan Africa	49	49	49	36	35	18	8	7	18	41	29	3	6	47	46	16		20	46
North Africa	6	6	6	4	5	3			1	4	4			6	6	2		5	4
Middle East	**13**	**13**	**13**	**11**	**12**	**12**	**2**	**2**	**1**	**13**	**11**	**2**		**13**	**13**	**10**		**11**	**6**
Total	**227**	**223**	**220**	**176**	**187**	**154**	**90**	**96**	**60**	**203**	**175**	**64**	**61**	**189**	**194**	**115**	**37**	**123**	**136**

Notes: EU European Union; SE South-Eastern; CIS Commonwealth of Independent States
Source: KILM (2011: Table D1)

KILM Indicators

1. Labour force participation rate	10. Youth unemployment
2. Employment-to-population ratio	11. Long-term unemployment
3. Status in employment	12. Time-related underemployment
4. Employment by sector	13. Inactivity
5. Employment by occupation	14. Educational attainment and illiteracy
6. Part-time workers	15. Average monthly wages
7. Hours of work	16. Hourly compensation costs
8. Employment in the informal economy	17. Labour productivity
9. Unemployment	18. Poverty, income distribution and the working poor

Annex 4: The Measurement of Decent Work

Table 20: Decent Work Indicators

Substantive element of the Decent Work Agenda	**Statistical Indicators**	**Legal Framework Indicators**
Numbers in brackets refer to ILO strategic objectives: *1. Standards and fundamental principles and rights at work;* *2. Employment;* *3. Social protection;* *4. Social dialogue.*	*Selection of relevant statistical indicators that allow monitoring progress made with regard to the substantive elements.* *M – Main decent work indicators* *A – Additional decent work indicators* *F – Candidate for future inclusion / developmental work to be done by the Office* *C – Economic and social context for decent work* *(S) indicates that an indicator should be reported separately for men and women in addition to the total.*	*L – Descriptive indicators providing information on rights at work and the legal framework for decent work. Description of relevant national legislation, policies and institutions in relation to the substantive elements of the Decent Work Agenda; where relevant, information on the qualifying conditions, the benefit level and its financing; evidence of implementation effectiveness (as recorded by ILO supervisory bodies); estimates of coverage of workers in law and in practice; information on the ratification of relevant ILO Conventions.*
Employment opportunities (1 + 2)	**M – Employment-to-population ratio, 15-64 years (S)** **M – Unemployment rate (S)** **M – Youth not in education and not in employment, 15-24 years (S)** **M – Informal employment (S)** A – Labour force participation rate, 15-64 years (1) [to be used especially where statistics on Employment-to-population ratio and/or Unemployment rate (total) are not available] A – Youth unemployment rate,15-24 years (S) A – Unemployment by level of education (S) A – Employment by status in employment (S) A – Proportion of own-account and contr. family workers in total employment (S) [to be used especially where statistics on informal employment are not available] A – Share of wage employment in non-agricultural employment (S) F – Labour underutilization (S) Memo item: Time-related underemployment rate (S) (grouped as A under "Decent Working Time")	**L – Government commitment to full employment** **L – Unemployment insurance**
Adequate earnings and productive work (1 + 3)	**M – Working poverty rate (S)** **M – Low pay rate (below 2/3 of median hourly earnings) (S)** A – Average hourly earnings in selected occupations (S) A – Average real wages (S) A – Minimum wage as % of median wage A – Manufacturing wage index A – Employees with recent job training (past year / past 4 weeks) (S)	**L – Minimum wage**
Decent Working Time (1 + 3)	**M – Excessive working time (more than 48 hours per week; 'usual' hours) (S)** A – Usual hours worked (standardized hour bands) (S) A – Annual hours worked per employed person (S) A – Time-related underemployment rate (S) F – Paid annual leave (developmental work to be done by the Office; additional indicator)	**L – Maximum hours of work** **L – Paid annual leave**
Combining work, family and personal life (1 + 3)	F – Asocial / unusual hours (Developmental work to be done by the Office) F – Maternity protection (developmental work to be done by the Office; main indicator)	**L – Maternity leave (incl. weeks of leave, and rate of benefits)** **L – Parental leave**
Work that should be abolished (1 + 3)	**M – Child labour [as defined by ICLS resolution] (S)** **M – Other worst forms of child labour (S)** A – Hazardous child labour (S) A – Forced labour (S)	**L – Child labour (incl. public policies to combat it)** **L – Forced labour (incl. public policies to combat it)**

Stability and security of work (1, 2 + 3)	Stability and security of work (developmental work to be done): M - Precarious Employment rate A - Job tenure A - Subsistence worker rate A – Real earnings casual workers (S) Memo item: Informal employment grouped under employment opportunities.	**L – Termination of employment (incl. notice of termination in weeks)** Memo item: 'Unemployment insurance' grouped under employment opportunities; needs to be interpreted in conjunction for 'flexicurity'.
Equal opportunity and treatment in employment (1, 2 + 3)	**M – Occupational segregation by sex** **M – Female share of employment in senior and middle management (ISCO88 groups 11 and 12)** A – Gender wage gap A – Share of women in wage employment in the non-agricultural sector A – Indicator for Fundamental Principles and Rights at Work (Elimination of discrimination in respect of employment and occupation) to be developed by the Office A – Measure for discrimination by race / ethnicity / of indigenous people / of (recent) migrant workers / of rural workers where relevant and available at the national level. F – Measure of dispersion for sectoral / occupational distribution of (recent) migrant workers F – Measure for employment of persons with disabilities Memo item: Indicators under other substantive elements marked (S) indicator should be reported separately for men and women in addition to the total.	**L – Equal opportunity and treatment** **L – Equal remuneration of men and women for work of equal value**
Safe work environment (1 + 3)	M – Occupational injury rate, fatal A – Occupational injury rate, nonfatal A – Time lost due to occupational injuries A – Labour inspection (inspectors per 10,000 employed persons)	**L – Employment injury benefits** **L – Safety and health labour inspection**
Social security (1 + 3)	**M – Share of population aged 65 and above benefiting from a pension (S)** **M – Public social security expenditure (% of GDP)** A – Healthcare exp. not financed out of pocket by private households A – Share of population covered by (basic) health care provision (S) F – Share of econ. active population contributing to a pension scheme (S) F – Public expenditure on needs based cash income support (% of GDP) F – Beneficiaries of cash income support (% of the poor) F – Sick leave (developmental work to be done by the Office; additional indicator) [Interpretation in conjunction with legal framework and labour market statistics.]	**L – Pension** **L – Incapacity for work due to sickness / sick leave** **L – Incapacity for work due to invalidity** Memo item: 'Unemployment insurance' grouped under employment opportunities.
Social dialogue, workers' and employers' representation (1 + 4)	**M – Union density rate (S)** **M – Enterprises belonging to employer organization [rate]** **M – Collective bargaining coverage rate (S)** M – Days not worked due to strikes and lockouts F – Indicator for Fundamental principles and rights at work (Freedom of association and collective bargaining) to be developed by the Office	**L – Freedom of association and the right to organize** **L – Collective bargaining right** **L – Tripartite consultations**
Economic and social context for decent work	C – Children not in school (% by age) (S) C – Estimated % of working age population who are HIV positive C – Labour productivity (GDP per employed person, level and growth rate) C – Income inequality (percentile ratio P90/P10, income or consumption) C – Inflation rate (CPI) C – Employment by branch of economic activity C – Education of adult population (adult literacy rate, adult secondary-school graduation rate) (S) C – Labour share in GDP C (additional) – Real GDP per capita in PPP$ (level and growth rate) C (additional) – Female share of employment by industry (ISIC tabulation category) C (additional) – Wage / earnings inequality (percentile ratio P90/P10)	**L – Labour administration** Developmental work to be done by the Office to reflect environment for Sustainable enterprises, incl. indicators for (i) education, training and lifelong learning, (ii) entrepreneurial culture, (iii) enabling legal and regulatory framework, (iv) fair competition, and (v) rule of law and secure property rights. Developmental work to be done by the Office to reflect other institutional arrangements, such as scope of labour law and scope of labour ministry and other relevant ministries.

Source: ILO (2009:42-45) and www.ilo.org/integration/resources/mtgdocs/WCMS_115402/lang--en/index.htm

Annex 5: Existing Proposals on Employment

Table 21: Survey on Post-2015 Proposals on Employment Indicators

Source	Goal	Description	Targets	Employment-Related Indicators
UN Task team Post 2015 (ILO, UNCTAD, UNDESA, WTO)	Decent employment to support poverty reduction	Integration of growth-promoting macroeconomic policies with developmental industrial policies and redistributive measures, all geared towards the creation of decent employment. These elements must be combined with a social protection framework aimed at eliminating the causes of poverty and exclusion. Raise the productivity of the poorest workers within an overall sustainable development approach.	1. Employment creation 2. National specific employment targets	• A rate of growth for non-agricultural formal employment that at least keeps up with labour force growth and rural-urban migration. • Decent work indicators
CIGI-KDI (Bellagio Goals)	Inclusive growth for dignified livelihoods and adequate standards of living	Growth is the single most important factor in reducing poverty and one of the main priorities of poor people. Inclusive growth is comprised of three elements: High, efficient and sustained growth that creates jobs and economic opportunities, social inclusion to ensure access to those and social safety nets to protect from livelihood shocks.	1. Inclusive growth a) Income poverty b) Economic growth c) Opportunities d) Conditions 2. Standard of Living a) Shelter b) Well-being c) Social security	• Growth rate of GDP per person employed • Employment rate • Share of population aged 65 and above benefitting from a pension
Save the Children	Eradicate extreme poverty and reduce relative poverty thorough inclusive growth and decent work	Eliminate poverty within a generation. Look at economic growth as part of a poverty reduction package. It should be inclusive and sustainable growth. Growth should generate decent work so that workers can benefit from employment. Provide a safety net for those who have no work or are unable to do so	1. Eradicate extreme income poverty 2. Pursue growth that is inclusive and sustainable, and provides opportunities for all 3. Provide decent work for all 4. Establish a global social protection floor	3a. Wage share of GDP 3b. Closing disparities in employment: youth and gender (employment rates and pay) 3c. Percentage of children involved in hazardous work (as defined in ILO 182, art. 3d)
Centre for Global Development	Poverty eradication	To ensure that, by the year 2030, the proportion of the world's people whose income is less than two dollars a day or that is undernourished is below one in ten, and to expand access to decent work worldwide. To develop and implement strategies that give young people everywhere a real chance to find decent and productive work.	1. Poverty 2. Youth employment	• $2/day • Malnutrition • Gap between youth unemployment and total unemployment

International Trade Union Confederation	Decent Work and Social Protection	1. Introduction of a specific goal on full and decent employment (not as a target on goal on poverty reduction). Built on the ILO's Decent Work Agenda 2. Ensuring universal access to basic guarantees of social protection is a human right and a direct and efficient way of reducing inequalities. The new agenda should include a goal on the implementation of social protection floors as defined in the Bachelet Report, and the ILO Recommendation 202 which has set an international standard to be applied at national level.	1. Full employment 2. Investment in green job promotion 3. Reducing precarious work 4. Ensuring a living wage as complying with international labour rights for all workers 5. Gender equality at the workplace	• Employment-to-population ratio • Employment growth rate • Annual hours worked per employed persons • Labour productivity – GDP per employed person • Proportion of own-account and contributing family workers in total employment • Share of people engaged in informal work relations among the active population • Proportion of employed people living below 1.25$ a day • Wage inequality • Low pay rate • Minimum wage as % of median wage • Ratification of the eight ILO Core Labour Conventions • Ratification of the ILO Convention No. 183 on maternity protection, No. 156 on workers with family responsibilities and No. 189 on domestic workers • Gender wage gap • Excessive hours • Occupational injury rate (fatal and non-fatal) • Union density rate • Enterprises belonging to employer organisation • Collective bargaining coverage rate • Share of population aged 65 and above benefiting from a pension • Public social security expenditure (% GDP) • Beneficiaries of cash income support (% of the poor) • Share of population covered by basic health care provisions

Source: http://tracker.post2015.org/

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