
Conceptual and Methodological Guide to Employment Diagnostic Analysis

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General considerations

In general terms, *the objective of diagnostic analysis for inclusive and job-rich growth*, hereafter referred to as *employment diagnostics* is to understand the nature of the deficiency of productive employment and to identify the constraints on and opportunities for enhancing inclusive job-rich growth, with a view to provide a sound knowledge base for effective policies, institutional reforms and other interventions aimed at reducing the deficiency of productive employment.

An employment diagnostic analysis is no panacea. It is not a universal tool; it complements other existing analytical tools, rather than make them redundant. The most important role of employment diagnostics is as an instrument for broad-based charting and understanding the country specific 'landscape of employment and economic development'; for a first diagnosis of where the main constraints, challenges and opportunities for enhancing inclusive job-rich growth are to be found. Its main role is to help identify what issues need to be addressed in order to enhance productive employment and to reach established employment targets through a well-structured process of deduction and elimination. A related important role is as an aid to narrow down the focus any further in-depth analysis and/or provide a context specific basis for subsequent thematic analysis. Pursuing the parallel with pathology, where the concept has its origin, it is as a tool for the general practitioner to make a diagnosis before remitting the patient to more specialised analysis and care that employment diagnostic analysis has its most clear-cut role. It precedes and provides the basis for, and needs to be complemented by, forward looking analyses and development policies¹ aimed at guiding structural change on to a path of inclusive and sustainable job-rich growth.

Defining inclusive and productive employment

In headcount terms, deficiency of productive employment at a given point in time can be quantified and defined as the *sum of unemployed and working poor*.² Achieving full and productive employment, which is one of the Millennium Development Goal Targets, requires the elimination of this deficit. The working poor may usefully be further categorised according to the proximate causes and expressions of the inadequate returns to labour:³

¹ Which are likely to require a strategic combination of education, social, industrial and other policies.

² The working poor are defined as employed persons living in a household whose members are estimated to be below the nationally defined poverty line. One might argue that the concept of unemployed should also include people who have withdrawn from the labour force and who are not actively searching for employment opportunities because they believe such a search would be futile.

³ See S.R. Osmani in 'Exploring the Employment Nexus : The Analytics of Pro-Poor Growth' in Rizwanul Islam *Fighting Poverty: The Development – Employment Link* (Boulder, CO & London: Lynne Rienner, 2006).

1. *Underemployment*

- Open underemployment; those working less than full-time, but who would like to work more hours, and whose income is insufficient to permit escape from poverty.
- Disguised underemployment; those working full time but at a low intensity, within an institutional framework that permits both work sharing and income sharing.

2. *Low returns to labour*

- Those working for low returns to labour, as wage workers or own account entrepreneurs, because they have to compete with potential entrants (a pool of surplus labour), who have very low reservation wage – the *surplus labour* syndrome.
- Those working with poor skills, poor technology and/or inadequate complementary factors (e.g. capital and/or land) – the *low productivity* syndrome.
- Those suffering from adverse terms of trade because of either low product prices or high input costs or both – the *adverse terms of trade* syndrome.

The proximate causes behind deficiencies in productive employment are obviously not mutually exclusive, but may assume a large variety of combinations.

The development objective is thus to reduce the deficiency of productive employment and decent work, with the ultimate aim of eliminating it, through quantitative increases and qualitative improvements of employment. The relative emphasis on the quantitative versus qualitative aspects must depend on the nature of the proximate causes and expressions of the deficiency of productive employment and on the growth rate of the labour force.

The conceptual framework

The fundamental importance of human resources and employment to economic growth in the pursuit of increased material well-being and freedom from poverty stems from two considerations:

- Employment and income derived from employment (self-employment or wage employment) are the singularly most important link between economic growth on the one hand and increased material well-being and freedom from poverty on the other hand.
- Human resources and their deployment in the pursuit of economic gains in the form of productive employment are a key factor of production and for achieving sustainable economic development. Moreover, the human resources also determine the speed by which new technologies can be absorbed and changes in the mode of production can be carried out.

For the vast majority of people and households, returns to own labour are by far the most important source of income. Returns to capital and rents obtained from land or other sources do not provide a main source of income except for few people. Public cash transfers can and should provide a crucial form of sustenance for the most vulnerable and can play an important role in redistributing income across households and individuals in a society, but have a strictly complementary role to income from labour. Indeed, the fundamental importance of productive employment and decent work to elimination of poverty has been explicitly recognised by the international community as *achievement of full and productive employment and decent work for all, including women and young people* was adopted in 2007 as a third target for the overriding goal to eradicate extreme poverty and hunger.

Sustained, high levels of investment in human resources – in the form of education, health etc. – are an absolute prerequisite for achieving high levels of sustainable economic development.⁴

Viewing human resources as creator of growth through productive employment and decent work, rather than productive employment as an outcome of growth.

The traditional analytical approach has typically focused on growth per se, as economic growth has tended to be seen not only as a prerequisite, but as a more or less sufficient condition to generate productive employment and to reduce poverty. Standard growth models have tended to assume full or near-full employment as a state of market equilibrium and to ascribe deviations from this norm to market failures. Indeed, even economic analysis aimed at poverty reduction has tended to focus on growth to the point where productive employment has been treated as a residual outcome and an implicit standard ‘trickle down’ assumption, sometimes complemented by assumptions of redistribution policies and basic social security, has *de facto* been the reigning paradigm.

An alternative and arguably more conducive and logical, approach would be to view the human resources and the labour force not primarily as beneficiaries of growth, but as creators of growth. Just as increases in employment and in labour productivity combined, by definition, make up economic growth, investments in a qualitative development of human resources, together with improved opportunities to maximise and enhance the economic returns to these resources make up the foundation and essence of job-rich growth. On moral as well as efficiency grounds two additional considerations need to be added to the conceptual framework: inclusiveness and sustainability. A focus on inclusiveness is particularly important from the perspective of increasing productive employment, as this requires a special focus on the working poor and the unemployed.

Hence, the human resource base provides the point of departure for understanding and addressing constraints, challenges and opportunities for inclusive and sustainable job-rich growth. The outcome in terms of sustainable generation of productive employment and reduction of the number of working poor and unemployed in an

⁴ Commission on Growth and Development, *The Growth Report: Strategies for Sustained Growth and Inclusive Development* (Washington D.C.: The World Bank, 2008).

economy can be seen as the result of the combined impact of three categories of factors:

- *The supply side.* The human resource base, i.e. the rate of growth of the labour force and the qualitative level, structure and characteristics of the human resources base, e.g. the structure of educational and skills attainment, health status. In the medium to long term the institutional capacity to develop the human resources – the societal capability – needs to be brought into the picture.
- *The demand side.* Opportunities for / returns to employment, which in its turn requires a focus on the rate and the quality of economic growth and issues of inequality.⁵ In the short term the level of employment (labour utilisation rate) is determined by the level and composition of aggregate demand. The growth of the potential for employment is largely determined by private and public investments. Public policy can foster growth in the medium and long term, while in the short term it can ensure that the potential output is realised.
- The *sustainability* of the present trajectory of job-rich growth and the sustainability considerations of alternative, future trajectories. That is the extent to which present job-rich inclusive growth is achieved in a manner that does not compromise the possibilities for the coming generation(s) to access productive employment.

The human resource base

‘Investments in the health, knowledge, and skills of the people – human resources base – are as important (for growth) as investments in the more visible, physical capital of the country.’⁶ The qualitative attributes that determine employability⁷ – education, skills, health, cognitive abilities etc. – set the parameters for individuals’ ability to access productive employment as well as for the scope for technological advancement, increased labour productivity and returns to labour at the aggregate national level.

There is a strong interrelationship between human resource development and economic development. Economic resources are needed for investing in education, health and other forms of human resource development at the same time as the qualitative level and characteristics of the human resource base set limits for both the pace and pattern of economic development. The long lead times required for investments in human resources development imply a need for strategic long term planning and provide grounds for policy-guided structural change and economic development. Hence, the need for investments in human resources will need to be cast against the desired future development trajectory.

⁵ The issues of inequality are here taken to include unequal resource endowment as well as unequal opportunities and vulnerability.

⁶ Commission on Growth and Development, *The Growth Report: Strategies for Sustained Growth and Inclusive Development* (Washington D.C.: The World Bank, 2008) p.37.

⁷ The concept of employability is interpreted to refer to the combined qualitative attributes (education, skills, health etc.) that determines/sets the limits for a person’s capability to be economically productive/to get maximum returns for her/his own labour. Although employability inevitably contains an element of context specificity, it should not be confused with opportunities to make full and optimal use of one’s resources, which may be constrained by a poor economy, institutional factors, discrimination, lack of basic security etc.

If the economy is not in a position to offer employment opportunities *at par* with the capabilities and productive capacities of the labour force, then labour is likely to migrate abroad attracted by better opportunities elsewhere. Conversely, inadequate levels of human development may impose a truly binding constraint on economic development. For instance, a high share of workers with only primary education may suffice to attract FDI in low technology sectors, but may act as a binding constraint on entering into high-tech activities.

An assessment of the human resource base from the perspective of employability productive capabilities needs to be context specific. However, because of the long gestation periods such assessments should not only be cast against the present characteristics of the economy, but also against the desired development trajectory of the economy. Furthermore, assessments need to be made of both the level and characteristics of the stock of human resources and the investments and institutional capacity to invest in human resources, viz. the institutional systems for education and vocational training, health care systems etc.

Opportunities for and returns to productive employment of human resources through employment

The opportunities for and returns to productive employment will depend on the combined impact and the interaction of three types of factors.⁸

- *The quantitative economic growth factor:* The rate of economic growth as measured by (per capita) GDP.
- *The qualitative growth factor:* The qualitative aspects of growth pertain to the efficiency by which the growth is translated into more productive employment, i.e. more employment and/or higher returns to labour, in a sustainable manner.⁹ In other words, the larger the weight of labour (as a production factor) and returns to labour in GDP and GDP growth, the higher the quality from the perspective of productive employment.
- *The equality factor.* Differences and inequality with regard to employability and access to productive employment opportunities. The extent to which the working poor and the unemployed have the necessary resources, opportunities and protection against vulnerability to be able to participate fully and on an equal footing in the economic development process and fully benefit from the fruits of their participation in this development.

The quantitative growth factor. A dynamic economic environment is essential for generating opportunities for productive employment Hence, a growth diagnostics needs to be an integral component of the demand side part of employment diagnostics.

⁸ This discussion draws heavily on earlier conceptual work done by Rizwanul Islam and by Osmani *op. cit.* pp. 12-13.

⁹ It should be noted that the efficiency concept used is broader than the standard definition of employment elasticity which refers to the relationship between the growth of GDP and the growth of employment in quantitative terms. A distinction is made between sustainability in the medium term and in the long term. The latter is treated as a separate consideration (below).

A great deal of effort has been devoted over the years to understanding the triggers and ingredients of growth. This generation of knowledge has not always been cumulative. Indeed, the past few decades have seen a variety of quite diverse schools of thought succeeding each other as the dogma of the day. The Commission of Growth - established in the context of a progressive erosion of the dominance of the Washington Consensus¹⁰ and in the wake of a soul-searching retrospective assessment by the World Bank¹¹ – provides an authoritative synthesis of what we know (and do not know) about how high rates of growth can be achieved and sustained.¹² For the purpose of employment diagnostics the findings and conclusions of this report provide a useful basis for understanding the growth factor.¹³ While stressing that there is no blueprint for achieving sustained growth, the Commission did identify a number of shared characteristics of countries that have managed to sustain high level of growth over several decades. These included:

- Engagement with the global economy as a source of demand and knowledge.
- Macroeconomic stability.
- High levels of savings and public and private investments, including high levels of public investment in human resources and in physical infrastructure.
- Reliance on markets for resource allocation and continuing structural transformation, fostering flexibility and resource mobility.
- Credible government commitment to inclusive growth combined with capable administration.

The qualitative growth factor, as defined above, depends essentially on the use of and returns to labour in the creation of value added in the economy. In other words, the relative weight of use and returns to labour as against that of other production factors, such as capital, land, immaterial property and extraction of rents in various forms. This, in its turn, will be influenced by and warrants a focus on several important features of the growth process, such as:¹⁴

- The sectoral composition of growth,
- The choice of technique,
- The domestic terms of trade, i.e. the extent to which movements in the domestic terms of trade favour or disfavour the employment intensive sectors of the economy.¹⁵
- The prevalence of various forms of rent-seeking.
- Wage bargaining power.
- Regional concentration of growth.
- Changes in the external terms of trade and other time-bound factors.

¹⁰ See for instance Dani Rodrik, 'Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform' in *Journal of Economic Literature*, vol. 44, no. 4 (December 2006).

¹¹ World Bank, *Economic Growth in the 1990s: Learning from a Decade of Reform* (Washington D.C.: World Bank, 2005).

¹² Commission on Growth and Development, *The Growth Report: Strategies for Sustained Growth and Inclusive Development* (Washington D.C.: The World Bank, 2008).

¹³ This should not be interpreted as an unreserved endorsement of the Report. For a critical review see comments by Jose Manuel Salazar-Xirinachs.

¹⁴ For a discussion of the first three of these, see Osmani, *op.cit.* pp. 15-17.

¹⁵ Strictly speaking it is not just the labour intensity of the sector in question that matters, but the labour intensity of the sectors providing inputs into the sector in question, that is the entire value added chain, should also need to be brought into the equation.

The efficiency by which growth translates into generation of productive employment is influenced by the sector composition and product-mix. In a situation of free trade and open economies one might expect that the law on comparative advantages would compel a labour abundant economy to specialize in products and services with a high labour content. There are a number of reasons why this may not take place; such as market imperfections at the global and national level, policy distortions favouring capital over labour, a large share of non-tradables in the economy, unequal land distribution, poor infrastructure and, not least poor employability and/or restricted labour market access of parts of the labour force. Hence, one should not assume that internal and external liberalisation of the economy will automatically result in adequate improvements of the demand for labour.

The sector composition also has a strong bearing on the sustainability of the growth. A broad economic and export base where tradables play the predominant role as growth engine is generally perceived as a prerequisite for sustaining a high rate of economic growth. Economic growth that is driven by non-tradables tend to be self-limiting, as does growth that is based on export of raw materials. Excessive reliance on natural resources as a source of growth and export often lead to a 'resource curse' where volatility, a crowding out of the private sector, rent-seeking and exchange rate appreciation undermine the prospects for sustained and inclusive job-rich growth.

Technology choice is closely linked to the product mix and sector composition. Stringent requirements with regard to standardisation and detailed product specification, not least in the OECD countries, and a demand for both uniform and high quality are some of the factors imposing restrictions on the choice of technology in the production of tradeables. However, even within these confines there may be scope for use of alternative technology that are better in tune with a country's relative endowment of capital and labour. Within the non-tradeable sectors the scope for technology choice is likely to be much less restricted. The HIMO (Haute Intensité de Main-d'Ouvre) initiative, providing labour intensive alternatives for the construction of public physical infrastructure, clearly shows that there may indeed be a large scope for selecting more labour intensive technologies.

Extraction of rents can take a variety of forms, many of which are legal as well as taxable (viz. rent generation) while others are illegal, such as most forms of rent seeking¹⁶ Rent generation typically refers to economic benefits obtained from control over finite resources or a monopoly position. Land rents extracted by land owners from tenants are a classic type of rent extraction, as are excessive profits¹⁷ derived from control over natural resources. Generation of rents can also take the form of excess profits derived from a monopoly situation which may be due to control over immaterial property rights or other circumstances. Rent seeking is often associated with corruption, i.e. the dishonest abuse of power for personal gains. Informal and non-authorised 'fees' levied by government officials and other public servants are a case in point, but it may also take other forms, such as protection rackets or excessively high fees levied by middlemen on labour migrants. Belonging to the

¹⁶ Economic rent is defined as an excess distribution to any factor in a production process above the amount required to draw the factor into the process or to sustain the current use of the factor.

¹⁷ Excess profits are profits above what the firm would need to pursue its activities.

weakest groups in the labour market, the working poor are arguably particularly exposed to various forms of rent seeking as they would tend to be the underdogs in any power relation. Some forms of rent seeking do not only affect the employment content of growth negatively, but can also significantly impair employability and access as well as growth.

The institutional structure of the labour market also has a strong bearing on the employment intensity of growth. Asymmetric power relations on the labour market tend to work to the detriment of workers and not least the working poor are often in a very bargaining position. Respect for the principles of collective bargaining and unionisation of workers can help overcome the asymmetry in power relations and enhance the returns to labour in the form of higher wages. Organisation of workers in trade unions can also help protect against intimidation and discrimination at the work place. Minimum wages, if judiciously determined, and labour regulations may also serve as instruments for enhancing the employment content of growth and the efficacy by which growth results in increased productive employment and reduction of the number of working poor.

The equality factor. Sustained economic growth always entails structural change. The sectors, occupations and geographic areas with the greatest potential for growth change over time and place, but they seldom coincide with those where the majority of the working poor are to be found. For the working poor to be able to access opportunities offered by growth *and* structural change they must be sufficiently endowed with the factors that determine employability, they must be sufficiently mobile and they must enjoy a basic economic and social security that allows them to take calculated risks. Reversing inequality may be particularly difficult in situations where it has resulted in and is entrenched by social value systems characterised by a high tolerance of inequality among the elite. Inequality of resource endowment and of opportunities and lack of basic security to permit calculated risk-taking not only constrain the inclusiveness of economic development, but also undermines its robustness and pace *inter alia* through inefficient resource use.

At the most basic level, the capabilities – employability profiles - of the working poor and unemployed must meet the requirements of emerging and existing opportunities for productive employment. However, there are also a large number of other factors that may limit the opportunities of the working poor and unemployed to access productive employment opportunities, even when the employability *per se* is no hindrance. Poorly functioning markets, not least credit markets, corruption and illegitimate forms of rent seeking tend to discriminate against the working poor in their role as entrepreneurs, thus unduly reducing their competitiveness and returns to labour. In certain situations labour market institutions may create insider – outsider problems. Poor geographic, vocational and social mobility may prevent the working poor and unemployed to move to more dynamic areas of the country and sectors of the economy. Cultural and social stereotypes may result in a fragmentation of the labour market along gender, ethnic or other lines, thus confining large parts of the labour force to specific segments of the labour market. A society that severely constrains the access of women to productive employment opportunities, will not only see higher inequality, but also lower growth and lower employment elasticity than a society that offers equal opportunity. An inordinate burden of reproductive work may

also limit women's ability to engage in economically productive work. The list of possible inhibiting factors can be made very long.

Poor employability, access and lack of basic security lead to unemployment and/or working poverty. It not only expands the ranks of unemployed and discouraged workers, but inability to access productive employment and decent work forces people into vulnerable forms of employment and involuntary self-employment. For the self-employed it restricts their space of manoeuvre and results in low productivity, which is often combined with long working hours under precarious conditions.

The issue of sustainability

Promoting inclusive and productive employment in the present must be done in a manner that does not compromise the possibilities for the coming generation(s) to access productive employment. Productive employment, much like growth, needs to be sustainable. Policies aimed at achieving inclusive and productive employment need to take the legitimate rights and interests of future generations as well as those of the present into account. Three broad groups of aspects pertaining to sustainability deserve to be singled out: environmental aspects, investments in the young and climate change. The importance of safeguards against environmental degradation and depletion of the natural resource base is so obvious that it ought not to need any elaborate justification. The well-being of future generations will crucially depend on their ability to benefit from the same ecosystem services as we do. Long term investment in the young to ensure that the next generation obtain a human resources endowment and a level of employability that makes them attractive on the labour market of tomorrow and permits them to access productive employment is another core aspect of sustainability. In view of the increasing evidence that the impact of climate change on economies and livelihoods will be both pervasive and rapid, exposure to the impact of climate change and measures taken to adapt to these should arguably be included as a third key aspect of sustainability.

Some additional considerations

While the categories and types of factors determining outcome in terms of generation of productive employment discussed above have considerable explanatory power a static review of them would leave some issues unaddressed. The quantitative and qualitative aspects of growth and employability and access factors exert considerable influence on each other, as does economic growth for investments in human resources base. Hence, a purely static analysis will not suffice, but the interrelationship between the different factors and the dynamics this creates also need to be understood. This also implies that the qualitative and quantitative aspects of growth need to be analysed jointly and that this combined growth analysis should not only inform but also be informed by an analysis of the employability, access and sustainability factors. Similarly, the interplay between the qualitative dynamics over time of the human resource base and rate and characteristics of the economic development needs as far as possible to be understood. As will be elaborated further below, this is also one argument for a stepwise analysis that proceeds from the general to the more specific.

The concept implicitly assumes a labour market confined by the borders of the country in question, i.e. the labour market equivalent of a closed economy. Relaxing this constraint by allowing for cross-border movement of labour, which *de facto* is a major and increasing phenomenon in many countries, can change the picture significantly. The working poor and unemployed are no longer confined to aspiring for the productive employment opportunities on offer at home, but if attracted by prospects of better employment and income opportunities elsewhere they may choose to invest their labour abroad.¹⁸ At the same time the domestic labour force, and not least the working poor, may face increased competition on the domestic labour market from migrant workers arriving from other countries.¹⁹

From concept to methodology

The above framework helps us understand how employment outcomes result from the interplay of different types of factors and thus helps us structure an employment diagnostics. However, while it does give guidance on what to analyse, it does not answer the question how.

Taking the growth diagnostics approach as a starting point...

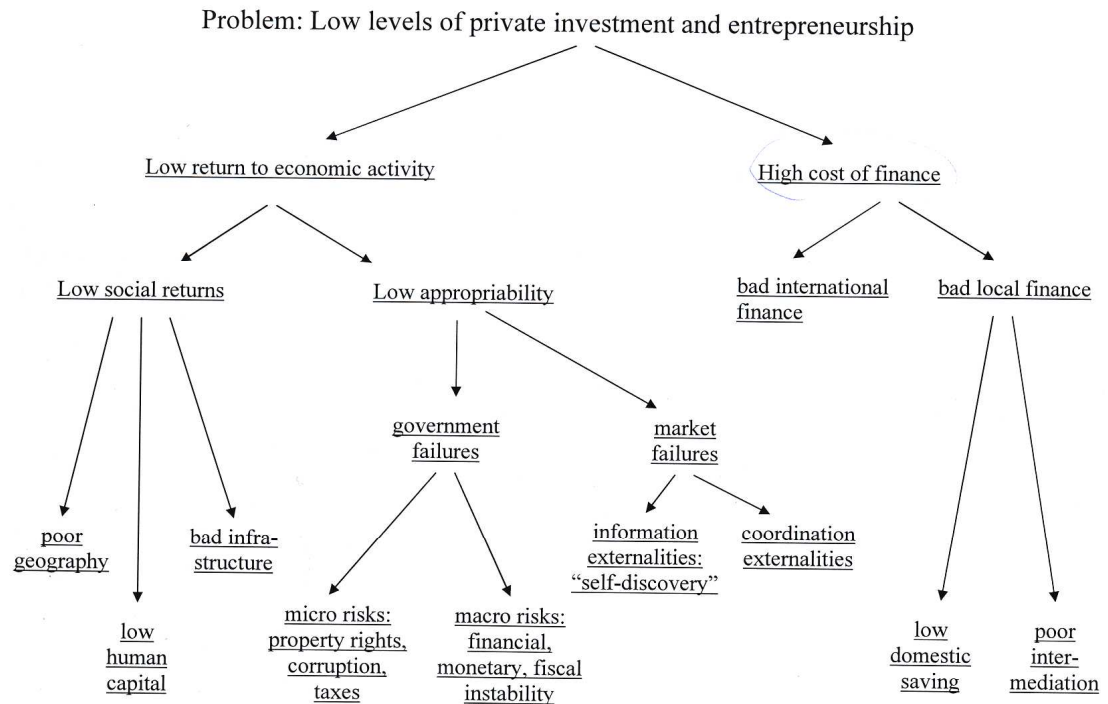
The development of an analytical and conceptual framework for growth diagnostics by Hausmann, Rodrik and Velasco has had a major impact on growth analysis and can serve as a source of inspiration also for the development of an analytical framework for inclusive and productive employment diagnostics.²⁰ Clearly and strongly inspired by medical science, it combines a binding constraint approach²¹ with the use of a 'decision tree' as tool for disentangling causal chains and identifying the fundamental, rather than proximate, constraints on growth. The decision tree - as developed by Hausmann, Rodrik and Velasco - for determining cause(s) of low levels of investments and entrepreneurship looks as follows.

¹⁸ Despite the often very high costs and risks involved and the total absence of anything resembling a free movement of labour, the number of overseas labour migrant is estimated to have increased from 156 million in 2000 to 214 in 2010 (<http://esa.un.org/migration>). Officially recorded remittances by international migrants are estimated to have increased from 132 billion USD in 2000 to 338 billion USD in 2009 (World Bank Migration and Development Brief [April 23, 2010] Outlook for Remittances Flows 2010-11 [<http://econ.worldbank.org>]).

¹⁹ There are essentially three ways of dealing with migrant workers in country level analysis. The analysis may focus on: (i) the entire labour force in a country, irrespective of origin; (ii) the labour force originating in a specific country irrespective of where it is presently employed, or (iii) it may confine the focus to the domestic labour force alone. The latter is arguably the most common, yet also least satisfying, approach. For an attempt to apply the second of these approaches, see for instance Per Ronnås, 'Labour Migration for Pro-Poor Growth: More than a Quick Fix', *Poverty in Focus*, No. 16 (December 2008) (Brasilia: International Poverty Centre).

²⁰ For a detailed presentation of the concept as applied to growth, see Ricardo Hausmann, Dani Rodrik and Andrés Velasco, *Growth Diagnostics*, John F. Kennedy School of Government, Harvard University (Cambridge, Mass., 2005). For a more general discussion, see for instance Ricardo Hausmann, Dani Rodrik and Andrés Velasco, *Getting the Diagnosis Right, Finance and Development* Vol. 43, No. 1 (Washington D.C.: IMF, 2006).

²¹ A binding constraint (on productive employment) is defined as the constraint that, if relaxed, will boost productive employment in a given situation.



Source: Hausmann, Rodrik, and Velasco (2005).

The growth diagnostics approach has a number of attractive features:

- Through its focus on identifying the binding constraint(s) at a specific point in time, it can be an effective tool for prioritising and sequencing policies and reforms.
- The focus is on understanding causal links and identifying core factors, rather than on addressing symptoms and proximate causes. The use of the decision tree facilitates, indeed compels, such a focus.
- The ‘funnel-shaped’ step-by-step approach facilitates a combination of breadth and depth in the analysis.
- It is conducive to continuous calibration of policies and reforms and to a ‘crossing one bridge at the time’ approach to development.
- It requires situation-specific analysis and results in country-specific conclusions. The approach does not lend itself to stereotype prescriptions or a narrow *ex ante* focus.
- It has proven to be a powerful analytical tool for policy-making.
- Last, but not least, the idea that diagnosis should precede and inform policy prescription is intuitively sound.

However, the approach also has limits and weaknesses. The most fundamental of these arguably has to do with the limits of the parallels between pathology and economics and the appropriateness of a wholesale adoption of an analytical method designed for the former on the latter. Physical health may be seen as a normal state. Deviation from this state in the form of illness is due to one or several causes. Once these causes have been identified and removed it may be expected that health will be restored. By contrast, sustained and inclusive economic growth can hardly be characterised as a natural state of an economy. History has proven it to be the

exception rather than the rule. The reasoning that the absence of high and inclusive growth is due to one or at most a few binding constraints (causes of ill health) and that such growth will be more or less automatically obtained if these constraints are removed therefore begs some questioning. It may be argued that sustained high rates of inclusive job-rich growth is the result of a fortuitous combination of a wide variety of factors, the nature and combination of which will have to vary over time and place. A diagnosis that identifies constraints and obstacles may need to be complemented with analyses which focus on identifying and developing actual and potential comparative advantages and strengths, combined with which it should lay the basis for well-informed policies for guided structural change and development.

While the growth diagnostic approach provides a framework for structured analysis of constraints on growth and causal chains, it is in its traditional form limited to a sorting out of uni-directional causal chains. The decision tree concept is based on an assumption of primary causes, which in their turn branch down into secondary, tertiary and root causes. Reality is typically more complex. There are likely to be inter-relationships between ‘branches’ and not only uni-directionally along ‘branches’. The interaction of different factors may combined to create vicious circles that prevent the economy from generating productive employment and the working poor and unemployed from accessing productive employment. An in-depth analysis may therefore require an exploration of these dynamics, resulting from horizontal as well as vertical inter-relationships.

To properly apply the traditional growth diagnostic approach to employment diagnostics, i.e. to identify constraints on the generation of productive employment will also require important conceptual modifications. The Hausmann, Rodrik and Velasco original growth diagnostic ‘decision tree’ takes investment of capital as the point of departure for the analysis. Thus, the subsequent analysis is divided into two main branches: ‘high cost of finance’ and ‘low (financial) return to capital (economic activity)’. To make the diagnostic conceptually coherent with a focus on identifying and removing constraints on the generation of productive employment, the point of departure ought to be ‘low returns to ‘investment’ of labour’. This requires some non-trivial modifications of the traditional growth diagnostic ‘decision tree’.

Some of the strengths of the approach are at the same time potential weaknesses. Both the binding constraint concept and the use of a decision tree lend themselves to abuse as well as good use. Some of the pitfalls and keys to avoiding these are discussed by Rodrik himself:

‘.. The framework cannot be applied mechanically and requires an inquisitive, detective’s mind-set. You need to use economic theory and evidence judiciously to look for a series of clues that will identify the most likely suspect. So while the approach comes with a decision tree, which probably accounts for its good reception in policy circles, it is different from just checking a series of boxes – which is what is often done. There is an element of craft in doing the diagnostics right, but it is a craft solidly based on economic science.’²²

²² Dani Rodrik’s weblog, November 21,2007 (<http://rodrik.typepad.com>)

Yet, the ‘decision tree’ can invite a practice of mechanical check-listing as a substitute for the more painstaking inquisitive and analytical endeavours that Rodrik calls for. The identification of one or a few binding constraints may indeed be a powerful tool when correctly done, but, if abused, may be an equally powerful tool for leading policy-makers astray.

Another important weakness is that the original approach has a strong focus on the short term; on identifying present constraints. Hence, there is a risk of losing sight of the sustainability aspects of growth.

The approach will therefore in most instances need to be combined with analysis that explore dynamic processes and interrelationships that can create ‘vicious’ as well as ‘virtuous circles’ and with analyses that focus on creating and exploiting comparative advantages and strengths through informed long-term strategies aimed at guiding structural change and development..

.... From growth diagnostics to a methodology for employment diagnostics

The arguments for the use of a diagnostic approach aimed at identifying constraints and challenges, but also opportunities, for inclusive job-rich growth are quite persuasive. Foremost among these are no doubt the importance of an analytical framework that is designed to facilitate prioritisation and sequencing of policies, reforms and other interventions. Identifying and addressing constraints and weaknesses is also a precondition for the success of any subsequent policies aimed at exploiting strengths and comparative advantages.

Relaxing the binding constraint concept. The flaws in the analogy between pathology and economic growth analysis provide compelling reasons for modification of the binding constraint concept. First, its use should be characterised by a great deal of pragmatism and be informed by a clear understanding of its limitations. Its strength lies in identifying prerequisites for inclusive and productive employments, but not necessarily in coming up with a full-fledged recipe. Second, the focus should be on identifying bundles of constraints that can realistically be addressed within a specific period of time, rather than on identifying *the* binding constraint. There may be important inter-linkages between different constraints making it necessary to address several constraints jointly. Extending the analysis to include more than one binding constraint also reduces the risk of missing important constraints. Third, some policies and reforms yield result with long time lags. Hence, future constraints may need to be addressed today, even though they are not binding at the present.

Recasting the ‘decision tree’ to make low opportunities for / returns to investments of labour / human resources the point of departure.

As discussed above, in an employment diagnostic analysis the focus is on enhancing growth and enhancing the weight of the use and returns to labour in economic activities and the growth process in an inclusive manner. Hence, the structure of the ‘decision tree’ will need to be recast to make constraints on

enhancing opportunities for and returns to investments of labour (rather than financial capital) the main point of departure.

A pragmatic approach and judicious application. The factors inhibiting expansion of inclusive job-rich growth are even more diverse and context-specific than those inhibiting growth, and a decision tree capturing all of these factors thus more complex than that developed for growth diagnostics. The flaws in the analogy between pathology and economic analysis also suggest that such a ‘decision tree’ tool would have to be used judiciously. Its main use should be as an instrument for structuring analysis, but without imposing limits on it. The pitfall of arriving at stereotype and mechanical application of an insufficiently developed and comprehensive decision tree must also be avoided. To paraphrase Dani Rodrik, a decision tree for employment diagnostics will even under the best of circumstances only provide support for a more systematic and structured application of ‘an inquisitive, detective’s mind-set’ and for judicious analysis based on a thorough understanding of the specific situation and on profound knowledge of a more generic nature. For these reasons, it would be better to think in terms of an analytical ‘reference tree’ rather than a ‘decision tree’ and to view this as one of several analytical tools, complementing and being complemented by other tools.²³

A stepwise analysis. A main strength of the diagnostic methodology is that it permits the inclusion of a broad array of complex factors into the initial analysis and offers a method for a systematic narrowing down to a focus on root causes of constraints on productive employment through a process of elimination of less important factors and a disentanglement of causal chains. The shift in focus from growth to inclusive and sustainable job-rich growth brings with it a need to bring a considerable broader range of factors into the analysis. The importance of the role of the diagnostic methodology as a funnel for narrowing down the focus to a limited number of core factors is thus heightened. In order to achieve this and to take account of inter-linkages between different types of factors a stepwise analysis is needed. A stepwise approach in the analysis is also conducive to dialogue and active involvement of national stakeholders at different stages of the work.

Depending on the context and the needs, an employment diagnostic analysis may be undertaken as a stand-alone exercise. However, it may also be undertaken as a first component in a more comprehensive analytical endeavour, which would subsequently involve more in-depth analysis of the dynamic interaction between different factors resulting in ‘vicious’ or ‘virtuous’ development processes and/or analysis of strengths, opportunities and comparative advantages aimed at informing industrial or other development policy.

²³ See the Appendix (p. 29-30) for the employment diagnostic tree.

A user-friendly methodology for employment diagnostic analysis

The diagnostic process may be seen as a funnel. Starting from a broad array of often inter-related factor a structured process of elimination and disentanglement of causal links results in a stepwise narrowing down of the focus and in the identification of core constraints on inclusive job-rich growth. The proposed main phases of this stepwise process are outlined below.

Phase One: development and employment dynamics

The first step is an analysis of the setting and of contemporary patterns and dynamics of employment and economic development. The aim of this part of the analysis is to guide the subsequent analysis by arriving at an understanding of the *country-specific development context and employment situation*. This should be sufficiently comprehensive to permit a first broad identification of hypotheses regarding strengths and weaknesses of the economy and labour market and of the likely challenges in broad terms for sustainable inclusive job-rich growth.

This first analysis should contain an overview of three main areas and issues: (i) demographic and other given factors; (ii) the broad patterns and dynamics of employment, income, inequality and poverty, and (iii) the sector-specific growth, employment and productivity dynamics.

The first part of the development and employment dynamics analysis reviews the main external forces that serve as parameters for the subsequent analysis. The *demographic structure and its dynamics* (including parameters such as the rates of population growth, fertility, age and sex structure and internal and external migration) is a useful starting point for this analysis since the human resources and the necessity to create preconditions conducive to unleashing the creative and productive forces inherent in this resource base are fundamental. A second important starting point is the *global context* since it provides the given framework for economic opportunities and limitations in the medium to long term. This includes geographical considerations as well as the given context, institutional and otherwise, for global economic interaction and integration.

The subsequent second and third parts can usefully be structured in line with the following stylised formula:

$$\frac{GDP_t}{Population_t} = \frac{WorkingAgePopulation_t}{Population} * \frac{LabourForce_t}{WorkingAgePopulation_t} * \frac{Employment_t}{LabourForce_t} * \frac{GDP_t}{Employment_t}$$

Or

$$G_t = S_t * A_t * E_t * P_t$$

In other words change in GDP per capita is the sum of the changes the following:

1. Age structure, S_t ²⁴
2. Activity rate, A_t
3. Employment rate, E_t ²⁵
4. Labour productivity, P_t

The second part provides an overview of the main dynamics and patterns of the labour force and employment – corresponding to the first three components of the formula above – as well as incomes, inequality and poverty. Figure 3 provides a stylised picture of the employment and labour force information that should be reviewed. This should be followed by a mapping of changes and patterns of income inequality and poverty to gain information on who the working poor are, the distributional aspects of past economic development and its impact on the number and whereabouts of the working poor. This information should be broken down by sex.

²⁴ The reason for this follows.

1. When we take log differences, we do the following:

$$G_t = S_t * A_t * E_t * P_t$$

Taking logs,

$$\log G_t = \log S_t + \log A_t + \log E_t + \log P_t$$

We can represent this by

$$g_t = s_t + a_t + e_t + p_t$$

2. We have the same for the period $t - 1$,

$$g_{t-1} = s_{t-1} + a_{t-1} + e_{t-1} + p_{t-1}$$

3. So we can subtract the above two equations to get log differences,

$$g_t - g_{t-1} = s_t - s_{t-1} + a_t - a_{t-1} + e_t - e_{t-1} + p_t - p_{t-1}$$

4. And we know that

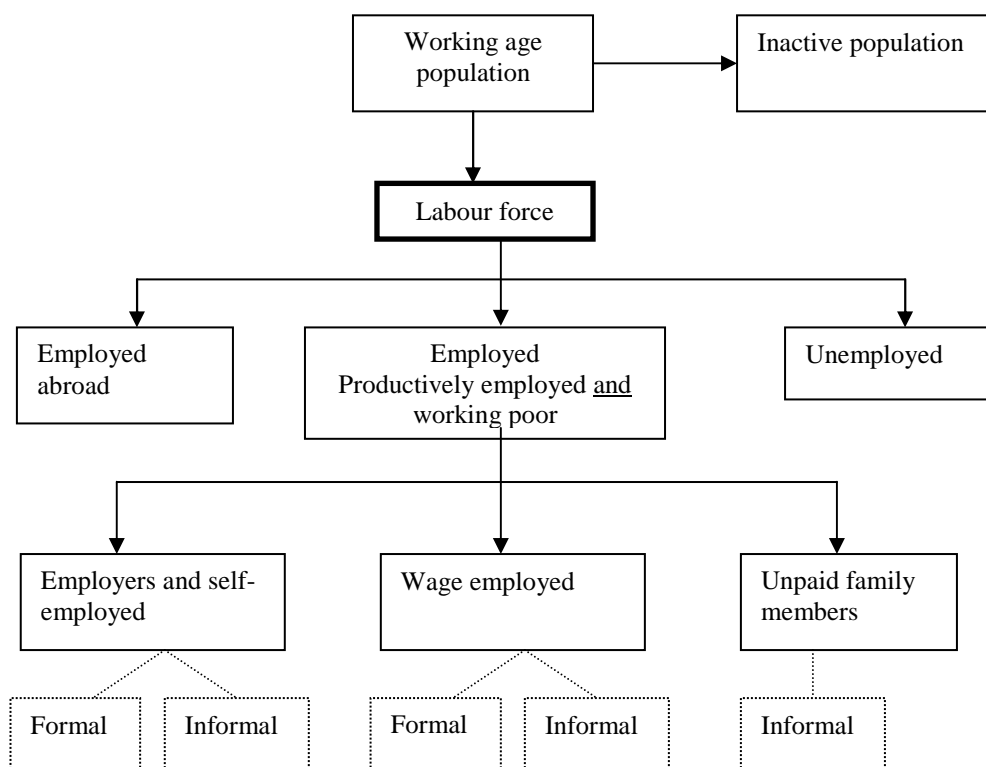
$$\begin{aligned} g_t - g_{t-1} &= \log G_t - \log G_{t-1} = \log \left\{ \frac{G_t}{G_{t-1}} \right\} \\ &= \log \left\{ \frac{G_t}{G_{t-1}} - 1 + 1 \right\} \\ &= \log \left\{ \frac{G_t - G_{t-1}}{G_{t-1}} + 1 \right\} \\ &\cong \frac{G_t - G_{t-1}}{G_{t-1}} \end{aligned}$$

5. If we do the same for all the other terms in the equation in 3., we get that,

$$\frac{G_t - G_{t-1}}{G_{t-1}} = \frac{S_t - S_{t-1}}{S_{t-1}} + \frac{A_t - A_{t-1}}{A_{t-1}} + \frac{E_t - E_{t-1}}{E_{t-1}} + \frac{P_t - P_{t-1}}{P_{t-1}}$$

²⁵ Note that this is not exactly how employment rate is defined, but it expresses the same information

Figure 3: The employment tree



The third part is an analysis of the development of *the economic structure, reliance on natural resources and the dynamics of economic and employment growth and of labour productivity*, corresponding to the final component of the formula above. Following an overview, the analysis should be broken down by main economic sectors, by sex (where possible) and by geographic areas (where relevant) - and cast against the demographic, employment and poverty overviews. In countries with high rates of overseas labour migration this aspect should also be incorporated into the analysis. A few basic tables can often go a long way towards providing the desired information.²⁶ The understanding of these dynamics can help shed light on whether structural changes and trends are due to ‘pull’ or ‘push’ factors, i.e. demand-driven or a result of distress situations. The analysis should be linked to, and interpreted, in the context of other key economic and demographic variables.

²⁶ Such as tables showing development of employment, value added and labour productivity by main sectors, sector contribution to GDP growth and employment growth, sex-specific employment by sector, sector specific wage dynamics.

Phase Two: a structured diagnostic

This phase of the diagnostic analysis is structured as depicted in the ‘employment diagnostic tree’ below. The conceptual framework outlined above provides the logical basis for the design of the ‘tree’. The starting point is the desire to reduce a deficiency of productive employment through enhanced inclusive job-rich growth. The analysis is pursued along three main branches (Level A): Productive resources / employability, the opportunities for and returns to employment and sustainability issues. The main sequence of the analysis is level by level - i.e. B before C, C before D and D before E – although some flexibility will inevitably be needed. The attention and importance accorded to each branch and sub-branch will depend on their identified importance as constraints or challenges to enhancing inclusive and job-rich growth, which inevitably will vary from one situation to another. Hence, all branches need not be explored down to the lowest level. For instance, in a situation of high and robust growth, the ‘Economic growth’ branch and sub-branches may not need any further attention.

This phase of the diagnostic analysis should be undertaken against the backdrop of and be informed by the overview of the development and employment dynamics (Phase One) as well as by the employment target analysis (below) and consultations with national counterparts. The knowledge gained from these analytical exercises will facilitate an interpretation of the indicators attached to the various ‘branches’ in the reference tree and speed up the process of elimination, disentanglement of causal chains and identification of core causal factors and constraints without compromising on the robustness and relevance of the conclusions drawn. Indeed, while the ‘employment diagnostic tree’ may seem dauntingly comprehensive and complex, it should be remembered that a main feature of the diagnostics is that of early and step-wise exclusion of non-relevant aspects.

The phase begins with a tour d’horizon of the ‘upper’ branches of the employment diagnostic tree – level B and C – to determine where the main constraints and challenges to enhancing productive employment are likely to be found. This first analysis may also extend to a review of the branches at level D with a view to derive hypothesis on the nature and causes of these constraints and suggestions for further in-depth analysis.

Causal relationships do not necessarily follow branches, but there may also be important interplay and causal links across the main branches. An unsuitable sector composition of growth may not only exert a negative impact on the quality of growth, but also on the level of growth, as well as impair the inclusiveness and sustainability of growth. A high degree of inequality with regard to resource endowment and/or opportunities is likely to have a negative impact on the rate of growth. In some instances there may be a long term vicious circle between low levels of human resources development and poor opportunities in the form of slow or poor quality growth and inequality. The list of possible interrelationships across branches can be made very long. Hence, the exploration of vertical causal chains along the branches of the employment diagnostic tree will need to be combined with analysis of probable horizontal interrelationships across branches.

Setting employment targets

In most instances it will be appropriate for an employment diagnostic analysis and an exercise aimed at establishing sector-specific and aggregate employment forecasts and targets to go hand in hand. Both of these exercises serve the purpose of linking economic analysis and policy with employment and labour market analysis and policy and to provide a basis for policy coherence. ILO has also developed more sophisticated methods for translating sector specific economic growth targets into sector specific employment forecasts / targets. Further sector specific analysis can provide information on sector-specific employment generating potentials. Matching these with politically established or desired targets for productive employment, which in some instances may be derived from national poverty reduction targets and/or MDG targets, will provide information on the 'productive employment gap' between the likely employment outcomes of planned / forecast economic growth trajectories on the one hand and targets for productive employment and reduction of working poverty and unemployment on the other hand.

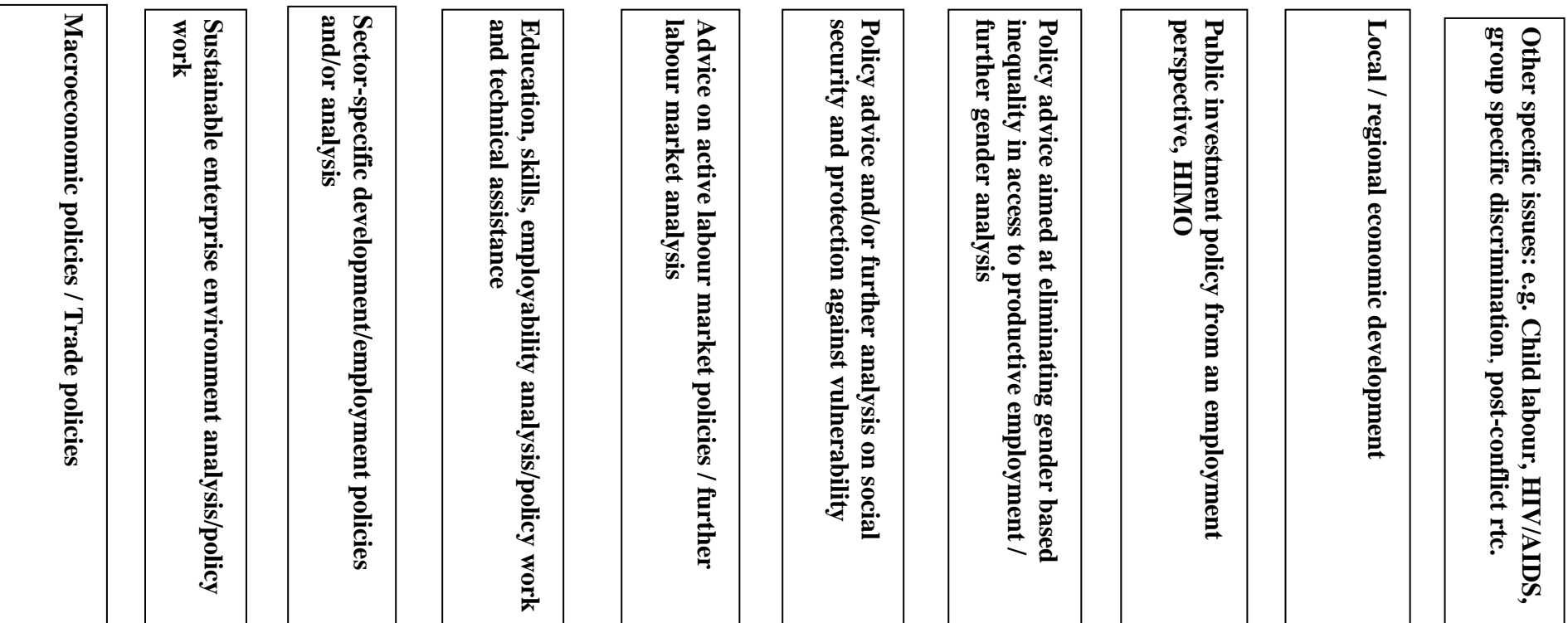
The precise nature of employment targets will obviously vary from country to country. Often, countries may have established various types of employment targets through political commitments to reduce unemployment, increase youth employment, reduce regional differences in employment etc. A breakdown of employment targets by sex is to be recommended as a rule. Where appropriate, targets may also be related to specific, vulnerable groups.

The identified / proposed employment targets should be cast against the development and employment dynamics analysis (above). This will yield a good understanding of the magnitude of the 'employment challenge'. It will also give a good idea of the nature and magnitude of changes in terms of rate and quality of growth – and not least the sector composition – needed to achieve the targets as well as some information on challenges in the areas of employability and access. Where relevant, further sector specific work may also be warranted, e.g., assessments of sector specific employment growth potentials → proposals for sector targets → implications for sector specific development.

Further specialised analysis, policy formulation and support with policy implementation

The employment diagnostic analysis aims to identify the main constraints on inclusive sustainable job-rich growth and the main challenges that need to be addressed to enhance the creation of productive employment and achieve established employment targets, but it does not address the question how. Thus, the conclusions from employment diagnostic analysis form the basis for follow-up activities such as policy formulation, subsequent technical assistance, and, where needed, further specialised in-depth analysis involving one or several of the pillars below (Figure 4).

Figure 4: Possible areas for follow-up analysis, policy formulation and technical assistance.



Implementing an Employment Diagnostic Analysis

The objective of employment diagnostic analysis is to inform, through a structured knowledge building process, policies and interventions with a view to enhance productive employment through inclusive and job-rich growth. This objective can only be achieved if there is an active involvement throughout the knowledge building process of those who will have the main responsibility for translating knowledge into policies and for implementing these policies and interventions. To this end, it is often useful to establish a steering committee consisting of key national counterparts and experts and to explicitly build in opportunities for consultation in the implementation plan. Other aspects, too, such as the need to ensure a high level quality and situation specific relevance of the analytical work, underscore the need for a participatory process. Scope for 'hands-on' training in employment diagnostic analysis should also be actively sought and exploited whenever and wherever possible. The present methodology is designed with a view to facilitate such a participatory process.

Within the parameters of necessity of a participatory process, there is scope for a great deal of flexibility in the mode of implementation. In all instances the starting point will need to be a broad-based and explicit demand from ILO constituents in the country in question. By way of illustration, two possible modes of implementation are presented below.

Implementation model A

1. In-country meetings to agree with constituents and national counterparts on the objective, scope and mode of implementation of the proposed employment diagnostic and targeting work. At this point it should also be clarified what national policy processes - national development strategies/PRS, national employment strategies etc. - the work is expected to feed into as well as the implications for the timeframe of the work.
2. Establishment of core analytical team, preferably including national researcher(s), steering committee and principles for coordination and communication.
3. Implementation of '*Phase One of the Employment Diagnostic Analysis: Development and Employment Dynamics*'.
4. Initiation of work on employment forecasts / targeting.
5. Drafting of inception report based on (3) and (4), above.
6. In country presentation of inception report and discussion of main findings and conclusions of work done under point 3-5, above. Discussion and agreement on the follow-up work.
7. Implementation of the main diagnostic analysis and finalisation of work on employment forecasting / targeting.
8. Presentation and discussion of findings and policy conclusions of the main and final diagnostic and targeting work. Discussion and agreement of follow up-activities.
9. Assistance with policy formulation.

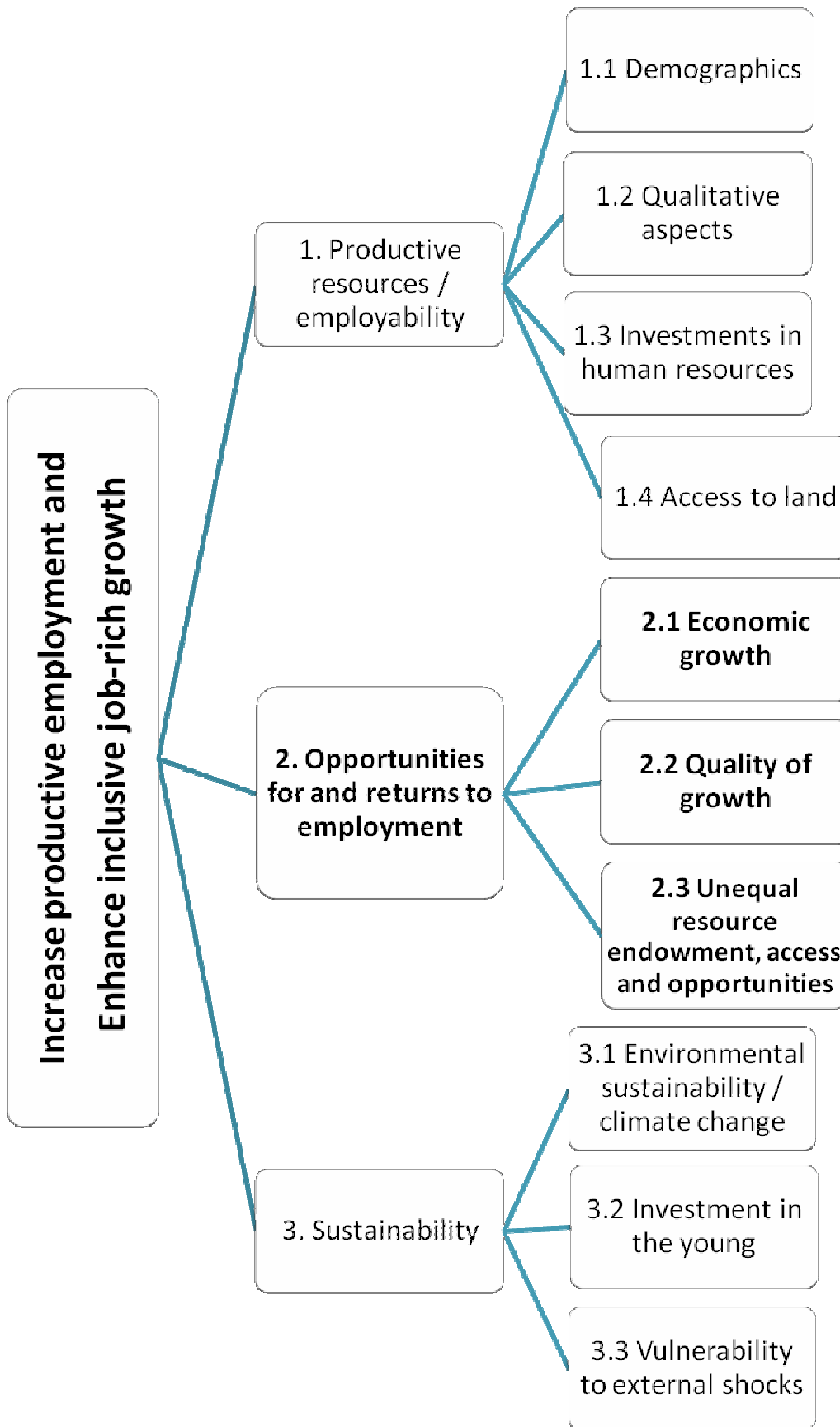
Implementation model B

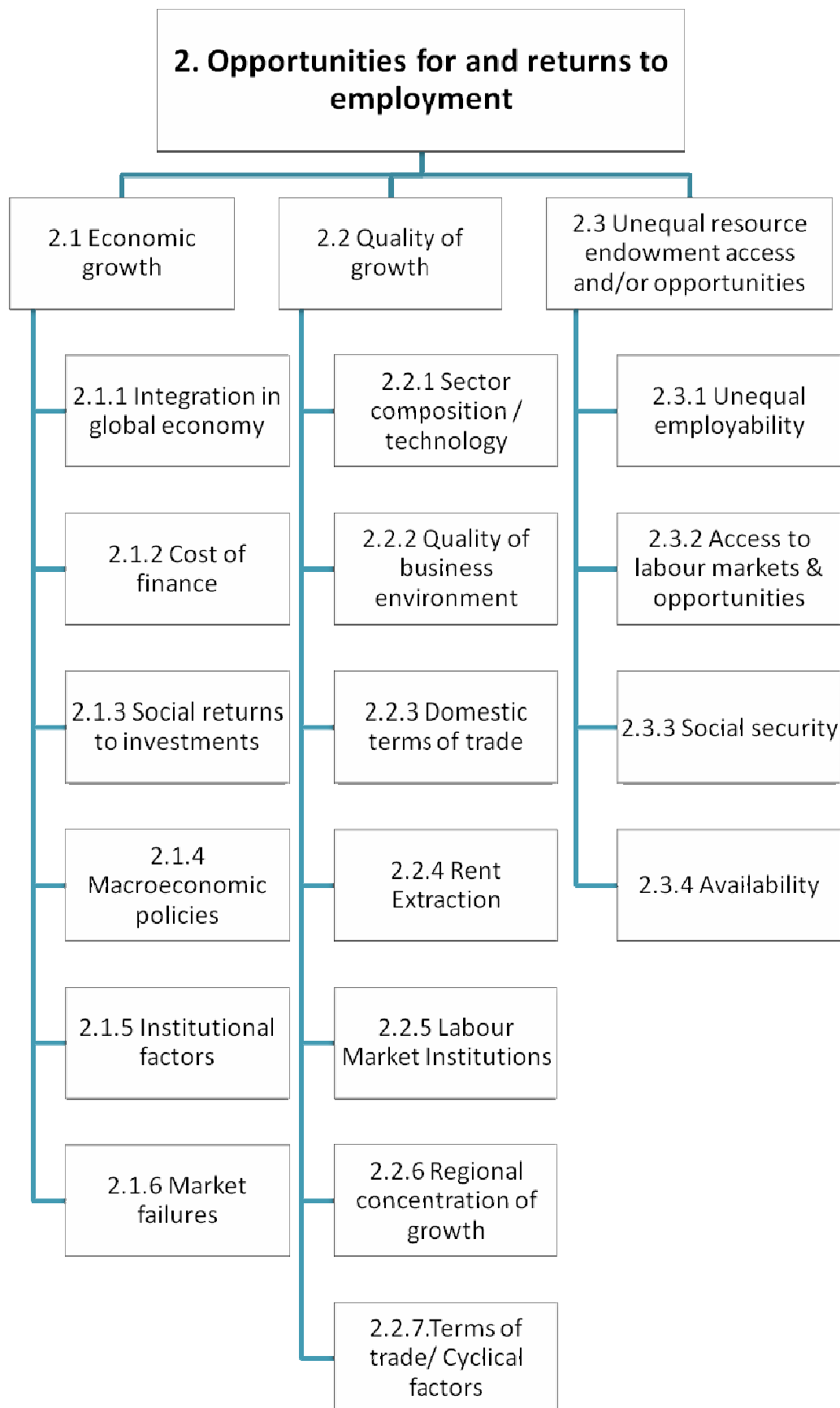
1. In country meetings to agree with constituents and national counterparts on the objective, scope and mode of implementation of the proposed employment diagnostic and targeting work. At this point it should also be clarified what national policy processes - national development strategies/PRS, national employment strategies etc. - the work is expected to feed into as well as the implications for the timeframe of the work.
2. Establishment of core analytical team, preferably including national researcher(s), steering committee and principles for coordination and communication.
3. Implementation of '*Phase One of the Employment Diagnostic Analysis: Development and Employment Dynamics* and a first round (Tour d'horizon) of *Phase Two: A Structured Diagnostic*, including of assembly of data on the indicators.
4. Initiation of work on employment forecasts / targeting.
5. Preparation of material for training course in employment diagnostic analysis, including a methodological guide and the results of the analytical work undertaken under (3) above.
6. Holding of one or several training courses for ILO constituents and counterparts at the heart of which will be a guided implementation by the participants themselves of a structured, stepwise employment diagnostic analysis. The purpose of these training courses will be fourfold: (i) joint knowledge-building on the country specific constraints, challenges and opportunities for enhancing inclusive job-rich growth; (ii) capacity building among our constituents in the field of employment analysis, and; (iii) social dialogue, arriving at a common understanding of key employment challenges based on joint analysis and the type of policies needed to address these challenges.
7. Finalisation of work on employment targeting (which may precede (5) and (6) above in time).
8. Discussion and agreement of follow up-activities, including any further in-depth specialised analytical work.
9. Assistance with policy formulation.

Appendix:

Conceptual and Methodological Guide to Employment Diagnostic Analysis

*Comments and guidelines for the
use of the employment diagnostic
tree and on the links with the
follow-up analysis*





1. Productive resources/employability

Comment: The human resources and the labour force are the creators of economic growth and not just the beneficiaries of growth. Investments in a qualitative development of human resources together with improved opportunities to enhance the economic returns of these resources make up the foundation of job-rich growth. The qualitative attributes that determine employability – education, skills, health, cognitive abilities etc. – set the parameters for individual persons' ability to access productive employment as well as for the scope for technological advancement, increased labour productivity and returns to labour at the aggregate level.

Employability refers to the endowments of the labour force with qualitative attributes that enhance their attractiveness on the labour market, their capabilities as independent economic agents and their productivity. This main 'branch' covers several aspects:

- The level and characteristics of the human resource base at present from an employability perspective disaggregated by sex.
- The level and characteristics, both quantitative and qualitative, of present investments in human resources, disaggregated by sex.
- The institutional capacity to invest in human resource development.

These assessments need to be made against the present as well as the expected future (5-10 year horizon) needs and requirements of the economy.

1.1 Demographics

Comment: The demographic structure and dynamics have strong bearing on both the need and the ability of the economy to generate productive employment. The ratio between the young and the old (typically those aged under 15 and over 65) and the working age population determine the dependency ratio, i.e. the number of people each working age person has to support. Changes in the age structure of the population will invariably influence per capita income and have a major impact on both the need and the scope for increasing labour productivity and returns to employment. The current age structure of the population also determines the need for employment generation – new jobs – in the medium 10-15 year period. These are factors over which the government can exercise little or no influence, at least not in the short and medium term.

1.1.1 Population growth/decline

Main indicators:

- Rate of population growth
- Rate of natural population increase
- Total fertility rate.
- Age structure.
- Migration

1.1.2 *Dependency ratio*

Comment: The dependency ratio has a direct impact on the number of working poor [as defined by ILO]; it also exerts an influence on savings and investments not least in human resources and on participation rates in the labour force [availability]. Distinguish between a high dependency ratio due to large number of young in the population and high dependency due to large number of elderly.

Indicator:

- Age based dependency ratio (-15 & 65+ / 15-65).

1.1.3 *Rate of growth of the labour force / working age population*

Comment: This should not be seen as a negative factor, labour being a factor of production, but it does have a strong bearing on the outcome in terms of inclusive and productive employment and hence on the subsequent analysis.

Indicator:

- Rate of growth of the population in the 15 – 60/65 age groups, during past 5/10 years and in coming 5 / 10 years.

1.2 Qualitative aspects of human resources / employability

Comment: This includes all the qualitative attributes that determine an individual's ability to access productive employment. At the national level it sets the parameters for the capability and capacity to embrace technological advancement, increase labour productivity and returns to labour. At the core are aspects such as education, skills and cognitive abilities, but it also includes aspects of health. The information needs to be disaggregated by sex. The choice of indicators will depend on their context specific relevance. For instance, indicators such as literacy, basic education and maternal mortality may be highly relevant in least developed countries, while other indicators are more relevant in middle-income countries.

Main indicators:

- Educational attainment of adult population (25+) and/or labour force.
- Educational attainment of youth (15-19 and 20-25).
- Enrolment in education by level and possibly type
- % transition to secondary & to tertiary education.
- Graduation / success rate in education by level / type of education
- (il)literacy rates
- Student assessment rates; PISA scores
- Infant/child and maternal mortality
- HIV/AIDS prevalence
- Stunting and wasting among children
- Other relevant health related indicators.

1.3 Investments in human resources

Comment: This covers quantitative and qualitative aspects of the current investments in human resources – education, vocational training, health care etc. – as well as the

institutional constraints and capacity to undertake such investments. Where appropriate the information should be disaggregated by sex.

Main indicators:

- Public expenditure on education and on health care / per capita and as share of GDP;
- Teacher per thousand aged 5-15,
- Doctors / qualified nurses/1000 inhabitants.
- Class sizes at different levels.

1.4 Access to land and other production factors

Access to other productive factors such as land is additional and complementary to the human resources, and as such will typically make it possible to achieve higher returns to labour.

2. Opportunities for / returns to employment

Comment: The opportunities for and returns to productive employment depends largely on the ability of the economy to generate productive employment opportunities, on a match in terms of skills and qualifications between the supply and demand for labour and the ease with which people can access productive employment opportunities on an equal footing. To assess this, three broad types of factors need to be explored: (1) the rate of economic growth, (2) the quality of growth and (3) issues of inequality in resource endowment, access and opportunities.

Main indicators:

- Labour force participation rates
- Employment rates
- Unemployment rates
- Share of working poor in labour force / underemployment
- Labour migration abroad.

2.1 Factors that mainly affect the rate of economic growth

Comment: Economic growth is a prerequisite for increasing productive employment. Economic growth is the combined result of increases in employment and increases in labour productivity. Hence the rate of economic growth sets the absolute limits within growth in employment and growth in labour productivity can take place. Often, there is a need to increase both the number of jobs and the economic returns to employment, which in its turn require an increase in labour productivity. To meet both of these needs, sustained high rates of economic growth are often needed.

Main indicators:

- GDP growth,
- Per capita GDP growth.

2.1.1 Degree and terms of integration in global economic structures

Comment: This 'branch' includes both the degree and nature of integration in global economic structures and the terms of this integration. This exercises an influence not only over the rate of growth, but also over the structure, sustainability and quality of growth. It also exerts a strong influence over the policy space available to the government.

2.1.1.1 Degree of integration in global economic structures

Main indicators:

- Trade as % of GDP (may be broken down by goods and services).
- Inflows of FDI (average over several years). Same as for 2.1.2.1 'Access to international finance below.
- Cross-border flows of migrants (net or gross)
- Stock of migrant workers in the country
- Stock of migrant workers working abroad
- Composition of exports and imports (raw material, intermediate goods, final goods)
- Direction of exports (regional/non-regional)
- Member of WTO, membership in regional trade blocs.

2.1.1.2 Terms of integration in global economic structures

→ Trade policy analysis

Locational factors

- Landlocked countries or small island states at considerable distance from main global centres.
- Per capita GDP of neighbouring countries
- One or several neighbouring countries suffering from conflict or other severe governance problems.

External terms of trade.

Indicator:

- Development of external terms of trade (Net barter terms of trade)

External barriers to trade and the free flow of production factors

Comment: External barriers to trade and to competition and economic exchange with the outside world on equal terms.

Indicator: to be identified

2.1.2 Cost of finance

Comment: The cost of finance is one of the determining factors of the level of investments in an economy, the other being the expected returns to investments. The cost of capital can depend on a range of factors, such as access the level of domestic savings, access to international capital, monetary policies and the functioning of the capital markets. Different types of economic actors do often not have equal access to external capital. In situations of poorly functioning financial markets or inefficient institutions and mechanisms for contract enforcement and establishment of property rights, small firms tend to suffer disproportionately from poor access to external finance.

→ Macroeconomic policies, financial sector analysis, sustainable enterprise environment analysis.

2.1.2.1 Access to international finance

Main indicators:

- International credit ratings
- Terms of borrowing from abroad
- Inflow of FDI as percentage of GDP and of total gross capital formation
- Access to ODA.

2.1.2.2 Availability/access to local finance

Domestic savings

Comment: Low rates of total and private domestic savings restricting the availability of domestic capital for investments. High rates of domestic public borrowing can crowd out private borrowing

Main Indicators:

- Domestic total, private and public savings rates.
- Public domestic borrowing / debt
- Domestic credit as % of GDP
- Real lending rate to prime customers

2.1.2.3 Financial intermediation

Comment: The functioning of capital markets is important for overall access to capital as well as for equality in access to finance. A poor functioning of capital markets may have a wide range of causes, but are often rooted in ineffective systems for contract enforcement and property rights and inadequate channels and sources of information to assess risks. The spread between lending and savings rates and the spread of lending rates between different types of borrowers are good indicators of the functioning of the financial markets, but may need to be complemented by indicators of access to formal capital markets, access to medium- and long term credits and access to micro-finance.

Main indicators:

- Spread between lending and saving rates
- Spread in lending rates
- Difficulty of accessing credits [e.g. from Doing Business reports].
- Access to micro-finance facilities

2.1.3 'Social' returns to investments

Comment: This should be interpreted in a broad sense as the returns to society at large of accumulation of physical capital, human resources, technology, etc. This depends on a range of factors such as:

Geographic factors

Comment: Space imposes a high friction on economic transactions. Closely linked to bad infrastructure and 'coordination externalities'.

Main indicator: Costs of transport

Level of human resources development

Comment: Similar to 1. ‘Productive resources/employability’ (above), but here as an impediment to growth.

Main indicators: See 1. *Productive resources*.

Infrastructure

Comment: Poor physical infrastructure and ITC, but also more broadly poor environment for technological diffusion.

Main indicators:

- Km all-weather road per square kilometre
- Extent of electrification
- Irrigation
- Access to telephone, internet
- International internet bandwidth bits per second/capita.

2.1.4 Macroeconomic policies

Macroeconomic (in)stability

Comment: Macroeconomic instability distorts incentives, and reduces the predictability of the overall economic environment needed for medium and long term investments. Even fairly brief economic shocks can have long term negative impact on employment. Hence, ensuring a high degree of predictability in the economic environment and minimising exposure and vulnerability to both externally and internally induced economic shocks is crucial. Macroeconomic instability and uncertainty, erratic reforms and other macro level factors affecting predictability are included here.

Indicators:

- Level and fluctuation of inflation.
- Fluctuation of interest rates and exchange rate.
- Sustainability of public debt.
- Frequency of abrupt policy changes.
- Exchange rate regime.
- Capital market controls.
- Degree of integration in global financial systems

Macroeconomic policies impairing / aiding growth.

Comment: Macro-economic stability is necessary, but seldom sufficient to achieve sustainable and inclusive job-rich growth. Macro-economic policies may be conducive to stability, at least in the short run, yet detrimental to competitiveness, sustained investments in human and physical capital or institutional capacity building or various types of counter-cyclical policies, that is the overall goal of job-rich growth. Hence, macro-economic policies need to be assessed from the perspective of enabling / constraining sustainable job-rich growth. This will typically require a specific and qualified macroeconomic analysis.

Example of indicators:

- Share of tradables in GDP and in export.
- Evolution of real exchange rate.

→ Macroeconomic analysis

2.1.5 Institutional factors

Comment: The sustainability of the business environment is likely to affect both the rate and quality of economic growth. See section 2.2.2 'Quality of Business Environment' for indicators on this, as well as rent seeking in section 2.2.4.

2.1.6 Efficiency / functioning of markets

Comment: This heading covers the whole gamut of market malfunctioning: e.g. geographic market fragmentation, poorly functioning factor markets and markets for inputs and outputs, lack of learning and coordination externalities²⁷ and positive agglomeration effects. It will need to be further sub-divided.

Indicators: E.g. regional variation in market prices, seasonal fluctuations in food prices. Presence and intensity of competition. Density of firms. Some CPIA and Doing Business indicators can be used, more needs to be developed.

²⁷ Learning externalities refer inter alia to the ease by which learning can be transmitted from innovating 'advanced' firms to others (*knowledge and technological spillover*) as well as high threshold costs and economies of scale in searching for information needed to enter and embark on new markets, products, etc. Coordination externalities to the reduction of transaction costs that follows from a high density and diversity of local enterprises and increased ease of establishing vertical and horizontal linkages between enterprises.

2.2 Factors mainly affecting the quality of growth

Main indicator: Composite employment elasticity measure to capture the productive employment – growth elasticity; the share of returns to labour in GDP.

→ Sector specific analysis, sustainable enterprise environment analysis

2.2.1 *Sector composition of growth*

Comment: Growth may be concentrated to sectors which are inefficient in terms of generation of productive employment, i.e. with low labour intensity and/or low returns to labour, or to sectors to which the working poor and unemployed have poor access. Growth may also be concentrated to sectors with small multiplier effects. A concentration of growth to sectors with low shares of tradables would flag problems of competitiveness and sustainability.

Indicators: A simple analysis of the sector specific dynamics of growth of value added, employment and labour productivity will provide useful insights. More sophisticated tools such as value-added chain analysis, product space analysis and construction of Social accounting matrices (SAMs) and CGEs are also useful in this context.

2.2.1bis *Technology choice*

Comment: Even within sectors, there may be a choice of alternative technologies.

Indicator: It should be possible to use/adapt techniques developed for EIIP/HIMO for assessing this aspect

2.2.2 *Quality of Business Environment*

Comment: The seventeen indicators to assess the environment for sustainability of enterprises, as determined by the ILO²⁸, are used to measure the quality of business environment.

Indicator: Peace and political stability, good governance, social dialogue, respect for universal human rights, entrepreneurial culture, sound and stable macroeconomic policy, trade and sustainable economic integration, enabling legal and regulatory environment, rule of law and secure property rights, fair competition, access to financial services, physical infrastructure, information and communications technology, education, training and lifelong learning, social justice and social inclusion, adequate social protection, responsible stewardship of the environment.

→ Sustainable enterprise environment analysis

2.2.3 *Domestic terms of trade*

Comment: Adverse terms of trade in the labour intensive sectors and/or in sectors with a high proportion of working poor lower the marginal product of labour in these sectors and thus represses employment and returns to labour.

Indicators: Dynamics of terms of trade between goods produced in labour intensive sectors and those produced in less labour intensive sectors, e.g.

²⁸ International Labour Conference, June 2007, 'Conclusions concerning the promotion of sustainable enterprises', (Geneva: International Labour Office)

changes in terms of trade between agricultural and non-agricultural goods. Comparison of sector growth rates at sector specific constant prices with growth rates at current prices discounted by overall rate of inflation.

2.2.4 Rent extraction

Comment: Rent extraction may take a variety of forms. E.g. excessive profits derived from a position of monopoly or oligopoly; rents accrued from natural resource extraction; as well as abuse of position of power or influence for personal gains. It diverts income from those who produce it and thus reduces the returns to labour. Some form of rent extraction may also affect employability and access negatively and may have an adverse effect on growth.

Indicators: A combination of indicators are needed to capture this factor. For rent extraction resulting from corruption Transparency International's Corruption Perception Index provides a composite index, which may be used as proxy. The 'Doing Business reports provide another source of more detailed information. Indicators that captures monopoly rents, land rents (in agriculture), and rents from immaterial property rights need to be developed.

2.2.5 Labour market institutions

Comment: Unionisation of workers and respect for the principles of collective bargaining can help overcome unequal power relations on the labour market and enhance the returns to labour in the form of higher wages. Trade unions can also help protect individual workers against intimidation and discrimination at the work place. Minimum wages and labour regulations may serve as instruments for enhancing the employment content of growth and productive employment.

Indicators: Participation rates in trade unions / employers' organisations; collective bargaining coverage rate, ratification of fundamental ILO conventions. Minimum wage legislation.

2.2.6 Regional concentration of economic growth / activities

Comment: A high degree of geographic concentration of economic activities and growth and mismatch between the spatial distribution of the labour force and of economic activities has a negative impact on access to productive employment and tend to increase inequality. See Also Employability and Access, below.

Indicators: Regional / geographic differences in per capita GDP. Regional differences in personal income and in poverty.

→ Local economic development

2.2.7 Terms of Trade, Cyclical factors

Comment: For countries exporting raw material, improvement in external terms of trade will have a positive impact on economic growth, which has little to do with changes in level and productivity of production and which is usually not translated into employment growth. Changes in employment tend to follow cyclical changes in the level of production with a time lag. Hence, the employment elasticity of growth is typically low in periods of post-crisis recovery, but high in the early stages of a downturn.

Indicators: Development of world market prices for specific commodities. Discrepancies between value and volume growth of export of raw material. Sector specific development of value added and employment in earlier periods.

2.3 Unequal resource endowment, access and/or opportunities

Main indicator: The Gini coefficient for income. Employment rates disaggregated by sex.

2.3.1 Unequal employability

Comment: Employability refers to the endowments of the labour force with qualitative attributes that enhance their attractiveness on the labour market, their capabilities as independent economic agents and their productivity. Essentially the same analysis as for *1. Productive resources / employability*, but with a focus on inequality in this regard. The analysis should be disaggregated by sex.

→ Education, skills & employability analysis, also sustainable enterprise environment analysis for some aspects (see below). Gender analysis

2.3.1.1 Education and skills

Indicators: Same indicators as for *1. Productive resources /employability*, but with a focus on variations. Data broken down by e.g. sex, rural/urban, household income.

2.3.1.2 Health and nutrition

Indicators: life expectancy, mortality/infant mortality rate, same indicators as for *1. Productive resources* but with a focus on variations. Data broken down by e.g. sex/ rural/urban, household income

2.3.1.3. Access to production factors other than labour

Comment: I.e. access to land, capital and arguably technology. Gender-based inequalities should be explored.

Indicators: Distribution and size of (arable) land holding among rural households; access to capital; access to common resources; access to technology (tools, machinery, physical capital). Most of this data can be obtained from household budget surveys, employment surveys or living standard measurement surveys.

→ Sustainable enterprise environment analysis for some aspects (see below), gender analysis.

2.3.2 Access to labour markets and economic opportunities

Comment: Endowment with resources to engage in productive work (employability) needs to be matched with opportunities to make optimal use of these resources. The analysis of this aspect will need to capture gender-based inequalities.

Indicators: Employment/unemployment rates, percentage of the working poor, employment status, wages/returns to labour by key variables such as sex and age, rural/urban, region etc.

→ Labour market analysis, sustainable enterprise environment analysis (own account workers/entrepreneurs), gender analysis

2.3.2.1 Geographic, occupational and social mobility

Comment: As the most dynamic economic sectors and regions seldom coincide with those where the working poor and unemployed are found, mobility is crucial for accessing productive employment opportunities and for benefitting from opportunities created by structural change. Differences in mobility of men and women should be captured.

Geographic mobility

See also 2.2.5 'Regional concentration of economic growth' above.

Indicators: Large regional aggregate and intra-occupational variations in earnings and in poverty, co-existence of occupation specific unemployment and shortages of labour, census data on residential mobility and on temporary mobility.

Occupational mobility

Indicators: Inter-occupational and inter-sectoral differences in earnings. Persistent inter-sectoral mismatches in supply and demand for labour; structural unemployment; insufficient facilities for retraining and other active labour market policies; occupational histories.

Social mobility

Comment: This includes cultural stereo-typing of occupations along gender, ethnic, religious or other lines and other similar impediments.

Indicators: Anthropological and sociological studies, anecdotal evidence? Gender/group specific differences in unemployment, earnings and access to productive employment.

2.3.2.2 Functioning of labour markets

Poorly functioning labour market intermediation

Indicators: E.g. rates of frictional unemployment, frequency of use of formal channels for labour market intermediation, high fees for labour market intermediation (not least for labour migrants).

Inappropriate labour legislation / rules, insider – outsider problems

Indicators: Prevalence and growth of informal sector wage employment, differences in earnings, working conditions and social protection between workers in the informal and formal sectors of economy. Other indicators of asymmetry of power between 'insiders' and 'outsiders'.

2.3.2.3 Business environment for the working poor and unemployed

Comment: This factor needs to be further developed and disentangled. Its gender dimensions will also need to be captured.

→ Sustainable enterprise environment analysis

Indicator: Incidence of participation in the formal economy among small scale non-farm entrepreneurs.

Market failures

Comment: In particular, poorly functioning credit markets and informational asymmetries resulting in unduly high costs of credit and difficult access to credit for the working poor (as entrepreneurs).

2.3.3 Social security, vulnerability

Comment: Lack of economic margins forces people to become highly risk adverse at the expense of income / profit maximisation.

Indicators: E.g. household savings, possession of liquid assets, public social protection schemes. Main source of data: income / expenditure and employment surveys. Sex-disaggregated data should be used, where possible.
→ Social security analysis

2.3.4 Availability

Comment: Time constraints on labour force participation, typically due to heavy and unequally shared burdens of reproductive and household work. Availability and affordability of day care and pre-school facilities.

Indicators: Participation rates in the labour force by age and sex; Time use studies (broken down by sex); HIV/AIDS prevalence rates (AIDS reduces not only the availability of the sick, but also of those who nurse them).

→ In particular gender analysis

3. Sustainability

Three broad groups of aspects pertaining to sustainability deserve to be singled out: environmental aspects, investments in the young and climate change. Promoting inclusive and productive employment must be done in a manner that does not compromise the possibilities of coming generation(s) to access productive employment.

Main indicator: Discrepancy between growth of green GDP and growth of 'traditional' GDP. To be complemented by some indicator on exposure to climate change. Child mortality and enrolment rates in primary and secondary education.

3.1 Environmental sustainability

Comment: Economic development, productive employment and, indeed, human life are dependent on a wide range of resources and processes that are supplied by natural ecosystems, so called ecosystem services. They include products, such as fresh air, clean water, biodiversity and rich soil, but also processes such as waste decomposition. Overexploitation of these ecosystem services results in environmental degradation and implies that development is environmentally unsustainable. While many ecosystem services can be regenerated, some, such as minerals and fossil fuel are finite. Excessive dependence on extraction of finite natural resources is similarly environmentally unsustainable.

Indicators: A wide range of indicators on use/abuse of ecosystem services have been developed over the past decades. Calculations of adjusted net savings / net savings is an effort come up with a synthesising aggregate indicator. More detailed indicators are often needed and may usefully be grouped by main categories: viz. emissions and air pollution, water use and pollution of water, soil related indicators (e.g. deforestation, land erosion, loss of soil nutrients), energy use and share of renewable & non-polluting energy sources in energy use, extraction of minerals and other finite natural resources. For examples, see World Bank 'The Little Green Data Book' and other World Bank Environmental Data and Statistics, 'The Global Environment Outlook' by UNEP (geodata.grid.unep.ch), 'Earthtrends by the World Resources Institute (earthtrends.wri.org).

3.2 Investment in the young

Comment: Inadequate investment in the education and health of young people. Nutritional deficiencies among young and pregnant women.

Indicators: Prevalence of stunting and wasting among children, child mortality rates, net enrolment and graduation rates in primary and secondary education. Prevalence of child labour. All data and analysis should be disaggregated by sex whenever possible.

3.3 Climate change; mitigation and adaptation

Country specific analysis of expected impact of climate change. CO₂ emissions (total, per capita, per GDP unit, development over time). Separate analysis of adjustment and mitigation measured needed. The Intergovernmental Panel on Climate Change (IPCC)(www.ipcc-data.org) offers a good entry point for information.