

Promoting productive employment in Sub-Saharan Africa : a review of the literature

Citation for published version (APA):

Szirmai, A., Gebreyesus, M., Guadagno, F., & Verspagen, B. (2013). Promoting productive employment in Sub-Saharan Africa : a review of the literature. Maastricht University. UNU-MERIT Working Papers No. 062

Document status and date:

Published: 01/01/2013

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.



**UNITED NATIONS
UNIVERSITY**

UNU-MERIT

Working Paper Series

#2013-062

**Promoting productive employment in Sub-Saharan Africa:
A review of the literature**

Adam Szirmai, Mulu Gebreeyesus, Francesca Guadagno and Bart Verspagen

Maastricht Economic and social Research institute on Innovation and Technology (UNU-MERIT)

email: info@merit.unu.edu | website: <http://www.merit.unu.edu>

Maastricht Graduate School of Governance (MGSoG)

email: info-governance@maastrichtuniversity.nl | website: <http://mgsog.merit.unu.edu>

Keizer Karelplein 19, 6211 TC Maastricht, The Netherlands

Tel: (31) (43) 388 4400, Fax: (31) (43) 388 4499

UNU-MERIT Working Papers

ISSN 1871-9872

**Maastricht Economic and social Research Institute on Innovation and Technology,
UNU-MERIT**

**Maastricht Graduate School of Governance
MGSOG**

*UNU-MERIT Working Papers intend to disseminate preliminary results of research
carried out at UNU-MERIT and MGSOG to stimulate discussion on the issues raised.*

Promoting Productive Employment in Sub-Saharan Africa.

A Review of the Literature¹

By Adam Szirmai, Mulu Gebreeyesus, Francesca Guadagno and Bart Verspagen²

13-11-2013

Abstract

This report provides an overview of current research on and knowledge about employment trends and policies in sub-Saharan Africa. Access to productive employment is seen as essential for poverty reduction and the inclusion of the poor in wider society. Productive employment is characterised by a. Sufficient income to permit workers and their dependents a level of consumption above the poverty line; b. Stability of this income over time (absence of vulnerability); c. Decent working conditions and working hours. The challenge of African economies lies not so much in open unemployment, as in the quality of employment as defined by earnings, vulnerability and working conditions. Much employment is located in the informal sector, where vulnerability is a serious problem. High youth employment in young populations is another serious challenge. Causes of employment problems include: lack of the right kinds of structural change, skill mismatches on the labour market, insufficient attention for SMEs with growth potential and insufficient innovation. The paper discusses a wide range of policies to promote productive employment including trade policies, sectoral policies, innovation policies, population policies and employment and labour market policies. The paper concludes with a discussion of emerging debates and contrasting views with regard to productive employment. It summarises the debates on agricultural led industrial development, resource based industrialisation, emergence of non-traditional exports, employment in labour intensive modern commercial agriculture, the role of manufacturing in growth and employment creation, the exploitation of unlimited supplies of labour, role of FDI and promoting pro-poor innovation in the informal sector.

Key words: productive employment, vulnerability, working conditions, unemployment, structural change, skill mismatches, employment policies

JEL classification : J21, J24, J28, J46, O2, O4.

*This report was prepared for the Knowledge Platform Development Policies
of the Ministry of Foreign Affairs of the Netherlands*

¹ This paper was commissioned by the secretariat of the Knowledge Platform Development Policies, Research and Education Division of the Social Development Department of the Ministry of Foreign Affairs of the Netherlands (DSO-OO). It served as a background paper for a meeting of the Knowledge Platform Development Policies in Accra, Ghana, 305 April 2013. We gratefully acknowledge the Ministry's financial support for this paper.

² Contact: A. Szirmai, United Nations University- Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT), Keizer Karelplein 19, 6211 TC, Maastricht, The Netherlands, Tel. 31-43-3884469, email: szirmai@merit.unu.edu

Table of Contents

1	Introduction	3
2	The nature and size of the employment problem.....	5
3	Availability of data on (un)employment in Africa	11
4	Causes and solutions to the slow growth of productive employment in Africa: review of existing literature.....	15
4.1	Structural change	15
4.2	Skill mismatch	18
4.3	The role of SMEs.....	19
4.4	The role of innovation	20
4.5	Policies for productive employment.....	21
5	Emerging debates and contrasting views on how to promote productive and sustainable employment in Africa.....	38
5.1	Finding African role models.....	38
5.2	Agricultural led industrial development	38
5.3	Resource based industrialization	38
5.4	Non-traditional exports.....	39
5.5	Creating employment in labour intensive modern agriculture.	39
5.6	Engines of growth and employment creation: Is manufacturing still important?.....	39
5.7	Role of foreign direct investment in employment creation	40
5.8	Promoting entrepreneurship in the informal sector	40
5.9	Exploiting unlimited supplies of cheap labour	41
5.10	Population policy	42
5.11	Is skill mismatch in Africa myth or reality?.....	42
5.12	The nature and focus of industrial policy	42
	References	44

1 Introduction

This paper provides a brief overview of current research and knowledge on employment trends and policies in Sub-Saharan Africa (SSA). The aim is to reflect on our present state of knowledge, identify gaps in our knowledge and understanding, and contribute to evidence-based policy debates. The emphasis is on the productive and sustainable nature of employment, rather than on the numbers of persons engaged in work, or the rates of unemployment. This is because of the specific situation in SSA, where the employment problem does not primarily manifest itself as open unemployment, but as underemployment, vulnerable employment or low quality of employment. Open unemployment is rare in Africa, but very large numbers of the working population are active in agriculture and the informal service sector where productivity and earnings are low and there is a high degree of job vulnerability.

In a development context, the term “underemployment” refers to situations where productivity and earnings are so low that a worker cannot make a decent living in a normal working week and has to work very long hours to survive. Other connotations of underemployment are that the job does not make use of the worker’s skills, education and experience. Finally underemployment can also refer to situations where workers work less than they would like to work (part-time work instead of full-time work). “Vulnerability” refers to work with highly fluctuating and uncertain returns, and without a stable and secure relation between employer and employee. Vulnerability is an important aspect of unproductive labour. It is a typical characteristic of the many jobs in the informal sector.

Despite rapid growth in many SSA countries over the past 15 years, there is widespread concern that this growth has not created sufficient productive employment to lift large numbers of the population out of poverty (Kapsos, 2005; ILO, 2013; McKinsey, 2012; Fox and Sekkel Gaal, 2008). According to official World Bank figures, SSA and South Asia have the highest rates of poverty in the developing world. In 2010, 69.9 per cent of the SSA population was living on less than 2 PPP dollars per day, 48.5 of the SSA population was living on less than 1.25 PPP dollars per day (Bluhm et al. 2013).

Access to productive employment is essential for inclusion of the poor in society. Productive employment does not only provide the poor with better incomes, it also stimulates learning and skills acquisition (World Bank, 2013) and participation in society. The insight that poverty reduction and social inclusion are linked to economic development via improved job creation and productive employment represents an important shift in our thinking about socio-economic development (see Kremer et al., 2009).

Economic growth may create productive employment by means of a combination of rapid growth of output, optimal utilization of abundant labour, innovation and upgrading and productivity increases. Structural change, i.e. shifts of employment between sectors, may promote productive employment by a shift towards more dynamic and high productivity sectors that can absorb labour and provide jobs of better quality. In

present day Africa, the production structure in many African economies is unbalanced, with an undue reliance on exploitation of natural resources that cannot provide sufficient productive employment. There has been insufficient structural change, among other things, as a result of premature deindustrialization (Tregenna, 2013). Because the African employment problem is more one of quality of jobs rather than quantity of jobs, the types of jobs that need to be created in Africa are jobs of sufficient quality, i.e. productive employment.

Following the ILO (2009), we define productive employment as employment yielding sufficient returns to labour to permit workers and their dependents a level of consumption above the poverty line. According to this definition, whether a person is productively employed depends on the income from labour; the intra-household dependency ratio (i.e. the number of non-working household members depending on the income); the labour income of other employed members of the household, and other non-labour household incomes.³

The following indicators are currently used to measure productive employment: 1) labour productivity levels; 2. labour productivity growth (measured as annual change in GDP per person employed); 3) employment-to-population rates (proportion of a country's working-age population that is employed); 4) proportion of the employed population living on less than US\$1.25 per day (the working poor); 5) the proportion of own-account and unremunerated workers (e.g., contributing family workers) in the employed population (vulnerable workers).⁴ The last two indicators are measures that capture job quality. Indicator 4) approximates how many people have jobs that cannot lift them out of poverty, while indicator 5) refers to how many people work in precarious circumstances (because as own account and family workers they are less likely to have formal work arrangements ensuring continuity of work and social protection).⁵

The term “decent work” completes the definition of “productive employment” by adding dimensions referring to working conditions such as absence of coercion (no slavery, no child labour), equity at work (equity of conditions and opportunities for all workers), security at work (health, pensions, security against

³ This definition is not completely consistent. Whether or not a job is defined as ‘productive’ would also depend on the earnings of other members of the household. Thus the same job could be classified as ‘productive’ or non-productive depending on the earnings of others. For practical purposes the definition will serve: a productive job will keep the worker and those household members typically dependent on that worker’s income out of poverty.

⁴ Efforts to estimate trends in job creation in terms of employment quality and income distribution in the developing world has been made by the ILO, which is currently elaborating estimates of employment across economic classes (ILO, 2013).

⁵ This indicator of vulnerable employment needs to be qualified because of the heterogeneity of informal sector working conditions. Some own account workers in the informal sector may be better off than might average wage workers.

job loss), and dignity of work (Anker et al., 2002; Van der Hoeven, 2012). Decent work also means decent working hours, i.e. working not more than 48 hours per week (ILO, 2012). Though working conditions are an important aspect of productive employment, it is hard to find comprehensive international statistical indicators comparing working conditions. Therefore most researchers restrict themselves to the five indicators mentioned in the previous paragraph.⁶

Productive employment creation depends not only on changes in productive capacity and economic structures, but also on supporting policies. Policies can provide incentives for better use of abundant labour resources and enhance the productive capacity of the labour force through the development of human capital or policies supporting innovation and technological upgrading. Employment policies should be seen as part of a much wider range of industrial policies, innovation policies, and economic policies promoting both economic development and productive employment creation. However, policies that stimulate economic growth and structural change may not create enough productive employment if society does not change in terms of the institutions that underlie economic activity and employment relations. This includes formal rules such as laws, but also informal mechanisms such as the nature of family relations, the mix between the formal and the informal sector, and power relations between the economic elite and workers. These are particularly relevant for the design of employment and population policy. Changes and transformations in society may also play a large role in generating productive employment. Some of this comes under the heading “inclusive innovation”, which is a term that we use to describe technological, organizational and social innovation that lifts parts of the population out of poverty.

The rest of this study is organized as follows. Section 2 reviews the nature and magnitude of employment problems in SSA. Section 3 discusses the availability of data on employment and unemployment. Section 4 reviews existing literature regarding the causes and the solutions for the slow growth of productive employment in Africa. Section 5 presents emerging debates and contrasting views on how to promote productive and sustainable employment in Africa.

2 The nature and size of the employment problem

The unemployment rate in the SSA has been around 7.6 per cent in the past five years (ILO, 2013), which seems to suggest that only a relatively small fraction of the working-age population is unemployed. Whether these figures are sufficiently trustworthy is itself an interesting area of research, but, as noted already, we are not only interested in open unemployment, but in also in unproductive employment (vulnerable employment,

⁶ Another frequently used concept is that of “sustainable employment”. The term is used to refer to reduced vulnerability. As reduced vulnerability is already part of the definition of productive employment, the term “sustainable employment” does not add anything and will not be used in this paper.

low quality employment, underemployment). When we take work that does not meet the standards of productive employment into account, the employment problems of SSA are far more serious than if we only focus on open unemployment.

With a growing workforce and not enough formal jobs being created outside agriculture, job seekers resort to the informal sector. A defining characteristic of the informal sector is that activities are non-registered. In consequence even when informal enterprises employ wage labourers, these workers have no formal protection. In Africa, the informal sector is mostly made up of very small-scale non-agricultural activities, with employment characterized by self-employment or employment in a family business.⁷ A large segment of the informal sector is involved in the provision of a broad range of services such as barbering, repair, food service, street vending and other trading activities, including telecoms, like mobile phone kiosks or cards (Fox and Sekkel Gaal, 2008). The relevance of the informal sector in African economies is documented in several contributions (e.g., Sekwati and Narayana, 2011 and World Bank, 2011 for Botswana; Palmer, 2007 for Ghana; Luebker, 2008 for Zimbabwe; Pollin, 2009 for Kenya; Kweka and Fox, 2011 for Tanzania). Van der Hoeven (2010a, 2010b, 2011) has shown that globalization of trade has put formal employment under pressure and has contributed to the growth of informal activities worldwide, both in advanced and developing economies.

Informal sector activities are present in both urban and rural areas, but are more widespread in urban areas. But according to Haggblade et al. (2007; 2010), the rural nonfarm economy (RNFE) is large and expanding in developing countries and income from rural nonfarm activities represents 35 per cent of total income of the rural African populations. Many of these activities are informal. For agricultural households, the expansion of rural non-farm activities stems from the necessity to diversify risk, counterbalance seasonal income swings, and finance agricultural investments. Such expansion has meant that RNFE has started to be seen as a source of income and employment, and so as a strategy towards poverty reduction (see World Bank, 2008; Atamanov, 2011 for Kyrgyzstan; Dimova and Sen, 2010, for Tanzania; Stifel, 2008, for Madagascar; Bezu and Barrett, 2010, for Ethiopia). According to the empirical analysis by Reardon (1997) and Barrett et al. (2001), in Africa non-farm rural income is positively associated with households' welfare, but entry and mobility barriers exist in the high-return niches of RNFE and greater nonfarm income diversification yields higher growth in earnings and consumption.

In the last decades Africa has experienced a shift away from agriculture to other sectors, mainly services, but little expansion of manufacturing employment (see section 4.1). The service sector is more productive than

⁷ Even though agriculture shares several characteristics with the informal sector, the term informal sector as commonly used refers to non-agricultural informal activities (e.g. informal manufacturing, informal services, informal construction).

subsistence agriculture, but less productive than manufacturing. Despite this shift, agriculture continues to be the largest source of employment in Africa. But agricultural employment remains highly vulnerable.

According to Ncube (2008), employment in the agricultural sector is characterized by long and irregular working hours, lack of social benefits, job insecurity, contract and casual labour, and child labour. With respect to the nature of employment in agriculture, small farms and subsistence agriculture dominate Africa's agriculture and only few countries (e.g. Burkina Faso) manage to raise the grain output of their small farms (Anríquez and Bonomi, 2007; Wiggins, 2009; Aliber and Hart, 2009 and Baiphethi and Jacobs, 2009).⁸ Smallholders are heterogeneous with respect to access to resources –such as land- and markets and the poorest farmers face high obstacles to move away from subsistence agriculture towards higher-value horticultural and livestock products (Staatz and Dembele, 2007).

In the service sector, employment tends to take the form of self-employment or family businesses, rather than wage employment. Thus, it is also characterized by high degrees of informality, and therefore high degrees of job vulnerability. Wage employment, instead, is more likely in manufacturing, the employment share of which has been shrinking in the last few decades. Adjustment policies in the 1990s have also resulted in losses of formal jobs in the public sector which is another important source of formal wage employment (Fox and Sekkel Gaal, 2008). The nature of structural change in SSA explains why, despite high economic growth, the vulnerability of employment has not significantly decreased in SSA. The proportion of workers in vulnerable employment decreased only marginally from 83 per cent in 1991 to 82 per cent in 2000 and 77 per cent in 2012. These are still very high rates and comparable only to South Asia (ILO, 2013; UNECA, 2005). Apart from demography and the nature of structural change in SSA, the informal sector continues to grow due to lack of skills (discussed in section 4.2), and increased income coming from other sectors (Fox, 2011).

Estimates of the degree of underemployment (defined here as working less than 40 hours per week) reveal that underemployment is prevalent in agriculture (and so in rural areas) and among young people. It is less likely in formal employment and larger firms, and it decreases with education (e.g. Denu et al., 2005 for Ethiopia; Sakey and Osei, 2006, for Ghana; Jones and Tarp, 2012 for Mozambique). At the other extreme of underemployment, there are people that have to work excessive hours in order to survive. Excessive hours characterize male employment especially in urban areas. One of the countries with the highest prevalence of people working excessive hours is Tanzania, where 54.3 per cent of the population was working excessive hours in 2005 (ILO, 2010, 2012).

Youth unemployment

⁸ For estimations on the extent of small farming, see Modrego et al. (2006).

The unemployment problem in Africa is characterized by high heterogeneity across countries, high youth unemployment, and high disparities by gender and geography (rural versus urban areas), and level of education (Page, 2012). More than two-thirds of the population of SSA was under 25 years of age in 2010 and this percentage is expected to increase in the next decades. 60 per cent of Africa's unemployed are young, and youth unemployment rates are double those of adults in most African countries.⁹ Even in countries where the youth unemployment rate is relatively low, it is often more than twice as high as the national average. A very high proportion of young people are poor: on average 72 per cent of the youth population in Africa has to live on less than \$2 per day. Young people often work in the informal sector and are less likely to be wage-employed or self-employed (World Bank, *Africa Development Indicators* 2008/2009). While the average young worker in Africa is in family-based agriculture, other important occupations are services and sales, and 13 per cent are business owners (African Economic Outlook, 2012). In countries with high youth unemployment, unemployment often goes hand in hand with low quality of jobs (vulnerable employment) and lack of information about job seekers and job opportunities. In these contexts, skill mismatch is often another aspect of the employment problem (Fox and Sekkel Gaal, 2008; Garcia and Fares, 2008; African Economic Outlook, 2012; World Bank report 2013).

According to the African Economic Outlook (201), youth unemployment is particularly acute in middle-income countries (MICs).¹⁰ Youth unemployment is a political challenge because unemployed youths can become frustrated and cause instability (as happened in North Africa) and because initial long-term unemployment negatively effects lifetime earnings and future professional development. Country level data suggest that youth employment is largely a problem of quality in low-income countries (LICs) and one of quantity in middle income countries (MICs). This has to do with economic growth and its structural implications: when countries grow richer, they become more capital-intensive and demand higher quality goods. These two forces generate a reduction in the demand for low-skilled labour (and relative increase in the demand of high-skilled labour) and a shrinking of the informal sector (that produces low quality goods). So, in LICs, young people work mainly in the informal sector, where wages are low, i.e. labour is of low quality. In MICs, the informal sector is smaller and the formal sector is too small and demands high skills, so high-skilled labour competes for too few jobs and low-skilled labour is left out of the labour market. This results in higher open youth unemployment.

Despite the fact that the informal sector on average suffers from low productivity and low wages, it still presents opportunities and is part of the solution to the problem of Africa's youth unemployment. The

⁹ In the literature, youth is defined as people aged between 15 and 24.

¹⁰ According to current World Bank classifications, upper middle income countries (UMICs) in SSA include: Angola, Botswana, Gabon, Mauritius, Namibia, and South Africa. Cameroon, the Republic of Congo, Cote d'Ivoire, Ghana, Lesotho, Nigeria, Senegal, Swaziland, Tonga, and Zambia are lower middle-income countries (LMICS).

informal sector is an extremely heterogeneous sector. Besides all sorts of survival activities, it also includes pockets of high productivity and high income activities. The same applies to the rural sector that has the potential to become an engine of inclusive growth and youth employment. Farming, in fact, often branches out into household enterprises (Fox and Pimhidzai, 2011).

A large youth cohort can also yield opportunities, if growth is rapid and appropriate policies help to take advantage of the demographic dividend resulting from having a larger share of the population at working-age. In this regard, investments in human capital and policies to reduce the skill mismatch are essential (Garcia and Fares, 2008; UNECA, 2011a; Africa Economic Outlook, 2012).

Differences in conditions

Policy debates on productive employment and employment creation should take differences of conditions and opportunities in SSA into account. Several classifications have been proposed for SSA.

The World Development Report 2013 categorizes countries according to urbanization, demography, natural endowments, and strength of institutions. According to these dimensions, countries can be categorized into: agrarian, urbanizing and formalizing countries; countries with high youth unemployment and aging societies; resource-rich countries and small island countries; and conflict-affected countries. In agrarian economies, people cannot afford to be unemployed and have to accept jobs with low earnings and underemployment. Therefore, wage employment is not representative of the working status of the majority of the population, so the rates of underemployment and vulnerable employment are more relevant than unemployment. Small island countries, like Mauritius, are constrained by the low economies of scale or specialization. The Mauritian case shows that strategic industrial policies and strong institutions may compensate for them. For this kind of countries, it is needed to establish links with nearby economic centres, maximizing the benefits of migration, and exploiting niche markets as possible ways out. In countries with high youth unemployment, unemployment is often coupled with low quality of jobs and lack of information on job seekers and opportunities.

Based on empirical evidence from an analysis of household and labour force surveys in 16 African countries (AfDB, 2012), Page (2012) classifies countries according to the degree of informality of their labour market and level of GDP. Countries with well-structured labour markets and low levels of informality (Southern cone) currently face high rates of unemployment; lower income countries with high degrees of informality, like Ethiopia, Ghana, Tanzania and Uganda, present relatively lower unemployment; finally there are countries with large informal sectors and high unemployment rates, like Kenya, Mali, Zambia and Zimbabwe (Page, 2012). In South Africa, where labour market legislations do not guarantee employment opportunities in the informal sector, the employment problem translates into high unemployment. In fact, the economic performance of South Africa since 1994 has been rather disappointing, with a growing unemployment rate

estimated between 26 per cent and 40 per cent, if discouraged workers are included (Rodrik, 2006; Kingdon and Knight, 2004, 2007).

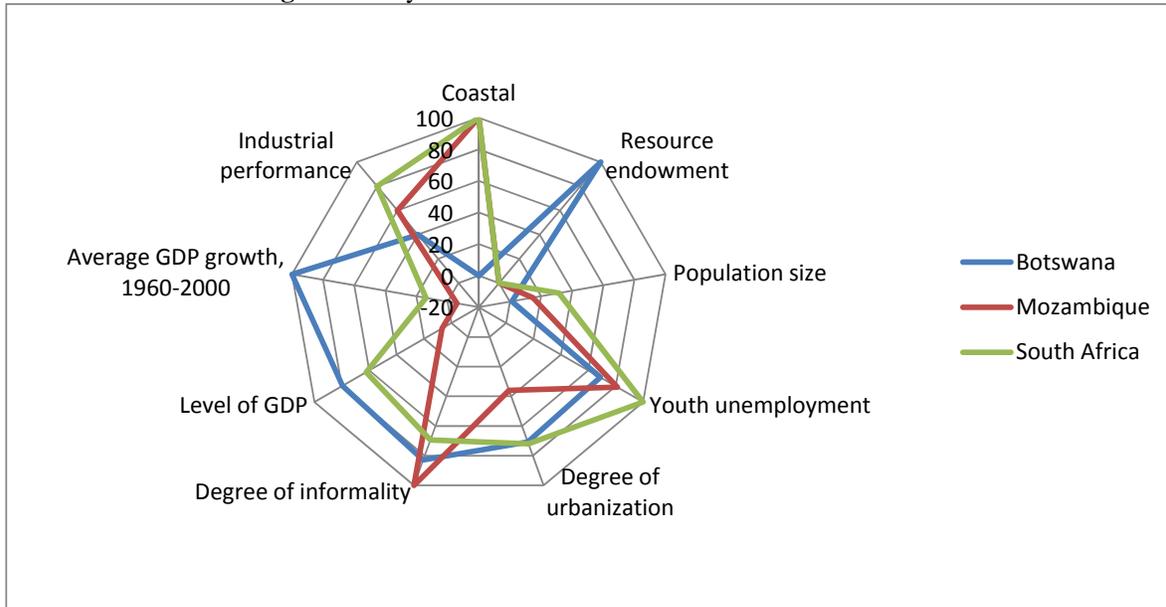
Moving to more policy-related classifications, Collier and O'Connell (2008) distinguish three categories of countries: (i) High opportunity coastal, resource-scarce countries (ii) low opportunity land-locked resource-scarce countries (iii) resource rich countries. UNECA (2011b) suggests to categorize countries according to the geographical characteristics (resource endowments, landlocked, non landlocked) and demographic characteristics (population size, density, age composition). In resource-abundant countries, sectoral policies should favour their resource sectors. For landlocked countries, it is crucial to leverage on regional integration. Countries with large population should relax rules on competition to allow domestic firms to reap the benefits of economies of scale and thus prepare them for international competition.

Following Collier and O'Connell (2008), UNCTAD (2011) classifies countries by their level of industrialization in 2010 and growth performance between 1990 and 2005. The report distinguishes (i) forerunners, (ii) achievers (high level, low growth), (iii), catch-up countries, (iv) falling-behind countries, (v) infant countries. Challenges and policy agendas vary across these groups. For the *forerunners*, policy priorities focus on the shift towards industries with higher technological intensity and value addition (like machinery and equipment or precision instruments) and creation of networks among existing firms. *Achievers'* strategies should be twofold: advancing technological capabilities and entrepreneurship in new manufacturing sectors and upgrading in core existing industries to enter into high-margin segments of the production chain. In *catching-up countries*, growth rates in certain industries are mainly dominated by few large firms whose linkages amongst themselves and with the rest of the firms (small and informal) need to be strengthened. In the medium-term labour intensive manufacturing can be a promising sector to target. *Falling-behind* and *infant-stage countries* need to support entrepreneurship and acquisition of basic managerial and technical competencies in order to move from natural resource extraction or agricultural commodity production to a higher degree of processing.

In Figure 1, we take South Africa, Mozambique and Botswana as examples and show a possible way to synthesizing these classifications. A dimension that is shared by several of these classifications is the geographical one. In this respect, we account for resource endowment and whether a country is landlocked or coastal, where a country is considered a natural resource economy if it generates more than 10 per cent of GDP from primary commodity rents (Collier and O'Connell, 2008). The second shared dimension is related to demography. Based on Collier and O'Connell (2008), UNECA (2010) and the World Bank (2012), the size of population is included. Connected to demography is the issue of youth unemployment, as evidenced by the World Bank report 2013. Following the classifications by the World Bank (2013) and Page (2012), labour market characteristics and strength of institutions are captured by the share of urban population and share of informal sector in the economy. Finally, we account for the industrial and economic performance of

the country by looking at level of GDP, average GDP growth from 1960 to 2000 and the level of industrialization (as measured by UNCTAD, 2011, Collier and O’Connell, 2008 and Page, 2012).

Figure 1. A synthesis of the classifications of SSA countries



Sources: Authors’ elaboration based on data collected from: for geographical variables and the average GDP growth from 1960 to 2000, Collier and O’Connell (2008); for population size and degree of urbanization, World Development Indicators (WDI) online; for youth unemployment and level of GDP, African Economic Outlook 2012 and WDI; for degree of informality, Ncube (2008); for industrial performance, UNCTAD (2011).

Notes: Being a coastal or landlocked country is a dichotomous variable that takes the value of 1 if the country is coastal. Similarly, if a country is resource-rich according to the definition of Collier and O’Connell (2008), the variable assumes value of 1. Following UNCTAD (2011), countries have been ranked within the 5 categories, from forerunners to infant countries. Forerunners are assigned the highest value (5) and infant countries the lowest (1). GDP levels are measured as the GDP per capita (PPP valuation, USD) as in the African Economic Outlook (p. 240). Degree of informality is proxy by the contribution of the informal sector to GNI (Ncube, 2008, p. 5). All variables are taken as percentages with respect to the maximum values observed in SSA (Nigeria for the population size, South Africa for youth unemployment, Gabon for urbanization and level of GDP, Mozambique for informality, Botswana for GDP growth between 1960-2000).

This diagram allows comparisons across different SSA countries and so it can guide policy makers in the selection of potential African role models. By comparing economic and industrial performance, and also characteristics of the labour market –such as the degree of informality and the rate of youth unemployment-, countries with similar pre-conditions can learn from each other. However, constructing this type of diagrams for all SSA countries is not easy, due to lack of data especially concerning degree of informality and youth unemployment.

3 Availability of data on (un)employment in Africa

Data availability about employment is a serious constraint to research and analysis (DIAL, 2007; World Bank, 2013). Data on employment normally derive from three main sources: labour force surveys,

production surveys (agricultural surveys, surveys of manufacturing, service sector surveys) and household surveys. Labour force surveys provide most information about employment conditions, remuneration, hours worked, labour market participation, and so forth. Production surveys have the advantage that output and employment figures are from the same source, allowing for productivity analysis, but they do not provide complete information about national employment trends and are usually restricted to larger enterprises. Surveys of informal sector firms are held only very infrequently. Household surveys are important for linking employment conditions to individual and household poverty, but usually they do not provide sufficient detail on employment, its sectoral distribution and employment trends.

In many SSA countries labour statistics simply do not exist. Regularly repeated labour market surveys are only held in Mauritius, South Africa, and Tanzania. In all other countries surveys are held irregularly, sometimes with long intervals, so that it is almost impossible to chart trends in employment. Where data are available there are important issues with regard to the statistical quality. Labour force surveys are often not harmonized with industrial surveys. There is insufficient information about the nature of work in the informal sector, especially with regard to underemployment and youth employment. There is an increasing wealth of micro-datasets for Africa (e.g. van Biesebroeck, 2005; Rankin et al., 2006; Söderbom et al., 2006; Arnold et al., 2008; Baptist and Teal, 2008; Amin, 2009; Shiferaw and Bedi, 2009; Sonobe et al., 2009; Goedhuys and Sleuwaegen, 2010), but it is not clear to what extent the micro-data samples are representative of the national populations. Overall statistical capabilities have been declining rather than improving (Klasen and Blades, 2013), so that data collection tends to depend on incidental donor support. Challenges for labour statistics are: data gaps, because in some countries labour statistics do not exist or are not collected systematically; data quality issues, when data are collected, there are often problems in the statistical production chain (use of inappropriate definitions, questionnaire design, sampling frame, data entry and coding, etc.); planning, coordination, and communication issues arise when different institutions collect and disseminate the data (World Bank, 2013; Kingdon and Knight, 2007 for the case of South Africa). Table 1 summarizes the availability of labour force and employment statistics in SSA.

Table 1. Sources of data for productive employment in SSA

SSA Country	Type of data available	Coverage	Periodicity of data collection	Years of data availability
Angola	-	-	-	-
Benin	<i>Integrated Modular Survey on living conditions of households</i>	<i>Whole country</i>	<i>Every 2 years</i>	<i>1984/5, 2006/7</i>
Botswana	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Every 10 years</i>	<i>1984/5, 2005/6</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>Every 7 years</i>	<i>1985, 1993, 2003, 2010</i>

	<i>Informal Sector Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2007</i>
Burkina Faso	<i>Annual Survey on Household Living Conditions (QUIBB)</i>	<i>Whole country</i>	<i>Yearly</i>	<i>1995, 2005, 2007</i>
Burundi	<i>Survey 1-2-3</i>	<i>Bujumbura</i>	<i>Irregularly</i>	<i>2005</i>
	<i>Household Living standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1998</i>
Cameroon	<i>Enquête Emploi Secteur Informel</i>	<i>No indication</i>	<i>No indication</i>	<i>1995, 2005</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995, 2005</i>
Central African R.	<i>OECD/Eurostat</i>	<i>No indication</i>	<i>No indication</i>	<i>1995</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Chad	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Congo, D. R.	<i>Survey 1-2-3</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>2004/5</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Congo	<i>Enquête sur l'Emploi et le Secteur Informel (ECOM)</i>	<i>Brazzaville and Pointe Noire</i>	<i>Irregularly</i>	<i>2009</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Côte d'Ivoire	<i>Enquête sur la Situation de l'Emploi à Abidjan</i>	<i>Abidjan</i>	<i>Irregularly</i>	<i>2008</i>
	<i>Household Living Standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1985, 1986, 1987, 1988, 1992, 1995, 1998</i>
Eritrea	-	-	-	-
Ethiopia	<i>Labour Force Survey</i>	<i>Whole country excluding some areas</i>	<i>Irregularly</i>	<i>1999, 2004/5</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>Every 5 years</i>	<i>1995, 2000, 2005, 2011/2</i>
	<i>Ethiopian Rural Household Surveys (ERHS)</i>	<i>Some rural areas</i>	<i>Irregularly</i>	<i>1989, 1994, 1995, 1997, 1999, 2004, 2009</i>
Gabon	<i>Enquête Nationale sur Emploi et Chômage</i>	<i>No indication</i>	<i>No indication</i>	<i>1993, 2011</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Gambia	<i>Integrated Household Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>2003/4</i>
Ghana	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1987, 1988, 1991, 1998/9, 2005/6</i>
Guinea	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995</i>
Guinea-Bissau	-	-	-	-

Kenya	<i>Integrated Household Budget Survey</i>	<i>Whole country</i>	<i>Every 10 years</i>	<i>1998/9, 2005/6</i>
Lesotho	-	-	-	-
Madagascar	<i>Enquête Périodique Auprès des Ménages</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1993,1995,1997, 1999,2001, 2005, 2010</i>
Malawi	<i>Integrated Household Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1991, 1997/8, 2002, 2004/5, 2010/11</i>
Mali	<i>Enquête Permanente Auprès des Ménages (EPAM)</i>	<i>Whole country</i>	<i>Every 2 years</i>	<i>1995, 2004, 2007, 2010</i>
Mauritius	<i>Continuous Multi Purpose Household Survey (CMPHS)</i>	<i>Whole country</i>	<i>Quarterly</i>	<i>1999-2012</i>
	<i>Small and Large Establishment</i>	<i>No indication</i>	<i>No indication</i>	<i>2002 and 2007</i>
Mozambique	<i>Integrated Labour Force Survey</i>	<i>Whole country, excluding 4 districts</i>	<i>Irregularly</i>	<i>2004/5</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995,2005, 2010</i>
Namibia	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1997, 2000, 2008</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995</i>
Niger	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995</i>
Nigeria	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Quarterly</i>	<i>2009</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>Every 5 years</i>	<i>1986, 1992, 1997,2003</i>
Rwanda	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995, 2005</i>
Senegal	<i>Enquête de Suivi de la Pauvreté (ESPS)</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>2005/6 and 2011</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>1995, 2005</i>
Sierra Leone	<i>Integrated Household Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>2003-2004</i>
Somalia	-	-	-	-
South Africa	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Quarterly</i>	<i>2000-2012</i>
South Sudan	-	-	-	-
Sudan	<i>Household Living standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1988</i>
Swaziland	<i>Household Living standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1985, 1995</i>
Tanzania	<i>Integrated Labour Force Survey</i>	<i>Whole country</i>	<i>Every 5 years</i>	<i>1995, 2000/1, 2006, 2010/11</i>
	<i>Household Living standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1991,2000, 2001</i>
	<i>Kagera Health and Development Survey</i>	<i>Kagera Region</i>	<i>No indication</i>	<i>1991, 1992,1993, 1994, 2004, 2010</i>

	<i>National Panel Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2008, 2010</i>
Togo	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Uganda	<i>Urban Labour Force Survey</i>	<i>Main cities/metropolitan areas/regions</i>	<i>Yearly</i>	<i>2002, 2009</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005/6, 2010</i>
Zambia	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1986, 2005</i>
	<i>Living Standards Survey</i>	<i>Whole country</i>	<i>No indication</i>	<i>2005</i>
Zimbabwe	<i>Labour Force Survey</i>	<i>Whole country</i>	<i>Irregularly</i>	<i>1993, 2004</i>
	<i>Household Living standard Survey</i>	<i>No indication</i>	<i>No indication</i>	<i>1990,1993, 1995</i>

Source: Authors' elaboration, based on national statistical offices, ILO¹¹, UNECA/AfDB¹² and World Bank (2012), table 9.

Notes: This table does not include production surveys and production censuses. It also excludes SSA countries with populations of under 1 million people.

The documented low frequency of data collection and low comparability of labour statistics hampers the development of labour market information analysis (LMIA) systems. According to Sparreboom and Albee (2011), "the state of LMIA systems in Sub-Saharan Africa is an important reason why many countries fail to formulate proactive employment and labour policies. Such policies, including ambitious but realistic targets that are consistently monitored and evaluated, require effective LMIA systems based on regular data collection and analysis. Strengthening LMIA systems and improving the availability of labour market indicators is therefore essential to ensure better labour market outcomes" (ibid., p. 5).

4 Causes and solutions to the slow growth of productive employment in Africa: review of existing literature

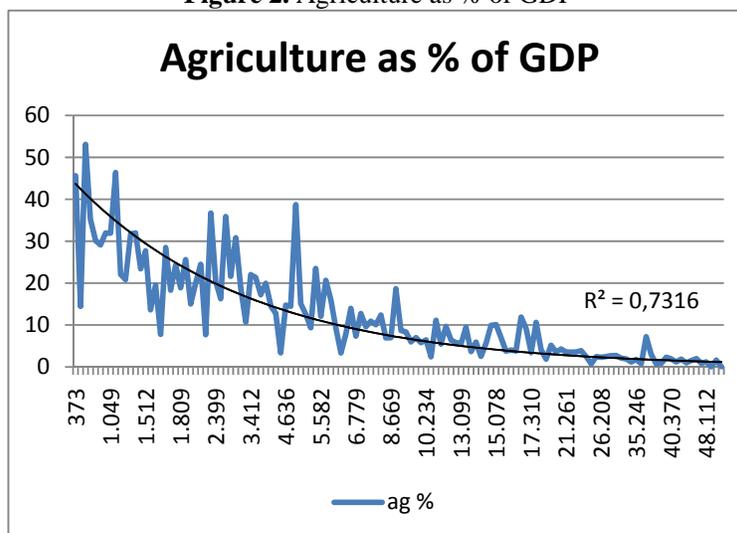
4.1 Structural change

There is a strong correlation between high shares of agriculture in GDP and low levels of per capita GDP. The implication is that in poor countries agriculture may contribute substantially to employment, but this is often low quality employment due to low productivity in traditional agriculture. As agricultural productivity increases, the share of agriculture in GDP and employment will decline. The redundant workers in agriculture will have to be absorbed in other sectors through a process of structural change. It is important to note that the necessity of structural change should not lead to a neglect of African agriculture, as was practiced in the period 1950-1980. Making agriculture more dynamic is an essential element of the process of structure change and should figure prominently in economic policy making.

¹¹ http://laborsta.ilo.org/applv8/data/SSM3_NEW/E/SSM3.html#A

¹² <http://ecastats.uneca.org/acsweb/rrsf/en-us/baselineinformation/datadevelopment.aspx>

Figure 2. Agriculture as % of GDP



Source: World Development Indicators online.

Sectors and activities that can potentially absorb workers leaving traditional agriculture include commercial farming and production of labour intensive higher value added crops; the rural and urban informal service sector; the formal service sector, in particular business services, tourism, transport, logistics and distribution; mining; construction; manufacturing and the public sector. These sectors differ greatly in terms of their opportunities to generate productive employment. Manufacturing and business services typically provide productive jobs, while informal services and traditional agriculture provide jobs of less quality (McKinsey, 2012).

Today, apart from Government and social services, stable employment (as opposed to vulnerable employment) in Africa is mostly concentrated in the manufacturing, construction, transport and communication, and finance and business services (McKinsey, 2012). The observed size distribution of the manufacturing firms in the developing countries is bi-modal, one mode at the small size group and another at the large one. This is known in the literature as ‘industrial dualism’ (Tybout, 2000). The few large formal firms provide products to niche or protected markets, while the many small low-productivity firms at the bottom size distribution provide low-quality products to the domestic market. The latter generates low-paying jobs and few productive employment opportunities (Dihn et al., 2012).

The past experiences with African manufacturing have been disappointing (e.g. Szirmai and Lapperre 2001 for the case of Tanzania). Since the mid 1980s, many countries in Africa have been experiencing de-industrialization and the contribution of manufacturing to employment creation has been rather limited, with other sectors tacking up the slack. Because agriculture and services are the sectors that are more characterized by informality, the jobs that this type of structural change has generated are generally vulnerable or characterized by underemployment, hence low quality jobs (among the others, McMillan and

Rodrik, 2011; McKinsey, 2012; Dihn et al., 2012; Page, 2013). McMillan and Rodrik (2011) show that, despite a regional trend of growth-reducing structural change, SSA countries present high heterogeneity, with Zambia and Nigeria experiencing structural change towards agriculture and Ethiopia, Ghana and Malawi, instead, experiencing growth-enhancing structural change (towards manufacturing). Rodrik (2006) argues that high wages and rigidities of the labour market, resulting from the strong position of trade unions, are only the proximate cause of unemployment in South Africa. The process of structural change away from the non-mineral tradable sector and the weakness of export-oriented manufacturing are the deeper causes of relatively low growth and high unemployment. According to Hausmann (2007), the binding constraints to growth in the tradable sector are: 1) level and volatility of the real exchange rate; 2) trade policy (and in particular, tariff protection in intermediate goods); 3) the logistics system and high input costs resulting from limited competition, 4) labour market constraints (high labour costs, rising wage differential between union and non-union workers and skill mismatch); 5) obstacles to structural transformation, linked to specialization in mining and low capabilities in other industries; 6) rules concerning the Black Economic Empowerment (BEE).

Extractive industries (mining) present few employment opportunities and weak forward and backward linkages to the rest of the economy. Diversification of the production and export structure, and mechanisms to channel the wealth generated by resource extraction in the rest of the economy are crucial for how an economy benefits from natural resources. The 2013 World Development report presents Norway and Papua New Guinea as cases of successful management of natural resources revenues for diversification.

Too little is known about the role of the construction sector in structural change and employment creation, even though it is an important sector in terms of the quantity of labour it employs. In Africa the construction section creates both formal and informal employment.

The public sector is a source of formal employment in the service sector, but budgetary constraints and more critical views of the potential of the public sector impose limits on public sector job creation.

The informal urban and rural service sector employs a large proportion of workers in SSA. As argued above, this is often vulnerable and low quality employment. Data on earnings for self-employed persons and family workers are hard to find (Fox and Gaal, 2008). The scarce evidence shows lower earnings than in the formal sector (some data available in labour surveys of Uganda in 2001; Ghana in 1998; Senegal in 2001). However, in rapidly growing economies, the informal sector earnings also tend to grow. Moreover, earnings in the informal sectors are still higher than those in the agricultural sector. These are some of the reasons why a solution to poverty in Africa should include the informal sector (Fox and Gaal, 2008; Sparks and Barnett, 2010). One should realize that the informal sector is highly heterogeneous (Grimm et al. 2012).

Recent research argues that policy attention should focus on the most dynamic entrepreneurs and firms in the informal sector which have the potential of rapidly expanding employment (e.g. Sonne, 2011).

A way to tackle the issue of job creation in Africa is by investing in agro-industry and in labour-intensive manufacturing and services. A shift of light manufacturing activities from East and South East Asia to Africa is conceivable, given the labour cost advantage and the abundance of raw materials but it requires investments in human capital and improvement of the business environment (Harrison et al., 2011; Clarke, 2011; Dihn et al., 2012; Leipziger and Yusuf, 2012; Page, 2012; McKinsey, 2012). In order to expand job creation, Africa should invest in agriculture by expanding commercial farming and shifting production toward more labour-intensive, higher-value-added crops; consider manufacturing as an engine of job creation and, in particular, labour-intensive light manufacturing in pre-transition and transition countries, agro-processing in countries with large agricultural sectors higher value-added exports in diversified countries, and manufacturing for domestic markets in oil exporters (McKinsey, 2012).

In all these contributions, however, the focus is more on job creation as such, rather than the creation of productive employment. Lavopa and Szirmai (2012) review the literature on the link between industrialization, employment and poverty reduction. They discuss evidence that manufacturing contributes significantly to growth, and via growth to employment creation and poverty reduction and that manufacturing jobs tend to be of high quality in the sense that they pay higher wages and offer more indirect benefits. An exception to the focus on job creation for African studies is Dihn et al. (2012), who argue that: *“the ongoing redistribution of cost advantages in labour-intensive manufacturing presents an opportunity for Sub-Saharan Africa to start producing many light manufactures, enhance private investment, and create millions of productive jobs”* (ibid. p. 4).

4.2 Skill mismatch

African countries have been extremely successful in expanding their education systems since 1950. They have invested heavily in education at all levels and enrolments and graduations have increased dramatically (Szirmai, 2013, chapter 7, Barro and Lee, 2010). Nevertheless, this has not translated into acceleration of growth, structural change and catch up in Africa. The modern debate on the role education asks why this is the case.

A very brief summary of the strands in this debate is as follows:

- 1 Investment in education affects economic performance with very long delays (of up to decades) and is also dependent on complementary factors such as inflow of capital and knowledge which challenges the acquired skills. In the 1950s, Africa had a huge skill gap with the rest of the developing world. Sixty years later, it is better placed to profit from its accumulated stock of human capital.

- 2 In contrast to the optimistic analysis under point 1, recent research suggests that quantitative advance in enrolment and graduation hides large skill gaps. The focus in education policy should be on improving the quality of education and cognitive skills (Hanushek and Woessman, 2007, 2008).
- 3 There is a skills mismatch between what is being learned in educational institutions and what is required by the labour market (World Bank, 2013; African Outlook 2012). The skills mismatch involves insufficient attention for professional, agricultural, vocational and middle level technical training, insufficient attention to on-the-job training and overschooling resulting in brain drain. But there is a debate whether the mismatch is caused by shortcomings in the educational system or by distorted financial and institutional incentives (Dihn et al., 2012; World Bank, 2013; Sekwati and Narayana, 2011; Okunola et al., 2010).

With regard to the last point, light manufacturing activities like sewing in the apparel sector, require so modest skills that industrialization could easily be ignited from the expansion of these sectors (and some manufacturing even require the similar skills to those of the agricultural sector). Vocational training could be offered by the State via public-private partnerships, starting from large firms in formal and informal industrial clusters (Dihn et al., 2012).

4.3 The role of SMEs

Developing countries are generally characterized by dualism at different levels of the economic and social structure. Duality also manifests in industrial markets, made up of few large formal firms and a myriad of small and mostly informal firms. Because job creation is mainly constrained by a lack of supply of jobs and because the African private sector employment is dominated by small and micro firms, it is important that policy addresses the issue of firm growth. There are few studies on this issue (e.g. Goedhuys and Sleuwaegen, 2002; Bigsten and Gebreeyesus, 2007; Shiferaw and Bedi, 2009).

An analysis of the role of SMEs and entrepreneurship is relevant to this study for two main reasons. The first is that SMEs and entrepreneurial activities (a great bulk of the informal sector) dominate the African economy. The second is that if these micro firms are driven by opportunities and prove to be dynamic and innovative, the constraints to their growth should be eliminated. In this way, more jobs could be created and with the emergence of larger firms, informality and vulnerability could be greatly reduced (African Economic Outlook, 2012).

Grimm et al. (2012) analyze a sample of informal entrepreneurs in seven capital cities of francophone West Africa and try to identify the characteristics of the firms that have the potential to grow but have not yet done so (so-called constrained gazelles). They find that top performance is correlated with family wealth, which might imply that access to credit is a binding constraint for dynamic SMEs. Although survivalist firms and constrained gazelles have similar levels of capital stock, constrained gazelles show much better management

skills (work more hours than survivalists, more often keep books, have a much higher financial competences) and seem to be more entrepreneurial than survival entrepreneurs (react better to demand shocks and search more actively for new clients). Because returns to capital are also highest among constrained gazelles, they conclude that constrained gazelles really represent an untapped growth potential (see also Sonne 2011).

Supporting SMEs can also take the form of supporting youth entrepreneurship. In order for such programmes to be effective, however, they should be well-targeted and comprehensive. While many countries have put in place programmes that cover job creation, training, and information services, only the Moroccan program has been positively evaluated. These types of programs need to build on reliable data on employment in Africa and systematic processes of policy evaluation (African Economic Outlook, 2012).

4.4 The role of innovation

The creation of increasing numbers of productive jobs is deeply entwined with a continuous process of innovation. Innovation results in the upgrading of existing production and jobs, but also shifts to new products and activities in the same sector or in different sectors (structural change). In low-income countries innovation usually does not take place at the frontiers of international knowledge. It often takes the form of adoption of internationally available technologies (e.g., Fu et al., 2011; Robson et al., 2009 for Ghana; Ola-David and Oyelaran-Oyeyinka, 2012 for Kenya and Nigeria). But such technology acquisition is never merely a process of passive imitation. It involves a highly creative process of selection, learning, adaptation, upgrading and sometimes leapfrogging. The capacity to tap into global technology and knowledge flows depends to a great degree on the development of capabilities and absorptive capacities. There is a large and important literature on capability building and absorptive capacity, which is of considerable relevance for SSA (Abramovitz, 1986; Biggs et al. 1995; Cimoli et al. 2009; Cohen and Levinthal, Lall, 1987, 1990, 1992, 1994, 1996, 1998, 2000). Capabilities are categorized in many different ways. An important distinction is that between production capabilities (the capability to operate a given technology), adaptation technologies (the ability to adjust technology to new circumstances and conditions) and innovation capability (the ability to start developing new technologies or upgrade existing ones).

Innovation depends not only on human capabilities but also infrastructural investment (e.g., Calderon and Serven 2010; Ncube, 2010), for instance investment in ICT infrastructure. In recent years, rapid progress has been made in Africa in creating ICT infrastructures, both using fibre technologies and satellite technologies (e.g. Special Issue on “ICTs and Economic Transformation in Africa”, African Journal of Science, Technology, Innovation, and Development, 2011; Mupela, 2011; Williams et al., 2011; Birba and Diagne, 2012), but major obstacles still remain especially in thinly populated rural areas. The expansion of mobile telephony in Africa is proceeding at an unprecedented rate, offering a host of innovative new opportunities.

One exciting new field of research links the literatures of entrepreneurship and innovation in the context of developing economies. This research enquires into the conditions under which small and large entrepreneurs can become more innovative and how policies could support this (see Gebreeyesus 2011, and Szirmai, Naudé and Goedhuys, 2011 for a recent overview). The work of Hausmann and Rodrik (2003) on economic development as self-discovery also focuses on the incentives for entrepreneurs in developing economies to branch out into new activities (structural change as innovation).

In recent years there is increasing attention for the concepts of inclusive or pro-poor innovation – types of innovation that contribute in important ways to poverty reduction and the needs of the poor. One strand of research is that of inclusive innovation, or *innovation at the bottom of the pyramid* (Prahalad, 2006, Ramani et al., 2012; for the African context, Ismail and Masinge, 2011), which focuses on the development of new products that serve the needs of billions of poor people ‘at the bottom of the pyramid’. Goedhuys (2007) discusses how in Tanzania foreign multinationals firms need to engage in collaborations with local partners in order to better understand and meet the needs of the local poor. A second strand of research focuses primarily on innovative entrepreneurial activities that create good quality jobs for poor people (Sonne, 2011). Sonne (2011) studied the Indian landscape of small innovative pro-poor entrepreneurial firms and their poor access to finance. The Indian financial system has evolved towards a dual system with traditional finance providers, the banks, and a bunch of alternative financial institutions, specialized in supporting pro-poor entrepreneur-based innovation. Access to finance for these types of firms is socially and economically important: through access to finance, improved goods and services, increasing incomes and job opportunities become available to rural communities. Sonne criticize the conventional micro-credit approaches and calls for financial instruments to support a subset of somewhat larger dynamic and innovative firms (see also the discussion of constrained gazelles above).

4.5 Policies for productive employment

There is a lively debate about the nature of industrial policy and how industrial and innovation policies can contribute to structural change, technological upgrading and the generation of productive employment (for an overview see Naudé and Szirmai 2012). Two interesting positions in this debate are provided by Hausmann and Rodrik (2003) and Lin and Monga (2011). Hausmann and Rodrik interpret structural change as a process of self-discovery, in which innovative firms discover where a country has a competitive edge. Policy should aim at supporting such firms, because they bear more risks and costs than subsequent followers who can imitate the leaders. Lin and Monga (2011) argue that a country can identify its latent comparative advantage through comparison of its sector structure with similar countries at higher stages of development. According to their framework, in the first step of an industrialization strategy, country should identify the sectors in which they have latent comparative advantage. In order to do so, countries can look at the list of tradable goods and sectors, produced in the last 20 years in growing countries with similar resource

endowments and with a per capita income about 100 per cent higher than their own. Among these industries, countries should favour industries where some domestic firms have already entered the market. If domestic firms are not present in these industries, the government can attract FDI from world industry leaders (by leveraging on lower labour costs or by creating EPZs and industrial parks, or by offering temporary financial incentives).

A more statist position is taken by authors such as Ha-Joon Chang (e.g. Lin and Chang 2009; Chang 2012) and Alice Amsden (2011), who argue that governments should take the lead in structural change by defying static comparative advantage and 'getting prices wrong'. But other authors argue that selective state interventions require very high state capabilities, which are lacking in many SSA countries. Thus Tilman Altenburg argues that the neo-patrimonial state can be a serious obstacle to the effective implementation of industrial policies in Africa (Altenburg, 2013).

Common trends in industrial policy in Africa include: attraction of FDI (especially for export-oriented sectors); promoting of export-oriented industries; selective tariff protection and export taxes to create incentives for local processing of raw materials; privatization of manufacturing public firms; sectoral policies focusing on existing resources and light manufacturing (Marti and Ssenkubuge, 2009).

In 2003, ILO adopted the Global Employment Agenda which set forth several elements for developing a global strategy for employment. At the core of this agenda there are economic development, social justice, and the concepts of productive employment and decent work, as defined and discussed in Section 1. The policies that allow these achievements are classified into policies addressing the economic environment (trade, investment, innovation, policies for sustainable development and macroeconomic policies for growth and employment) and policies that directly affect the labour market (policies for entrepreneurship, employability by improvement of knowledge and skills, active labour market policies, minimum wage policies, social protection policies, and productive employment). African policy makers are increasingly designing strategies that go in this direction. These efforts are often undertaken together with the ILO and the African Development Bank. Table 2 provides a summary view of the implementation of four categories of policies in SSA: trade policies, sectoral policies, innovation policies, employment policies. It is worth mentioning that, because some of the sources of this information are official policy documents, it is difficult to evaluate the progress of these reforms or their effective implementation. In table 3, we specify targeted sectors. In table 4, we summarize existing literature on implementation and result of each of these policies. The table is also useful to understand which policies have attracted most attention from academics and international organizations and which areas have been neglected and are in need of further investigation.

Trade policy

Export promotion is a recurrent policy recommendation, especially for resource-abundant countries whose production structure needs to be shifted towards sectors with more employment opportunities (World Bank, 2013). Currently, various African countries have in place export promotion agencies in charge of promoting export-oriented manufacturing and services, like the BEDIA in Botswana. These however do not always work properly (e.g., Lederman et al., 2010). Apart from export promotion agencies, governments set up a wide series of financial and fiscal incentives for exporting firms (e.g., Belloc and di Maio, 2011). Export promotion can also be achieved via Special Economic Zones (SEZs). SEZs attract investments that would have not come to a particular country otherwise and therefore create additional jobs (Kingombe and te Velde, 2012). In Africa, export promotion is often mentioned in combination with attraction of FDI (Marti and Ssenkubuge, 2009). FDI can be used strategically: as a diversification tool, and thus as a way to offer new employment opportunities where domestic firm capabilities are lacking (Lin and Monga, 2011), as a way to increase exports (Hailu, 2010), and as a way to absorb new knowledge and technologies and tap into global networks (discussed later). Exports can contribute to technological upgrading through standards and quality controls. Standards and quality controls are very important to compete in the international market. In order to stay competitive in the agricultural sector, African countries have to continuously upgrade their position in global value chains (UNECA, 2008; Page, 2013; Goedhuys et al., 2006; Iizuka and Gebreyesus, 2012). There is an extensive debate on the effects of selective trade protection and how it can impose market distortions and create inefficiencies. In the African context, some studies are investigating the extent with which tariffs and non tariff measures are still used to protect domestic markets (e.g. Hoekman and Nicita, 2011; Jones et al., 2011). They show that trade restrictiveness is still significant in low income countries, but that there is limited evidence of political economy influences on the cross sector pattern of tariffs and reforms.

Sectoral policies

Sectoral industrial policies comprise all measures that target specific sectors over others (e.g. the automobile sector in South Africa). According to UNECA (2011b), relevant tools of sectoral policies in Africa are preferential credit, competition policy and public procurement favouring local manufacturers. Credit, in fact, access to credit is a major obstacle to investment in the region (Ramachandran et al., 2009). Preferential credit can be used to support firms, and especially SMEs, in priority sectors. Successful cases are Ivory Coast (cement), Zimbabwe (wood products), South Africa (fertilizers), Ethiopia (flower) and Mozambique (aluminium). According to UNCTAD (2011), competition policies are particularly important in the raw-material sectors, which are often very important in the African context. In the last 10 years, new regulatory environments have spurred private investments in the sector (UNIDO, 2009). Very little empirical literature is available in this policy area.

Innovation policy

As far as innovation policies are concerned, the set of policy instruments government can choose from is generally quite ample (e.g. for South Africa: Lorentzen, 2009; Angola: UNCTAD (2008); Rwanda: Murenzi and Huges, 2006; Mauritius: Wignaraja, 2002, see also Gault, 2013). Instruments like tax incentives and R&D subsidies are offered only by South Africa and Rwanda (the latter has recently emerged as an innovation hub). By the same token, few countries have engaged in regional policies (e.g., Ethiopia: Egziabher, 2000). According to Aryeetey and Moyo (2012), priority in African industrial policy should be given to the adoption of new technologies through R&D incentives, clusters and SEZs, and a strategic use of FDI by which foreign investment would be channelled towards specific target sectors and incentives for the creation of linkages with the rest of the domestic economy are in place. Marti and Ssenkubuge (2009) suggest using FDI more selectively, by focusing on non-traditional activities (e.g. Botswana and Mauritius) and technologically advanced activities (e.g. Ghana and Mauritius) and aiming at upgrading, technology and knowledge transfer and entry into new value chains. Empirical evidence for African countries largely concentrates on attracting FDI for purposes of technology transfer (e.g. Portelli, 2006). A rapidly expanding area of research focuses not so much on specific instruments of innovation policy, but improving the function of national, regional and sectoral innovation systems (Lundvall et. al., 2009). A key recommendation from this literature is to improve the linkages and knowledge flows between economic actors, education institutions, research institutions and governments.

Employment policy

The tools of employment policies are selected based on the Global Employment Agenda of the ILO. Policy intervention should include government funded active labour market programs, aimed at employment in the public and private sector; training and education incentives; job search assistance and other information services; education systems reforms to tackle the skill mismatch and reforms of labour legislation (Page, 2012). Public works, i.e. subsidized temporary employment or labour intensive mega-projects, are often used in African countries to create (temporary) employment. These often are large infrastructure projects (see McCord and Slater, 2009). Public works' programmes are often coupled with food-for-work programmes (FFW). In FFW programmes, people are employed for public works and are paid in food. These programmes guarantee at least the minimum essential quantity of food necessary to maintain good nutrition. Providing food instead of money has several advantages, as Barrett et al. (2002) discuss. Few empirical studies evaluate the effects of public works and active labour market policies on employment creation and its quality. One of them is Rijkers et al. (2010). Recognizing the role of the informal sector, employment policies should specifically be able to reach these firms and support their move into the formal sector (Marti and Ssenkubuge, 2009). This applies to training as well (see the experience of Western African countries like Ghana).

Population Policy

Population policy refers to policies that target demographic aspects such as fertility, mortality, population growth, migration, distribution of people. The high rates of population growth prevalent in SSA cause several problems, among which the problem of increasing youth unemployment discussed above. According to the UN report *World Population Policies* (2009), 25 per cent of African Governments started to adopt population policy already in the mid-1970s and over time more and more countries followed. Today the majority of the African Governments sees the level of fertility of their country as too high.¹³ Population policy in SSA essentially aimed at providing information about, and access to, contraceptives. In some instances, these programs yielded positive results in terms of fertility reduction (see Blacker et al., 2005 for a comparison between Kenya and Uganda). According to Bongaarts and Sinding (2011), given that a good population policy can decrease fertility by 1.0 to 1.5 births, prompt adoption of such programs in SSA could reduce population by considerably more than a quarter-billion by 2050. While many SSA countries see migration as a way to control unemployment and boosts their revenues via remittances, the negative impact of brain drain on technological and socioeconomic development is of increasing concern (Adepoju, 2008). Migration and brain circulation in SSA is primarily intra-regional. Due to poverty and deteriorating living conditions, migration has increased in the last decades and international migration is also expected to rise as a consequence of high (educated) youth unemployment. In 2009, 75 per cent of the African Governments (75 per cent of the total) pursued policies to reduce the internal flow of migrants from rural to urban areas and 44 per cent to stimulate migration from urban to rural areas (UN, 2009). Some countries (Kenya, Nigeria, Ghana and Uganda) are also starting to experiment with policies to attract nationals (especially professionals) back in the country (Adepoju, 2008). Population policies, however, do not act in a vacuum. In order to fully reap their benefits, countries need to invest in female education and need to adopt other broad measures to foster socio-economic development (e.g., Jeejeebhoy, 1995; Subrahmanian, 2002).

¹³ For more details on progresses of SSA countries with respect to these policies, refer to UN (2009).

Table 2. Policies for employment creation in SSA

Policy area	IP tool	Botswana	Cameroon	Cote d'Ivoire	Ethiopia	Ghana	Kenya	Mauritius	Nigeria	Rwanda	Senegal	South Africa	Uganda	Zimbabwe
<i>Trade policy</i>	<i>Export promotion</i>	x	x	x	x	x	x	x		x	x		x	x
	<i>SEZs</i>		x	x	x	x	x	x	x	x	x	x	x	x
	<i>FDI attraction for export</i>	x	x	x		x	x	x	x	x			x	x
	<i>Standardization and quality controls</i>	x	x	x	x		x			x		x	x	
	<i>Selective trade protection</i>	x	x				x	x	x		x		x	
<i>Sectoral policy</i>	<i>Preferential credit</i>	x		x	x			x			x	x		
	<i>Competition regulation</i>											x		
	<i>Public procurement</i>	x			x	x	x					x		x
<i>Innovation policy</i>	<i>FDI attraction for technology transfer</i>	x	x		x	x		x						
	<i>Incentives for equipment and machinery</i>	x						x		x		x		
	<i>Industrial R&D</i>	x			x	x	x	x	x	x			x	

	<i>Clusters</i>					X	X	X	X				X	
Employment policy	<i>Training</i>	X	X	X	X	X	X	X	X	X		X	X	X
	<i>SMEs</i>	X		X	X	X	X	X		X		X	X	X
	<i>Measures for rural poor and informal sector</i>	X	X	X		X		X	X	X	X	X	X	
	<i>Public works</i>	X		X	X		X			X		X	X	
	<i>Employment services</i>				X		X					X		X

Source: Authors' elaboration based on: Altenburg (2010), Assefa (2008), Bategeka (2012), ILO (2004), Marti and Ssekubuge (2009), Rizzo (2011), Soludo et al. (2004), UNDP (2005), UNECA (2011b), Zeng (2008), Walther (2006) and national policy documents.

Notes: Measures for rural poor and informal sector include measures for agricultural development, programs to provide rural poor with the conditions to move to other productive sectors (e.g. education, technical skills, and access to finance) and measures to incentivize formality and improve productivity of the informal sector. Public works refer to subsidized temporary employment or labour intensive mega-projects financed to create employment (e.g. infrastructure projects). Employment services refer to active labour market measures and efforts to develop effective labour market mediation, information and careers advice institutions and services, both in the public and private sector.

Table 3. Targeted sectors of industrial policy

Country	Sectoral policies
Botswana	<i>auto, beverages, textiles and clothing</i>
Cameroon	<i>textiles and clothing, wood, energy and hydrocarbons, agro-processing, pharmaceuticals, tourism</i>
Cote d'Ivoire	<i>agro-processing, construction, civil engineering</i>
Ethiopia	<i>leather and leather products, textile and clothing, sugar, metal, dairy and meat, horticulture, agro-processing, construction</i>
Ghana	<i>agro-processing, ICTs, metal-based industries</i>
Kenya	<i>agro-processing, fertilizers, cement, fish, leather, pulp and paper, metals, plastics, textiles and clothing, footwear, ICTs, electrics</i>
Mauritius	<i>ICTs</i>
Nigeria	<i>pre-chemicals, machine tools, steel</i>
Rwanda	<i>agro-processing, ICTs</i>
Senegal	<i>Tourism</i>
South Africa	<i>auto and auto components, textiles and clothing, pharmaceuticals, plastics, metals, pulp and paper, furniture, chemicals</i>
Uganda	<i>agro-processing, textiles and clothing</i>
Zimbabwe	<i>agriculture, raw materials, clothing</i>

Source: Authors' elaboration based on Altenburg (2010), Marti and Ssekubuge (2009), Soludo et al. (2004), UNECA (2011b), national policy document.

Table 4. A review of the literature on policies for productive employment creation

Policy Area	Source	Countries covered	Main conclusions
SEZs	<i>Cling et al. (2005)</i>	<i>Madagascar</i>	<i>Average wages in the Zone Franche are equivalent to other formal sectors but labour standards are higher than average.</i>
	<i>Rojid et al. (2008)</i>	<i>Mauritius</i>	<i>Mauritius reduced unemployment and raised foreign exchange, yet EPZ bore more costs than benefits to the economy.</i>
	<i>Kingombe and te Velde (2012)</i>	<i>SSA</i>	<i>Half of the EPZ employment in SSA is in South Africa. Ghana, Tanzania, and Kenya are the countries where the share of SEZs employment is the highest. In few countries, SEZs helped to change export structure and upgrade economy (Mauritius and maybe Kenya).</i>
FDI attraction	<i>Ndikumana and Verick (2008)</i>	<i>SSA</i>	<i>FDI crowds in private investment but the impact of private investment on FDI is stronger and more robust than the reverse relation.</i>
	<i>Phelps et al. (2009)</i>	<i>Ghana, clothing industry</i>	<i>Ownership of FDI matters for insertion in GVCs and development. Rapidly emerging Asian MNEs present challenges for industrial upgrading via FDI.</i>
Standards and quality controls	<i>UNECA (2008)</i>	<i>Ghana, Kenya, Uganda, Zambia and Ethiopia</i>	<i>Food safety and quality standards, especially from the EU, undermine the participation of small-scale growers into GVCs. Small-scale farmers need substantial financial support to achieve these certifications. Kenya is a good example of proactive strategies in this respect.</i>
	<i>Goedhuys et al. (2006)</i>	<i>Tanzania</i>	<i>In the manufacturing sector, ISO certifications positively affect firms' productivity.</i>
FDI for technology transfer	<i>Portelli (2006)</i>	<i>Tanzania</i>	<i>Knowledge transfer occurs mainly via backward linkages with local suppliers. The strength of these linkages depends on factors like the orientation of the MNEs (domestic or export market), its origin, and varies across industries. Local capabilities are a prerequisite to seize the benefits of FDI.</i>
	<i>Managi and Mulenga Bwalya (2010)</i>	<i>Kenya, Tanzania and Zimbabwe</i>	<i>Results show evidences in support of intra- and inter-industry productivity spillovers from FDI for Kenya and Zimbabwe, but not for Tanzania.</i>
	<i>Osabutey and Debrah (2012)</i>	<i>Ghana and SSA</i>	<i>Countries like Ghana have improved their investment climate to increase FDI. However, policy paid</i>

		<i>little attention to technology transfer and capacity building. FDI policies are not integrated with education and technology policies, and private-sector development policies.</i>
	<i>Elmawazini and Nwankwo (2012)</i>	<i>Côte d'Ivoire, Kenya, Madagascar, Senegal, and South Africa</i>
		<i>FDI inflows have had relatively little impact on SSA's industrial capacity and global competitiveness and widened the gap with developed economies. Predominance of FDI in extractive instead of manufacturing industries and weak absorptive capacity reduce MNEs incentives to transfer knowledge.</i>
Clusters	<i>Oyelaran-Oyeyinka and Lal (2006)</i>	<i>Ghana, Suame and Kenya, Kamukunji and Kariobangi</i>
		<i>Managers of firms in clusters are more inclined to train workers if ICT facilities are available within the cluster. Cluster performance can be improved by taking joint actions in the form of technological and human resource development programs.</i>
	<i>Kinyanjui (2008)</i>	<i>Kenya, Kamukunji metalwork Cluster</i>
		<i>Sanitation, lighting, electricity, and links with learning institutions must be upgraded if the cluster is to continue to become more productive.</i>
	<i>Oluyomi Abiola (2008)</i>	<i>Nigeria, Otigba Computer Village Cluster</i>
		<i>The cluster benefited both from initiatives of associations (like CAPDAN), the National Information Technology Policy and public procurement of locally assembled computers.</i>
	<i>Kiggundu (2008)</i>	<i>Uganda, Lake Victoria Fishing Cluster</i>
		<i>With the help of EU buyers, the cluster has made some progress in process upgrades, less in product development. It has not yet shifted from the preparation and export of whole and semi-processed fish products to further processed products.</i>
<i>Sawkut (2008)</i>	<i>Mauritius, Textile and Clothing Cluster</i>	
	<i>The government provided training, export promotion, SMEs support, favourable business environment. Given that productivity is lower and wages are higher than global competitors, Mauritius is pointing at the knowledge-intensive segment (high quality products) of the industry.</i>	
<i>Gebreeyesus and Mohnen (2013)</i>	<i>Ethiopia, Mercato footwear cluster</i>	
	<i>Business and knowledge interactions are co-occurring in the cluster. Intense competition from imports and later on within the cluster has led to some form of upgrading and quality improvements.</i>	
<i>Mano et al. (2011)</i>	<i>Ethiopia, 64 cut flower farms</i>	
	<i>Relatively to firms outside the cluster, firms within the cluster attract workers with higher human capital, have more permanent than seasonal workers and better cope with demand fluctuations due to information flows.</i>	
<i>Sonobe et al. (2012)</i>	<i>Ghana, Ethiopia, Tanzania,</i>	
	<i>Basic management training helps to improve management practices, reduces the incidence of exit,</i>	

	Vietnam, China, Bangladesh	<i>and is likely to benefit participants enough to justify the cost of providing the training (due to spillovers within the cluster). Training, however, is not enough to spur firms' innovation because innovation capabilities are more difficult to teach.</i>
	Yoshino (2011) SSA	<i>Cluster-based enterprises are more productive and export-oriented than outside firms. Firms in survival clusters fail to grow due to lack of differentiation and lack of opportunities for spatial mobility. In terms of employment, cluster-based firms absorb more permanent workers, while outside enterprises more (unskilled) apprentices.</i>
Training	Sekwati and Narayana (2011) Botswana	<i>Current VET set up is not responsive to the needs of the people who did not have formal education and work already in the informal sector. The 2007 informal sector survey provides an idea of the training needs of informal sector, but much more detailed analysis is needed for a VET reform.</i>
	Okunola et al. (2010) Nigeria	<i>The main problems of VET are: limited resources for expansion, exclusion of VET from the main stream curriculum, lack of guidance services, quantity and quality of teaching resources. A public perception of VET as low status has partly vanished government efforts to reform VET.</i>
	Berthelemy (2006) and Biavaschi et al. (2013) SSA	<i>Education policies are biased against primary education and VET has low priority with respect classical curricula. This bears important distributional consequences.</i>
	Monk et al. (2008) Ghana	<i>Apprenticeship is by far the most important form of training in urban Ghana. The most important factor affecting returns to apprenticeship is the level of prior formal education: for currently employed people, who did apprenticeships but have no formal education, apprenticeship increases their earnings by 50 per cent, but the return declines as education rise.</i>
SMEs	Wignaraja (2002) Mauritius	<i>SMEs have lower capabilities, are less export-oriented, have less foreign equity, conduct less training and make less use of external technical assistance than large firms. Policies can improve their capabilities and competitiveness by incentivizing co-location with large firms into clusters.</i>
	Mckenzie (2011) SSA	<i>African SMEs are small and heterogeneous, which poses challenges for both experimental and structural methods of estimating the impact of firm policies. Different procedures should be used on different set of firms (microenterprises, larger firms, subgroups of relatively homogeneous SMEs).</i>

	<i>Cho and Honorati (2013)</i>	<i>Developing countries</i>	<i>Programs promoting self-employment and small scale entrepreneurship can lead to increases in labour market outcomes. Policy mixes (including training, facilitated access to finance, and counselling) are more effective than single measures and impacts are higher for young and educated people.</i>
Policies for rural areas and informal sector	<i>Akpan (2012)</i>	<i>Nigeria</i>	<i>Policies for rural areas are associated with (subsistence) agriculture and have the imprint of short-lived lifespan. They should go beyond agricultural development to creating social opportunities through heavy investment in education, healthcare, social security and infrastructures.</i>
	<i>Kweka and Fox (2011)</i>	<i>Tanzania</i>	<i>Due to the importance in creating jobs and sustaining livelihood, a large number of programs have been created to provide support to the informal sector. These, however, do not address the specific needs of household enterprises (HEs). Programs to provide access of HEs to finance are likely to be more effective if combined with training. These programs need a strong demand-driven component.</i>
	<i>Rizzo (2011)</i>	<i>Rwanda and Ethiopia</i>	<i>Poverty reduction strategies overlook the centrality of wage employment for many poor people.</i>
	<i>Sekwati and Narayana (2011)</i>	<i>Botswana</i>	<i>Increased access to training should be considered a necessary response to the needs of informal sector operators and employees to improve their performance and grow. Surveys of VET needs of the informal sector should inform policy intervention.</i>
Public works	<i>Rijkers et al. (2010)</i>	<i>Ethiopia</i>	<i>Firms in the programme Addis Ababa Integrated Housing Development Program (AAIHDP) do not seem to adopt neither new nor more labour-intensive technologies. There is an earnings premium associated with program participation which appears to be larger for the poorer paid workers.</i>
Labour market regulations and wage subsidies	<i>Kingdon and Knight (2007)</i>	<i>South Africa</i>	<i>Current labour legislation would be appropriate in a fully employed economy with little labour market segmentation. In protecting the rights of formal sector workers, this legislation harms the interests of those outside the formal sector.</i>
	<i>Fox and Oviedo (2008)</i>	<i>SSA</i>	<i>Employment growth is not associated with measures of labour regulation, and regulation is a minor obstacle if compared to the lack of infrastructure and limited access to credit.</i>
	<i>Pollin (2009)</i>	<i>Kenya</i>	<i>Preferred ways of reducing unit labour costs are by raising productivity and providing subsidies to businesses that are hiring workers into formal sector jobs.</i>

	<i>Schoer and Rankin (2011)</i>	<i>South Africa</i>	<i>Youth-targeted subsidies will induce firms to hire more young people, although not additionally to their existing workforce. This means that the subsidy will not create more jobs but favour the youth in the hiring process.</i>
--	---------------------------------	---------------------	---

Source: Authors' elaboration.

As table 2 shows, African governments are implementing several kinds of policies in order to create jobs. Below we provide some cases from selected countries.

South Africa has a plethora of programs in place. According to the National Development Plan (released in August 2012) 11 million more jobs are to be created by 2030, by expanding the public works programme, lowering the cost of doing business and helping match unemployed workers to jobs. In 2004, South Africa implemented the Expanded Public Works Programme (EPWP), which finances labour-intensive infrastructural projects. For the period 2004-2009, roughly R20 billion were allocated to these projects and slightly over one million work opportunities of varying duration were generated (Expanded Public Works Programme Five Year Report 2004/5-2008/9).¹⁴ In 2011, the Jobs Fund was launched to finance labour-intensive projects by public, private and non-profit organizations. Projects should be concerned with business development (especially SMEs), infrastructures, training and other services to link active job seekers (especially youth) to job opportunities. Funding allocation is based on an open and competitive process and financing is of limited duration. So far, R9 billion have been allocated to the Fund, 54 projects have been approved and assigned R3bn. The 27 projects that have already received funding are expected to create roughly 65,000 permanent jobs. The State is also financing projects to limit youth unemployment, to support SMEs, IT-training (via the e-Skills Institute), and is offering public employment services to match job seekers with job opportunities.

Given the severity of the problem of youth unemployment, in the years 2010 and 2011, South Africa experimented with a policy of youth-targeted wage subsidies (where youth was defined as people aged between 20 to 24 years). The total subsidy available for each worker is R5,000 (approximately \$670), with a maximum of approximately R800 (just over \$100) per month (in 2007 the national median monthly wage for youth aged 20-24 was R1,500, circa \$200). Schoer and Rankin (2011) evaluated the effects of this measure (see table 4).

Kenya is considered to be a country experimenting with innovative policy solutions. In 2007, a program offering training vouchers (Jua Kali) resulted in net improvements in terms of job creation, productivity and business profits (Puerto, 2007). More recently, Kazi Kwa Vijana (Work for Youth) finances small labour intensive public works projects and the Youth Enterprise Development Fund (YEDF) provides loans and business development services to young entrepreneurs and youth-oriented SMEs. As of today, the Fund has generated over 300,000 jobs in the five years by providing loans for total Kshs. 5.2 billion to 144,000 youth enterprises and by training over 200,000 youth (Fund Status Report as of 30th September 2011).

¹⁴ A similar programme is the Community Work Programme (CWP) that finances 'useful work' directed to improve living conditions of the community.

The Youth Employment Programme of Ghana has been launched in 2006 and is a more comprehensive program inasmuch as it provides training, support to entrepreneurship, employment services and creation of public employment. According to official estimates, the programme has benefited 457,779 persons as of June 2012. In order to cope with the widespread system of informal apprenticeship (80-90 per cent of all basic skills training), the Ghanaian government has also started the National Apprenticeship Policy, under which the apprentice receives formal instruction and on the job training.

Ethiopia also launched a National Employment Policy and Strategy in 2009. The strategy recognizes that the main manifestation of the employment problem in the country is the prevalence of underemployment and ‘working poor’ people rather than open unemployment. It, thus, stresses the need to address the problems of unemployment and underemployment, working poor, and lack of protection in the informal sector. The strategy gives due emphasis to the role of micro and small enterprises (MSEs) in the creation of employment opportunities and poverty reduction. Accordingly, the ongoing five-year development plan covering 2011-15 and known as Growth and Transformation Plan, GTP, sets targets to create employment opportunities for about three million people by the end of the plan period through the provision of full-fledged support to the MSEs. Massive employment generating schemes are underway particularly in the construction sector, mainly targeting the youth and women.

Bategeka (2012) reviews the set of policies put in place by the Ugandan government to stimulate economic development and argues that, many of them are ill-designed, while others exist only on paper. Despite the recent efforts of African governments towards a design of industrial policy consistent with what we have called “a new approach to industrial policy”, various authors provide suggestions on how to improve present industrial policy in Africa. Table 5 summarizes their views on some important issues associated with the new approach to industrial policy. As the table shows, the majority of the literature reviewed tackles the issue of how to design cluster policies to achieve export-oriented sustained growth.

Table 5. Promising areas of IP for job creation in Africa

	Clusters policy: SEZs and CBIPs	Upgrading within GVCs	FDIs	SMEs	Selective financing
UNECA (2011b)	<i>Review of empirical evidence</i>	<i>Agro-business and the challenges of upgrading</i>			
UNCTAD (2011)	<i>appropriate for the implementation of technology policies</i>	<i>Access to export markets vs. trap into low value-added activities</i>		<i>facilitating acquisition of technical and managerial skills and entry into foreign markets</i>	<i>discretionary credit lending and fiscal policy to target sectors</i>
Aryeetey and Moyo (2012)	<i>Strengthen linkages between foreign and domestic firms</i>		<i>Selective FDIs towards target sectors</i>		
Marti and Ssenkubuge (2009)	<i>Strengthen linkages between firms in SEZs and domestic firms</i>		<i>Selective FDIs towards technological sectors</i>		
Monga (2011)	<i>Customize clusters to the needs of their target industry; Stimulate linkages with firms outside the cluster</i>				
Kingombe and te Velde (2012)	<i>Use SEZs to change export structure and upgrade economy</i>				
UNIDO (2009)	<i>SEZs require good infrastructure, technical and managerial skills, and good institutions (see Mauritius); link cluster policy and export</i>				

	<i>promotion</i>
Page (2013)	<i>Improve investment conditions (infrastructures, skills, regional integration) and support firms' productivity by encouraging export push, clusters and task-based production.</i>

Source: Authors 'elaboration

5 Emerging debates and contrasting views on how to promote productive and sustainable employment in Africa

5.1 Finding African role models

It is important to find African countries that can serve as examples or role models for other countries on the continent. Development strategies cannot be blindly copied from one setting to another (Hobday, 2013) but countries can learn from one another. When an African country is successful in realising an employment creating path of dynamic growth, this will be more inspiring for other countries in the region than distant examples from Asia or Latin America. The same is true from a policy perspective: examples of policies that have been effective – e.g. export zones, promotion of non-traditional exports - can stimulate policy formulation in other countries.

5.2 Agricultural led industrial development

There is an interesting debate on agricultural development led industrial development. An example of a country presently following such a development strategy is Ethiopia. The argument for ADLI goes back to the balanced growth debates of the 1960s (Szirmai, 2005). It is argued that prior productivity improvements in the agricultural sector are an important precondition for industrialization in countries where a large proportion of the working population is still employed in agriculture. This means that there should be investment in productivity improvement and technological change in agriculture, while at the same time the foundations are being laid for expansion of manufacturing and other non-agricultural sectors.

A similar argument can be made for the informal sector. The two sectors that generate most employment are the agricultural and the non-agricultural informal sector (one could argue that small-holder agriculture should be seen as part of the informal sector). According to the 2013 *World Development Report*, improvement of agriculture and the informal sector will promote productivity growth in the respective sectors but will also contribute to the development of other sectors.

The most important debate concerns the implementation of policies that tries to promote the productivity and learning in the small farms and firms. The dominant policy is a top-down approach, whereby the private sector (the small farmers and firms) passively receives technology, finance and other support from the government and the donor community. But such top-down approaches have increasingly been criticized. Hence, examination of success/failure stories could enrich our understanding in this regard.

5.3 Resource based industrialization

Often, the East Asian economies are taken as the exemplars for economic strategy and structural change. Perhaps Latin America can also provide alternative lessons for economic development in resource rich

economies. Carlotta Perez has coined the phrase “resource-based industrialization” (Perez, 2008, see also Marin et al. 2009), arguing that natural resource-based activities can serve as a platform for development strategies. These authors have argued that resource rich countries can develop resource-based manufacturing activities, which are technological dynamic and contribute to employment. Examples of resource based manufacturing include ethanol production in Brazil, wine production in Chile and Argentina (Farinelli, 2013) and salmon production in Chile (Iizuka, 2007). Many of the examples come from food production which was once considered to be a traditional technologically stagnant sector, but is now seen as much more technological dynamic. Botswana provides a partially successful example of resource based development (Acemoglu et al. 2003), Nigeria and Democratic Republic of Congo are clear examples of failures. Angola and Mozambique provides examples of interesting and promising developments).

5.4 Non-traditional exports

Structural change and economic diversification can take different forms. One particular interesting avenue of structural change is the emergence of non-traditional exports. In the past 15 years several African countries have been successful in developing new modern export sectors for products such as flowers, vegetables or brand coffees (see Iizuka and Gebreyesus, 2012). Countries which have achieved success in this respect include Ethiopia, Kenya and Tanzania. The employment impact of these new export activities is yet to be explored.

5.5 Creating employment in labour intensive modern agriculture.

In the 1950s and 1960s Africa was self-sufficient in food. Decades of anti-agricultural bias in policy have made many countries on the continent import dependent in food. There is an urgent need for green revolutions in semi-arid agriculture, which increase food productivity, food security and at the same time are labour intensive in nature. One debate is whether or not such a green revolution is feasible in the African context (Page, 2012, 2013). Another debate which cannot be avoided in this context is that concerning the relative efficiency and innovative capabilities of large farms or plantation agriculture using wage labour versus small-holder agriculture based primarily on family labour.

5.6 Engines of growth and employment creation: Is manufacturing still important?

Since the late 1980s, Africa has been characterized by premature de-industrialization (Tregenna, 2013). De-industrialization involves a decline of the share of manufacturing in total employment. As manufacturing jobs are better rewarded, more stable and provide more learning opportunities than most other sectors, de-industrialization is problematic from the productive employment perspective. The debate focuses on whether re-industrialization is feasible, or whether African economies should follow the alternative route of service-led growth. As is clear from the preceding sections, we argue that growth and employment creation has to be

broad-based. We discussed a variety of strategies including modernization of agriculture, innovation in the informal service sector, non-traditional sectors, resource based development. In a recent report to the international finance corporation, Lavopa and Szirmai (2012) argue that manufacturing still has a special role to play in employment creation and poverty reduction, also in an African context. It may be that direct employment creation in modern manufacturing is not sufficient to absorb the increasing supply of labour, but the indirect effects of manufacturing on other sectors remain important for growth, employment creation and poverty reduction. As discussed in section 4.1, the literature on structural change in SSA (Harrison et al., 2011; Clarke, 2011; Dihn et al., 2012; Leipziger and Yusuf, 2012; Page, 2012; McKinsey, 2012) also suggests investing in labour-intensive manufacturing. A shift to light manufacturing is feasible given labour costs and abundance of natural resources in SSA, but this requires complementary investments in human capital and improvement of the business environment.

5.7 Role of foreign direct investment in employment creation

Attitudes to foreign investment have undergone substantial change in Africa. Up till the late 1980s many countries such as Tanzania, Mozambique or Ethiopia were hostile to foreign investment. In recent decades countries such as Tanzania and Mozambique have opened up to foreign investment. For instance, former socialist Tanzania is one of the largest recipients of FDI in Eastern Africa, which not only flows into mining, but also into manufacturing (Portelli, 2006). The same is true for Mozambique. In general, the debate has shifted from whether or not FDI is desirable to how it can be attracted and under what conditions its contributions to the domestic economy and employment are more positive. To the extent that FDI is aimed at setting up production facilities, it may contribute to creating productive employment. In this context, special attention is now being paid to the increasing role of Chinese investment in African economic development.

5.8 Promoting entrepreneurship in the informal sector

In economies where a large part of the labour force is locked into the vulnerable informal sector, the question arises whether entrepreneurship (and entrepreneurship policies) can provide a route towards making employment in this sector less vulnerable (more productive). Recent research indicates that the scope for dynamic entrepreneurship in the informal sector is limited. For instance, in a survey of 800 entrepreneurs in Uganda, the great majority were survival entrepreneurs (other terms: necessity entrepreneurs; subsistence entrepreneurs). Only some 20 to 25 entrepreneurs were dynamic and entrepreneurial in a Schumpeterian sense (Rooks et al. 2012).

From the perspective of poverty reduction and social inclusion, a recent study by Lina Sonne argues that policy should focus on the limited number of somewhat more affluent growth oriented micro-entrepreneurs, rather than on the mass of the poor survival entrepreneurs. It is these growth oriented entrepreneurs (also referred to as Gazelle firms) that can rapidly create new employment. For this new financial institutions have to be developed – different from conventional micro-finance institutions - that can reach these growth

oriented micro-entrepreneurs. The study of Sonne focuses on India, but has obvious relevance for Africa (see also Grimm et al. 2011).

5.9 Exploiting unlimited supplies of cheap labour

As indicated in section 2, African economies are characterized by huge reserves of underemployed labour, which are excluded from formal labour markets. In the past, African countries have missed out on labour intensive manufacturing, in part due to a policy of relatively high wages and too capital intensive production. In 1950, Western Africa and Southeast Asia started out at similar levels of per capita income. Since then industrialization in South East Asia has taken off, initially on the basis of exploitation of cheap labour in labour intensive manufacturing, later followed by upgrading). African countries have missed out on this opportunity.

The next decades will offer a new window of opportunity for African manufacturing. Successful population policies in China are resulting in an aging population, shortages of labour and increasing incomes. The future shortage of labour in China will create new opportunities for low-income countries in labour intensive manufactured exports (see also Lin, 2011). Manufacturing is already shifting from China to other low-wage countries such as Vietnam, Cambodia, Myanmar and especially Bangladesh.

In general, African countries produce far too capital intensively, given their factor proportions, in part due to highly distorted labour and capital markets (e.g. Kaplan, 2012; van Biesebroeck, 2004). One of the most extreme examples is South Africa where workers in the formal sector striking for large wage increases, while perhaps up to 40 per cent of the workforce is excluded from the formal labour market. Africa needs to learn from the example of East Asia that the route to economic success lies in the exploitation of a highly disciplined, relatively well educated pool of cheap labour.

This has clear implications for labour market policies. African labour market policies have been shaped by coalitions between an elite labour movement and dominant political parties favouring a small working population in the formal sector and excluding the majority of the workers in the informal sector. Labour market policies should become more inclusive, which also means the acceptance of low wages, till an expanding economy starts to realize productive increases which at a later stage allow for wage increases. (Even low wages in manufacturing will be better than remuneration in the informal sector, due to higher productivity and learning opportunities).

One should realize that wage levels are only part of the story. What really matters is unit labour costs, which depend not only on wage levels, but also on productivity and efficiency. While African wage levels are higher than those of countries at similar levels of per capita income, a recent study suggests that they are lower than those of the East Asian economies since 2006 (Clarke, 2012, UNIDO, 2013). Nevertheless, East Asian unit labour costs are estimated to be 20 per cent lower than in Africa. Thus exploiting supplies of

cheap labour depends not only on wage costs, but also on the efficiency with which the labour force is deployed. This in turn depends on labour discipline, efficient organization of production, and labour skills.

5.10 Population policy

All researchers agree that youth unemployment is a huge problem on the African continent. From this perspective it is hard to understand why population policies have come to have such a low priority in the policy debates. Compared to other developing regions in the world Africa is unique in maintaining very high rates of fertility and population growth. In the medium to long term, a decline in fertility rates would also reduce the pressures on the labour market.

5.11 Is skill mismatch in Africa myth or reality?

With regard to the presumed skill mismatch, there are at least two parallel debates.

First, there is a question about whether or not the skill mismatch exists. The 2013 *World Development Report on Jobs* argues that skill mismatches are important and that they are increasing rather than shrinking. On the other hand, the McKinsey 2012 report *Africa at Work* argues that entrepreneurs do not see the difficulty of finding workers with appropriate skills as a major obstacle to business growth in Africa.

The second debate takes the existence of skill mismatches in Africa for granted and focuses on what the best policy responses should be. One response is to give higher priority to both vocational training and on the job training schemes. A more general approach is to see the education system not merely as a supplier of appropriately schooled labour, but as an integral part of the national innovation system. This requires strengthening the ties and interactions between educational institutions, public research organizations and productive firms at all levels. These closer ties themselves would contribute to reductions of skill mismatches.

5.12 The nature and focus of industrial policy

Africa has moved from strong state intervention to a more or less market oriented approach, but the incentives for entrepreneurial activity remain limited. Africa ranks low on the ease of doing business index (Page, 2013).

At present industrial policy is making a global comeback, as a reaction to the disappointments with a purely market oriented approach. More statist positions are taken by authors such as Ha-Joon Chang (e.g. Lin and Chang 2009; Chang, 2012) and Alice Amsden (2011). Some authors (e.g. Cimoli et al., 2009) even argue for a return to the industrial policies of the post-war period, including protectionist measures. Some countries such as Ethiopia are experimenting once more with a state-led developmental strategy. Intermediate

positions are taken by authors such as Hausmann and Rodrik (2003) and Lin and Mong (2011). According to Hausmann and Rodrik (2003), policy should aim at supporting firms that are leading the process of self-discovery. In a similar vein, Lin and Monga (2011) argue that a country can identify its latent comparative advantage through comparison of its sector structure with similar countries at higher stages of development. Policy should then target these industries.

Naudé and Szirmai (2012) argue against a wholesale return to the selective interventions of the past in the African context. They agree that there is a renewed need for industrial policy. But policies must be tailored to state capacity. Selective intervention requires a degree of state capacity and autonomy which does not presently exist in most African countries. One should not neglect the lessons of serious failures of past industrial policies in Africa prior to the 1980s. New industrial policies should be less top-down than in the past and more aimed at promoting entrepreneurial activity and innovation. Though debates continue, the dominant focus at present is still on supporting and challenging firms and building effective relations with the private sector (UNECA, 2011b).

References

- Acemoglu, D., S. Johnson and J.A. Robinson (2003), 'An African success Story: Botswana', in D. Rodrik (ed.), *In Search of Prosperity. Analytic Narratives on Economic Growth*, Princeton: Princeton University Press, Chapter 4.
- Adepoju, A. (2008), 'Perspectives on International Migration and National Development in Sub-Saharan Africa', in A. Adepoju, T. van Naerssen and A. Zoomers, *International Migration and National Development in Sub-Saharan Africa: Viewpoints and Policy Initiatives in the Countries of Origin*, Leiden, the Netherlands: Brill
- African Development Bank (2012), *African Economic Outlook 2012: Promoting Youth Employment*.
- African Development Bank (2012b), *Youth Employment in Africa: A Background Paper for the 2012 African Economic Outlook*, Tunis: African Development Bank.
- Akpan, N. S. (2012), 'Rural Development in Nigeria: A Review of Pre- and Post-independence Practice', *Journal of Sociological Research*, **3**(2): 146-159.
- Aliber, M., and T.G.B. Hart (2009), 'Should Subsistence Agriculture Be Supported as a Strategy to Address Rural Food Insecurity?', *Agrekon*, **48**(4): 434-458.
- Altenburg, T. (2010), *Industrial Policy in Ethiopia*, German Development Institute Discussion Paper 2/2010.
- Altenburg, T. (2013) 'Can Industrial Policy Work under Neopatrimonial Rule?', in A. Szirmai, W. Naudé and L. Alcorta (eds.), *Pathways to Industrialization in the 21st Century*, Oxford: Oxford University Press.
- Amin, M. (2009), *Labour Productivity in the Informal Sector: Necessity vs. Opportunity Firms*, Enterprise Analysis Unit, World Bank.
- Anker, R., I. Chernyshev, P. Egger, F. Mehran and J. Ritter (2002), *Measuring Decent Work with Statistical Indicators*. ILO Policy Integration Department, Working Paper No. 2.
- Anríquez, G., and G. Bonomi (2007), *Long-Term Farming and Rural Demographic Trends*, Background Paper for the World Development Report 2008.
- Amsden, A. (2011), 'Firm Ownership and Entrepreneurship' in A. Szirmai, W. A. Naudé, and M. Goedhuys (eds.), *Entrepreneurship, Innovation, and Economic Development*. Oxford: Oxford University Press, Chapter 3.
- Assefa, T. (2008), *Digest of Ethiopia's National Policies, Strategies, and Programs*, Forum for Social Studies, Addis Ababa, Ethiopia.
- Aryeetey, E. and N. Moyo (2012), 'Industrialization for Structural Transformation in Africa: Appropriate Roles for the State', *Journal of African Economies*, Vol. 21, AERC Supplement 2, pp. ii55 – ii85.

- Atamanov, A. (2011), *Rural Nonfarm Employment and International Migration as Alternatives to Agricultural Employment. The Case of Kyrgyzstan*, PhD thesis, Maastricht University, Maastricht Graduate School of Governance.
- Baipheti, M.N., and P.T. Jacobs (2009), 'The Contribution of Subsistence Farming to Food Security in South Africa', *Agrekon*, **48**(4): 459-482.
- Barrett, C. B., Th.Reardon, and P. Webb (2001), 'Nonfarm Income Diversification and Household Livelihood Strategies in Rural Africa: Concepts, Dynamics, and Policy Implications', *Food Policy*, **26**(4): 315-331.
- Barrett, C. B., S. Holden and D.C. Clay (2002), *Can Food-for-Work Programmes Reduce Vulnerability?*, WIDER Discussion Papers No. 2002/24. Development Economics (UNU-WIDER), No. 2002/24.
- Barro, R.J. and J-W. Lee (2010), *A New Data Set of Educational Attainment in the World, 1950–2010*, NBER Working Paper No. 15902.
- Bezu, S. and C.B. Barrett (2010), 'Employment Dynamics in the Rural Nonfarm Sector in Ethiopia. Do the Poor have Time on their Side?', *The Journal of Development Studies*, **48**(9): 1223-1240.
- Bategeka, L. (2012), *The Role of the State in Economic Development: Employment Challenges in Uganda*, Economic Policy Research Centre.
- Belloc, M., and M. di Maio (2011), *Survey of the Literature on Successful Strategies and Practices for Export Promotion by Developing Countries*, International Growth Centre, Working Paper 11/0248, June 2011.
- Berthelemy, J.C. (2005), 'To What Extent are African Education Policies Pro-poor?', *Journal of African Economies*, **15**(3): 434 – 469.
- Biavaschi, C., W. Eichhorst, C. Giulietti, M.J. Kendzia, A. Muravyev, J. Pieters, N. Rodríguez-Planas, R. Schmidl and K.Z. Zimmermann (2012), *Youth Unemployment and Vocational Training*, Background Paper for the World Development Report 2013.
- Bigsten, A. and M. Gebreyesus (2007), 'The Small, the Young, and the Productive: Determinants of Manufacturing Firm Growth in Ethiopia', *Economic Development and Cultural Change*, **55**(4): 813-40.
- Birba, O., and A. Diagne (2012), 'Determinants of Adoption of Internet in Africa: Case of 17 sub-Saharan Countries', *Structural Change and Economic Dynamics*, **23**: 463– 472.
- Blacker, J., C. Opiyo, M. Jasseh, A. Sloggett and J. Ssekamatte-Ssebuliba (2005), 'Fertility in Kenya and Uganda: A Comparative Study of Trends and Determinants', *Population Studies*, **59**(3): 355-373.
- Bluhm, R., D. de Crombrughe and A.Szirmai, *The Pace of Poverty Reduction - A fractional response approach*, UNU-MERIT Working Paper [2013-051](#), October 2013..

- Bongaarts, J., and S. Sinding, (2011), 'Population Policy in Transition in the Developing World', *SCIENCE*, 333: 574-575.
- Brilleau A., F. Roubaud, and C. Torelli, (2005), 'L'emploi, le chômage et les conditions d'activité, Enquêtes 1-2-3, phase', *Stateco*, **99**: 54-84.
- Calderon, C., and L. Serven (2010), 'Infrastructure and Economic Development in Sub-Saharan Africa', *Journal of African Economies*, **19**, AERC supplement 1: i13 – i87.
- Chang, H.J. (2012), *Industrial Policy: Can Africa Do It?*, Paper presented at IEA/World Bank Roundtable on Industrial Policy in Africa Pretoria, South Africa 3-4 July 2012.
- Cho, Y., and M. Honorati (2012), *Entrepreneurship Programs in Developing Countries: A Meta Regression Analysis*, Background Paper for World Development Report 2013.
- Clarke, G. R. G (2011), *Wages and Productivity in Manufacturing in Africa: Some Stylized Facts*, Background Paper for the book "Light Manufacturing in Sub-Saharan Africa: Targeted Policies to Enhance Private Investment and Create Jobs", World Bank.
- Clarke, G.R.G. (2012), *Manufacturing Firms in Africa: Some Stylized Facts about Wages and Productivity*. MPRA Paper 36122. Munich: Munich University Library.
- Cling, J.-P., M. Razafindrakoto and F. Roubaud (2005), 'Export Processing Zones in Madagascar: a Success Story under Threat?', *World Development*, **33**(5), 785–803.
- Collier P. and S. O'Connell (2008), 'Opportunities and Choices' in B.J. Ndulu, , S.A. Connell, R.H. Bates, P. Collier and Ch. C. Coludo (eds.), *The Political Economy of Economic Growth in Africa, 1960-2000*, African Economic Research Consortium, Cambridge: Cambridge University Press.
- Denu, B., A. Tekeste and H. van der Deijl, (2005), *Characteristics and Determinants of Youth Unemployment, Underemployment and Inadequate Employment in Ethiopia*, Working Paper, Employment Strategy Paper 2005/7.
- De Vreyer, P., and F. Roubaud (2013), *Urban Labor Markets in Sub-Saharan Africa*, World Bank, forthcoming.
- DIAL (2007), *Youth and Labour Markets in Africa: A Critical Review of Literature*. Document de Travail, DT/2007-02.
- Dimova, R., and K. Sen (2010), *Is household income diversification a means of survival or a means of accumulation? Panel data evidence from Tanzania*, BWPI Working Paper 122.
- Dinh, H. T., V. Palmade, V. Chandra and F. Cossar (2012), *Light Manufacturing in Africa: Targeted Policies to Enhance Private Investment and Create Jobs*, World Bank.
- Egziabher, T. G. (2000), 'Regional Development Planning in Ethiopia: Past Experience, Current Initiatives and Future Prospects', *Eastern Africa Social Science Research Review*, **16**(1): 65-94.

- Elmawazini, K., and S. Nwankwo (2012), Foreign Direct Investment: Technology Gap Effects on International Business Capabilities of Sub-Saharan Africa', *Thunderbird International Business Review*, **54**(4): 457-467.
- Farinelli, F., *National Resources, Innovation and Export Growth. The Wine Industry in Chile and Argentina*, PhD thesis, Maastricht University/UNU-MERIT, 2012.
- Fox, L. (2011), *Why is the Informal Normal in low income Sub-Saharan Africa*, Presentation at The World Bank, March 29, 2011.
- Fox, L., and A.M.Oviedo (2008), *Institutions and Labor Market Outcomes in Sub-Saharan Africa*, World Bank Policy Research Working Paper N. 4721.
- Fox, L., and M. Sekkel Gaal (2008), *Working out of Poverty: Job Creation and the Quality of Growth in Africa*, World Bank, Washington DC.
- Fox, L. and O. Pimhidzai (2011), *Is Informality Welfare-Enhancing Structural Transformation? Evidence from Uganda*, Policy Research Working Paper No. 5866, World Bank, Washington DC.
- Fu, X., C. Pietrobelli, L. Soete. (2011), 'The Role of Foreign Technology and Indigenous Innovation in the Emerging Economies: Technological Change and Catching-up', *World Development*, **39**(7): 1204-1212.
- Garcia, M, and J. Fares (2008), *Youth in Africa's Labour Market*, Washington DC: World Bank.
- Gault, F. (ed.) (2013), *Handbook of Innovation Indicators and Measurement*, Edward Elgar, Cheltenham.
- Gebreyesus, M. (2011), 'Innovation and Micro-Enterprise Growth in Ethiopia', in A. Szirmai, W. Naudé and M. Goedhuys (eds.), *Entrepreneurship, Innovation and Development*, Oxford, Oxford University Press.
- Gebreyesus, M., and P. Mohnen (2013), 'Innovation Performance and Embeddedness in Networks: Evidence from the Ethiopian Footwear Cluster', *World Development*, **41**, 302–316.
- Grimm, M., J. Kruger, and J. Lay (2011), 'Barriers to Entry and Returns to Capital in Informal Activities: Evidence from Sub-Saharan Africa', *Review of Income and Wealth*, **57**, pp. S27-S53.
- Grimm, M., P. Knorringa and J. Lay (2012), Constrained Gazelles: High Potentials in West Africa's Informal Economy, *World Development*, **40**(7): 1352–1368.
- Goedhuys, M. (2007), 'Learning, Product Innovation, and Firm Heterogeneity in Developing Countries: Evidence from Tanzania', *Industrial and Corporate Change*, **16**(2): 269–292.
- Goedhuys, M., Janz, N., and Mohnen, P. (2006), *What Drives Productivity in Tanzanian Manufacturing Firms: Technology or Institutions?*, UNU-MERIT Working Paper, 2006-037.

- Goedhuys, M., and L. Sleuwaegen (2002), 'Growth of Firms in Developing Countries, Evidence from Cote d'Ivoire', *Journal of Development Economics*, **68**: 117-35.
- Goedhuys, M. and L. Sleuwaegen (2010), 'High-Growth Entrepreneurial Firms in Africa: a Quantile Regression Approach', *Small Business Economics*, **34**: 31–51.
- Haggblade, S., P. Hazell and T. Reardon (eds.) (2007), *Transforming the Rural Nonfarm Economy*, Baltimore: Johns Hopkins University Press.
- Haggblade, S., P. Hazell and T. Reardon (2010), 'The Rural Non-farm Economy: Prospects for Growth and Poverty Reduction', *World Development*, **38**(10): 1429–1441.
- Hailu, Z. A. (2010), 'Impact of Foreign Direct Investment on Trade of African Countries', *International Journal of Economics and Finance*, **2**(3): 122-133.
- Harrison, A. E., J.Y. Lin, and L. Xu. (2011), *Explaining Africa's (Dis) advantage*, Background Paper for the book "Light Manufacturing in Sub-Saharan Africa: Targeted Policies to Enhance Private Investment and Create Jobs", World Bank.
- Hausmann, R. (2007), *Final Recommendations of the International Panel on Growth*. Available at: <http://www.treasury.gov.za/publications/other/growth/01-Overall%20Summary%20and%20Final%20Recommendations/01-Final%20Recommendations%20of%20the%20International%20Panel.pdf>
- Hausmann, R. and D. Rodrik (2003), 'Economic Development as Self-Discovery', *Journal of Development Economics*, **72**(2): 603–33.
- Hobday, M. (2013), 'Learning from Asia's Success: Beyond Simplistic 'Lesson-Making'' in A. Szirmai, W. Naudé and L. Alcorta (eds.), *Pathways to Industrialization in the 21st Century*, Oxford: Oxford University Press.
- Hoekman, B. and A. Nicita (2011), 'Trade Policy, Trade Costs, and Developing Country Trade', *World Development*, **39**(12): 2069–2079.
- Hoeven, R.E. van der (2010), 'Employment, Inequality and Globalization: A Continuous Concern', *Journal of Human Development and Capabilities*, **11**(1), 1-9.
- Hoeven, R.E. van der (2011), 'Income Inequality and Employment Revisited: Can One Make Sense of Economic Policy?' in: R. van der Hoeven (ed.), *Employment, Inequality and Globalization : A Continuous Concern*, London: Routledge, pp. 65-83..
- Hoeven, R.E. van der (2012), '(Financial) Globalization and Work' in UNCTAD, *Trade and Development Report, 1981–2011: Three Decades of Thinking Development*, Geneva: UNCTAD, (pp. 79-85).

- Iizuka, M. and M. Gebreeyesus (2012). ‘A Systemic Perspective in Understanding the Successful Emergence of Non-Traditional Exports: Two Cases from Africa and Latin America,' UNU-MERIT Working Paper Series 052, United Nations University, Maastricht Economic and social Research and training centre on Innovation and Technology.
- Ismail, T., and K. Masinge (2011), *Mobile Banking: Innovation for the Poor*, UNU-MERIT Working Paper Series, 2011-074.
- ILO (2004), Report III (Part 1B) , General Survey concerning the Employment Policy Convention, 1964 (No. 122), and the Employment Policy (Supplementary Provisions) Recommendation, 1984 (No. 169), and aspects relating to the promotion of full, productive and freely chosen employment of the Human Resources Development Convention, 1975 (No. 142), and of the Job Creation in Small and Medium-Sized Enterprises Recommendation, 1998 (No. 189), Report of the Committee of Experts on the Application of Conventions and Recommendations (articles 19, 22 and 35 of the Constitution), Geneva, ILO.
- ILO (2009), *Guide to the new Millennium Development Goals Employment Indicators*, Geneva, ILO.
- ILO (2010), *Decent Work Country Profile Tanzania (mainland)*, Geneva, ILO.
- ILO (2012), *Decent Work Indicators in Africa. A first assessment based on national sources*, Geneva, ILO.
- ILO (2013), *Global Employment Trends 2013.Recovering from a Second Jobs Dip*, Geneva, ILO.
- Jeejeebhoy, S. (1995), *Women’s Education, Autonomy and Reproductive Behaviour: Experience from Developing Countries*, Oxford: Oxford University Press.
- Jones, C., O. Morrissey and D. Nelson (2011), ‘Did the World Bank Drive Tariff Reforms in Eastern Africa?’, *World Development*, **39**(3): 324-335.
- Jones, S. and F. Tarp (2012), *Jobs and Welfare in Mozambique*, Country case study for the 2013 World Development Report.
- Kaplan, D. *The Structure and Performance of Manufacturing in South Africa: The Impact on poverty and Inequality* , Paper prepared for the UNU-MERIT/UNIDO workshop: The Untold Story. Structural Change for Poverty Reduction, Vienna, August, 2012.
- Kapsos, S. (2005), The Employment Intensity of Growth: Trends and Macroeconomic Determinants, Employment Strategy Papers N. 2005/12, ILO.
- Kiggundu R. (2008), ‘The Lake Victoria Fishing Cluster in Uganda, in D.Z. Zeng (ed.), *Knowledge, Technology, and Cluster-Based Growth in Africa*, Washington, D.C.: World Bank.
- Kingdon, G. and J. Knight (2004), ‘Unemployment in South Africa: The Nature of the Beast’, *World Development*, **32**(3): 391–408.

- Kingdon, G. and J. Knight (2007), 'Unemployment in South Africa, 1995-2003: Causes, Problems and Policies', *Journal of African Economies*, **16**(5): 813–848.
- Kingombe C. and D.W. te Velde (2012), *SEZs as a Growth Facilitating Policy that can Spur Job Creation*, Background Paper For The World Development Report 2013.
- Kinyanjui, N. (2008), 'The Kamukunji Metalwork Cluster in Kenya', in D.Z. Zeng (ed.), *Knowledge, Technology, and Cluster-Based Growth in Africa*, Washington, D.C.: World Bank.
- Klasen, S. and D. Blades (eds.) (2013), *Measuring Income, Wealth, Inequality, and Poverty in Sub Saharan Africa: Challenges, Issues, and Findings*, Special Issues, Review of Income and Wealth, **59** (S1), October.
- Kremer, M., P. van Lieshout, and R. Went (eds.) (2009), *Doing Good or Doing Better. Development Policies in a Globalising World*, WRR, Amsterdam University Press.
- Kweka, J., and L. Fox (2011), *The Household Enterprise Sector in Tanzania: Why It Matters and Who Cares*, Policy Research Working Paper N. 5882.
- Lavopa A. and A. Szirmai (2012), *Industrialization , Employment and Poverty*, Report prepared for the International Finance Corporation, November 2012 (63 pp.). Published as: UNU-MERIT working paper #2012-81, December.
- Lederman, D., M. Olarreaga and L. Payton (2010), 'Export Promotion Agencies: Do they Work?', *Journal of Development Economics*, **91**(2): 257-265
- Leipziger, D., and S. Yusuf (2012), *Growth Strategies for Africa in a Changing Global Environment. Policy Observations for Sustainable and Shared Growth*, Africa Task Force Meeting: Preparing for TICAD V, November 13-14, 2012.
- Lin, J.Y. and H.J. Chang, (2009), 'Should Industrial Policy in Developing Countries Conform to Comparative Advantage or Defy it? A Debate Between Justin Lin and Ha-Joon Chang', *Development Policy Review*, **27**(5): 483-502.
- Lin, J.Y. and C. Monga (2011), 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change', *Development Policy Review*, **29** (3): 264-290.
- Lorentzen, J. (2009), 'Learning by Firms: the Black Box of South Africa's Innovation System', *Science and Public Policy*, **36**(1): 33–45.
- Luebker, M. (2008), '*Employment, Unemployment and Informality in Zimbabwe: Concepts and Data for Coherent Policy-Making*, Issues Paper No. 32 and Integration Working Paper No. 90, ILO Sub-Regional Office for Southern Africa (SRO-Harare) Harare, Zimbabwe and Policy Integration and Statistics Department International Labour Office Geneva, Switzerland.

- Lundvall, B.A, K.J. Joseph, Ch. Caminade and J. Vang (2009), *Handbook of Innovation Systems and Developing Countries. Building Domestic Capabilities in a Global Setting*, Edward Elgar.
- Managi, S. and S. M. Bwalya (2010): 'Foreign Direct Investment and Technology Spillovers in Sub-Saharan Africa', *Applied Economics Letters*, **17**(6): 605-608.
- Mano, Y., T. Yamano, A. Suzuki, and T. Matsumoto (2011), 'Local and Personal Networks in Employment and the Development of Labor Markets: Evidence from the Cut Flower Industry in Ethiopia', *World Development*, **39**(10): 1760–1770.
- Marin, A., L. Navas-Aleman and C. Perez (2009), *The Possible Dynamic Role of Natural Resource-Based Networks in Latin American Development Strategies*, Prepared for the CEPAL-SEGIB, <http://www.ids.ac.uk/publication/the-possible-dynamic-role-of-natural-resource-based-networks-in-latin-american-development-strategies>
- Marti, D. F. and I. Ssenkubuge. (2009), *Industrialization And Industrial Policy In Africa: Is It A Policy Priority?*, South Centre Research Paper N. 20.
- McCord, A., and R. Slater (2009), *Overview of Public Works Programmes in Sub-Saharan Africa*, Overseas Development Institute.
- Mckenzie, D. (2011), *How Can We Learn Whether Firm Policies Are Working in Africa? Challenges (and Solutions?) for Experiments and Structural Models*, Policy Research Working Paper 5632.
- McKinsey (2012), *Africa at work: Job Creation and Inclusive Growth*.
- Modrego, F., R. Charnay, E. Jara, H. Contreras and C. Rodríguez (2006), *Small Farmers in Developing Countries: Some Results of Household Surveys Data Analysis*, World Bank, Washington, DC.
- Monga, C. (2011), *Cluster-Based Industrial Parks: A Practical Framework for Action*, World Bank Policy Research Working Paper N. 5900.
- Monga, C. (2012), 'Shifting Gears: Igniting Structural Transformation in Africa', *Journal of African Economies*, **21**, AERC Supplement 2: ii19 – ii54.
- Monk, C., J. Sandefur and F. Teal (2011), *Does Doing an Apprenticeship Pay Off? Evidence from Ghana*, CSAE WPS/2008-08.
- Mupela, E. (2011), *Connectivity and Growth in Sub-Saharan Africa. The Role of Satellite Technology*, PhD thesis Maastricht University/UNU-MERIT.
- Murenzi, R., and M. Hughes (2006), 'Building a Prosperous Global Knowledge Economy in Africa: Rwanda as a Case Study', *International Journal of Technology and Globalization*, **2**(3/4): 252-267.
- Naudé, W. and A. Szirmai, A. (2013), *Industrial Policy for Development*, UNU-WIDER Policy Brief, Number 2, 2013.

- Ncube, M. (2008), *The Labour Market and Decent Work Agenda in Southern Africa: Evidence and Challenges*, ILO Sub-Regional Office for Southern Africa, Harare, Zimbabwe.
- Ncube, M. (2010), 'Financing and Managing Infrastructure in Africa', *Journal of African Economies*, **19**, AERC SUPPLEMENT1: i114 – i164.
- Ndikumana, L., and S. Verick (2008), *The Linkages between FDI and Domestic Investment: Unravelling the Developmental Impact of Foreign Investment in Sub-Saharan Africa*, IZA Discussion Papers, No. 3296.
- Okunola, P.O., S.C. Madumere and S.O. Ogundiran (2010), *Planning Technical and Vocational Education for Youth Empowerment in Nigeria*.
- Ola-David, O., and O. Oyelaran-Oyeyinka (2012), *Can FDI Foster Inclusive Innovation and Technology Development in Africa?*, Prepared for the African Economic Conference on 'Fostering Inclusive and Sustainable Development in Africa in an Age of Global Economic Uncertainty', Kigali, Rwanda, 30th October- 2nd November, 2012.
- Oluyomi Abiola, B. (2008), 'The Nnewi Automotive Components Cluster in Nigeria', in D.Z. Zeng (ed.), *Knowledge, Technology, and Cluster-Based Growth in Africa*, Washington, D.C.: World Bank.
- Oyelaran-Oyeyinka, B. and K. Lal (2006), 'Institutional Support for Collective Learning: Cluster Development in Kenya and Ghana', *African Development Review*, **18**(2): 258-278.
- Osabutey, E.L. and Y.A. Debrah (2012), Foreign Direct Investment and Technology Transfer Policies in Africa: A Review of the Ghanaian Experience, *Thunderbird International Business Review*, **54**(4): 441–456.
- Page, J. (2012), *Youth, Jobs and Structural Change: Confronting Africa's "Employment Problem"*, AfDB Group Working Paper No. 155.
- Page, J. (2013), 'Should Africa Industrialize?', in: A. Szirmai, W. Naudé and L. Alcorta (eds.), *Pathways to Industrialization in the 21st century*, Oxford: Oxford University Press.
- Palmer, R. (2007), *Skills Development, the Enabling Environment and Informal Micro-Enterprise in Ghana*, PhD Thesis, The University of Edinburgh.
- Perez, C. (2008), *A Vision for Latin America: A Resource-based Strategy for Technological Dynamism and Social Inclusion*, GLOBELICS working paper series No. 08-04.
- Phelps, N.A., J. Stillwell and R. Wanjiru (2009), 'Broken Chain? AGOA and Foreign Direct Investment in the Kenyan Clothing Industry', *World Development*, **37**(2): 314-325.
- Pollin, R. (2009), *An Employment Targeted Economic Program for Kenya*, Paper Prepared for Festschrift Conference and Volume in Honor of Professor Azizur Khan.

- Portelli, B., (2006), *Foreign Direct Investment, Multinational Enterprises and Industrial Development: Backward Linkages and Knowledge Transfer in Tanzania*, PhD thesis, Centre for Technology, Innovation, and Culture (TIK), University of Oslo.
- Prahalad, C.K. (2006), *The Fortune at the Bottom of the Pyramid*, Upper Saddle river, N.J.: Prentice Hall.
- Puerto, O. S. (2007), *International Experience on Youth Employment Interventions: The Youth Employment Inventory*, World Bank.
- Ramachandran V, A. Gelb and M.K. Shah M. K. (2009), *Africa's Private Sector: What's Wrong with the Business Environment and What to do about It*, Centre for global Development. Washington, D.C.
- Ramani, S. V., S. SadreGhazi and G. Duysters (2012), 'On the Diffusion of Toilets as Bottom of the Pyramid Innovation: Lessons from Sanitation Entrepreneurs', *Technological Forecasting and Social Change*, **79**(4): 676- 687.
- Rodrik (2006), *Understanding South Africa's Economic Puzzles*, NBER Working Paper N. 12565.
- Rijkers, B., C. R. Laderchi and F. Teal (2010), 'Who Benefits from Promoting Small Enterprises? Some Empirical Evidence from Ethiopia', *World Development*, **38**(4): 523-540.
- Rizzo, M. (2011), *Rural Wage Employment in Rwanda and Ethiopia: A Review of the Current Policy Neglect and a Framework to Begin Addressing It*, Working Paper No. 103, Geneva, ILO.
- Robson, P., Haugh, H.M., Acquah Obeng, B. (2009), 'Entrepreneurship and Innovation in Ghana: Enterprising Africa', *Small Business Economics*, **32**:331–350.
- Rojid, S., R.V. Sannasee, and S. Fowdar (2008), 'The Net Contribution of The Mauritian Export Processing Zone Using Benefit-Cost Analysis', *Journal of International Development*, **19**: 1-13.
- Rooks, G., A. Szirmai and A. Sserwanga (2012), Social Capital and Innovative Performance. The Case of Ugandan Entrepreneurs', *Journal of African Economies*, **21** (4): 609-636.
- Sakey, H. A., and B. Osei (2006), 'Human Resource Underutilization in an Era of Poverty Reduction: An Analysis of Unemployment and Underemployment in Ghana', *African Development Review*, **18**(2): 221-247.
- Sawkut, R. (2008), 'The Textile and Clothing Sector in Mauritius', in D.Z. Zeng (ed.), *Knowledge, Technology, and Cluster-Based Growth in Africa*, Washington, D.C.: World Bank.
- Schoer, V. and N. Rankin (2011), *Youth Employment, Recruitment and a Youth-Targeted Wage Subsidy: Findings from a South African Firm Level Survey*, World Bank, Human Development Unit, Africa Region.
- Sekwati, L., and N. Narayana (2011), 'Stimulating informal sector through vocational education in Botswana', *International Journal of Education Economics and Development*, **2**(1), 81-89.

- Shiferaw, A. and A.S Bedi (2009), *The Dynamics of Job Creation and Job Destruction: Is Sub-Saharan Africa Different?*, IZA Discussion Papers No. 4623, Institute for the Study of Labor (IZA), Bonn.
- Soludo, C., O. Ogbu and H.-J.Chang (eds.) (2004), *The Politics of Trade and Industrial Policy in Africa. Forced Concensus*, Trenton: Africa World Press.
- Sonne, L. (2011), *Innovation in Finance to Finance Innovation: Supporting pro-poor entrepreneur-based innovation*, PhD Maastricht University/UNU-MERIT.
- Sonobe, T., J.E. Akoten and K. Otsuka (2009), An Exploration into the Successful Development of the Leather-Shoe Industry in Ethiopia. *Review of Development Economics*, **13** (4), pp.719-736.
- Sonobe, T., Y. Higuchi, K. Otsuka (2012), *Productivity Growth and Job Creation in the Development Process of Industrial Clusters*, Background Paper For The World Development Report 2013.
- Sparks, D. L. and S.T. Barnett, S. T. (2010), ‘The Informal Sector In Sub-Saharan Africa: Out of The Shadows to Foster Sustainable Employment and Equity?’, *International Business & Economics Research Journal*, **9**(5): 1-12.
- Sparreboom, T. and A. Albee (2011), *Towards Decent Work: Monitoring Millennium Development Goal Employment Indicators in Sub-Saharan Africa*, International Labour Office. - Geneva: ILO.
- Staatz, J.M., and N.N. Dembele (2007), ‘Agriculture for Development in Sub-Saharan Africa’, Background Paper For The World Development Report 2008.
- Stifel, D. (2008), *Madagascar: Labor Markets, the Non-Farm Economy and Household Livelihood Strategies in Rural Madagascar*, Africa Region Working Paper Series No. 112.
- Subrahmanian, R. (2002), *Gender and Education: A Review of Issues for Social Policy*, Social Policy Development, Programme Paper No. 9. Geneva: UNRISD.
- Szirmai, A. (2005), *The Dynamics of Socio-Economic Development*, Cambridge: Cambridge University Press.
- Szirmai, A. (2014), *The Dynamics of Socio-Economic Development*, 2nd edition, Cambridge: Cambridge University Press, forthcoming 2014.
- Szirmai A. and P. Lappere (eds.) (2001), *The Industrial Experience of Tanzania*, Palgrave.
- Szirmai, A., W. Naudé and M. Goedhuys (2011), *Entrepreneurship, Innovation, and Economic Development*, Oxford: Oxford University Press.
- Tregenna, F. (2013), ‘Deindustrialization and Reindustrialization’, in A. Szirmai, W. Naudé and L. Alcorta, *op. cit.* 2013.
- Tybout, J. (2000), ‘Manufacturing Firms in Developing Countries: How Well Do They Do, andW?’, *Journal of Economic Literature*, **28**: 11-44.
- UN (2009), *World Population Policies 2009*, Department of Economic and Social Affairs, Population Division, United Nations, New York.

- UNCTAD (2008), *Science, Technology, and Innovation Policy (STIP). Review of Angola*.
- UNCTAD (2011), *Economic Development in Africa Report 2011: Fostering Industrial Development in Africa in the New Global Environment*, UNCTAD, UNIDO.
- UNDP (2005), *Poverty Status Report For Botswana: Incidence, Trends and Dynamics*, Research Project Report, International Poverty Centre and Botswana Institute for Development Policy Analysis.
- UNECA (2005), *Economic Report on Africa 2005.Meeting the Challenges of Unemployment and Poverty in Africa*. Addis Ababa, Ethiopia.
- UNECA (2008), *Private-sector Standards and National Schemes for Good Agricultural Practices: Implications for Exports of Fresh Fruit and Vegetables From Sub-Saharan Africa: Experiences of Ghana, Kenya, and Uganda*, Addis Ababa, Ethiopia.
- UNECA (2011a), *Africa Youth Report 2011. Addressing the Youth Education and Employment Nexus in the New Global Economy*, Addis Ababa, Ethiopia.
- UNECA (2011b), *Industrial Policies for the Structural Transformation of African Economies: Options and Best Practices*, Addis Ababa, Ethiopia.
- UNFPA (2012), *State of World Population 2012: By Choice, not by Chance. Family Planning, Human Rights and Development*, New York: UNFPA.
- UNIDO (2009), *Industrial Development Report 2009. Breaking In and Moving Up: New Industrial Challenges for the Bottom Billion and the Middle-Income Countries*.
- UNIDO (2013), *Industrial Development Report 2013: Sustaining Employment Growth: The Role of Manufacturing and Structural Change*, Vienna: UNIDO (forthcoming).
- Van Biesebroeck, J. (2004), Exporting Raises Productivity in Sub-Saharan African Manufacturing Firms *Journal of International Economics* **67** (2), December: 273-391.
- Van Biesebroeck, J. (2005), 'Firm Size Matters: Growth and Productivity Growth in African Manufacturing.' *Economic Development and Cultural Change* **53** (3): 545-583.
- Walther, R. (2006), *Vocational Training in the Informal Sector*. Report on the Cameroon Field Survey, Working Paper N. 17, Paris, Agence Française de Développement.
- Wignaraja, G. (2002), 'Firm Size, Technological Capabilities and Market-oriented Policies in Mauritius', *Oxford Development Studies*, **30**(1): 87-104.
- Williams, M. D. J., R. Mayer and M. Minges (2011), *Africa's ICT Infrastructure: Building on the Mobile Revolution*, Washington, D.C.: World Bank.
- World Bank (2008), *World Development Report 2008. Agriculture for Development*, Washington D.C., The World Bank, chapter 9: Moving Beyond the Farm.

World Bank (2008/09), *Africa Development Indicators Youth Unemployment in Africa, The Potential, The Problem, The Promise*, Washington, D.C.

World Bank (2011), *Promoting Entrepreneurship in Botswana: Constraints to Micro Business Development*, Report No. 59916-BW.

World Bank (2012), *World Bank Report 2013: Jobs*, Washington, D.C.: World Bank.

Yoshino, Y. (2011), *Industrial Clusters and Micro and Small Enterprises in Africa. From Survival to Growth*, Washington, D.C.: World Bank.

Zeng, D. Z. (ed.) (2008), *Knowledge, Technology, and Cluster-Based Growth in Africa*, Washington, D.C.: World Bank.

Annex 1. Bibliography by topics

1. Case studies

- Riisgaard, L. (2009), ‘Global Value Chains, Labor Organization and Private Social Standards: Lessons from East African Cut Flower Industries’ . *World Development*, **37**(2), 326–340.
- Teklu, T., and S. Asefa (1999), ‘Who Participates in Labor-Intensive Public Works in Sub-Saharan Africa? Evidence from Rural Botswana and Kenya’, *World Development*, **27**(2), 431–438.
- Van Biesebroeck, J. (2011), ‘Wages Equal Productivity. Fact or Fiction? Evidence from Sub Saharan Africa’, *World Development*, **39**(8), 1333–1346.
- Van Rooyen, C., R. Stewart and T. de Wet, T. (2012), ‘The Impact of Microfinance in Sub-Saharan Africa: A Systematic Review of the Evidence’, *World Development*, **40**(11), 2249–2262.
- Waeyenberge, E. van, and H. Bargawi (2011), *Macroeconomic policy for “full and productive employment and decent work for all” : Uganda Country Study*,. Employment Working Paper No. 91.

2. National policy documents

- Republic of Cote d’Ivoire (2009), *Strategy for Relaunching Development and Reducing Poverty*.
- Federal Democratic Republic of Ethiopia, Ministry of Finance and Economic Development (2012), *Growth and Transformation Plan (2010/11-2014/15)*, Annual Progress Report for F.Y. 2010/11.
- Federal Democratic Republic of Ethiopia (2010), *National Science, Technology and Innovation Policy: Building Competitiveness through Innovation*.
- Federal Democratic Republic of Ethiopia, Ministry of Labour and Social Affairs (2009), *National Employment Policy and Strategy of Ethiopia*, available
- Federal Democratic Republic of Ethiopia, *Industry Development Strategy of Ethiopia*, August 2002.
- Government of Ghana (2011), *Ghana Industrial Policy*.
- Government of Ghana, *Ghana Trade Policy from January 2006 to December 2010*.
- Government of Ghana, Ministry of Youth and Sports, (2010), *National Youth Policy of Ghana: Towards an Empowered Youth, Impacting Positively on National Development*.
- Republic of Ghana, Ministry of Employment and Social Welfare, (2012), *National Employment Policy (2012-2016)*.
- Republic of Korea, Ministry of Labour, *Strategic Plan 2008-2012*.
- Republic of Mauritius, Ministry of Youth and Sports (2009), *National Youth Policy: Youth on the Move*.
- Republic of Rwanda, (2007), *National Employment Policy*.

Government of Rwanda, Ministry of Trade and Industry, (2011), *National Industrial Policy*.

Republic of South Africa, Department of Trade and Industry, (2010), *Industrial Policy Action Plan (IPAP) 2012/13 – 2014/15*.

Republic of South Africa, Department of Trade and Industry, (2010), *A National Industrial Policy Framework*.

Republic of Uganda, Ministry of Finance, Planning and Economic Development (2011), *The Background to the Budget 2011/12 Fiscal Year. Promoting Economic Growth, Job Creation and Improving Service Delivery*.

Republic of Uganda (2010), *National Development Plan (2010/11 - 2014/15): Growth, Employment And Socio-Economic Transformation For Prosperity*.

Republic of Uganda, Ministry of Public Service (2006), *The Public Service Training Policy*.

Republic of Zimbabwe, Ministry of Labour and Social Services, and Ministry of Youth Development, *Indigenisation and Empowerment in Conjunction with ILO/SRO*, (2009), *Zimbabwe National Employment Policy Framework (ZINEPF)*.

3. African clusters

Akoten, J.E. and K. Otsuka (2007), 'From Tailors to Mini-Manufacturers: The Role of Traders in the Performance of Garment Enterprises in Kenya', *Journal of African Economies*, (4):564-595.

Diyamett, B.D. (2009), 'Building Systems of Innovation in an African Setting: The Cluster Initiative Development Approach', *African Journal of Science Technology, Innovation and Development*, 1(1): 173-195.

Eyerusalem, S., M. Soderbom, A. Bigsten, and M. Gebreeyesus, M. (2012), *Enterprise Agglomeration, Output Prices, and Physical Productivity: Firm-Level Evidence from Ethiopia*, UNU-WIDER Working Paper, 2012/85.

Ogbu, O.M., B. Oyeyinka and H.M. Mlawa (Eds.) (1995), 'Introduction', in *Technology Policy and Practice in Africa*, International Development Research Centre Ottawa, ON, Canada

McCormick, D. (1999), 'African Enterprise Clusters and Industrialization : Theory and Reality', *World Development*, 27(9): 1531-1551.

McCormick, D. and M.N. Kinyanjui (2007), 'Industrializing Kenya: Building the Productive Capacity of Micro and Small Enterprise Clusters', in B. Oyelaran-Oyeyinka and D. McCormick (eds.), *Industrial Clusters and Innovation Systems in Africa. Institutions, Markets and Policy*, United Nations University Press, pp.63-80.

Morris, M. and G. Robbins (2007), *Government Support and Enabling Environment for Inter-firm Cooperation: Policy Lessons from South Africa*, in B. Oyelaran-Oyeyinka and D. McCormick (eds.),

Industrial Clusters and Innovation Systems in Africa. Institutions, Markets and Policy, United Nations University Press, pp.243-262.

Mytelka, L.K. (2007), 'From Clusters to Innovation Systems in Traditional Industries, in B. Oyelaran-Oyeyinka and D. McCormick (eds.), *Industrial Clusters and Innovation Systems in Africa. Institutions, Markets and Policy*, United Nations University Press, pp. 39-62

Oyelaran-Oyeyinka, B., and D. McCormick (2007), *Industrial Clusters and Innovation Systems in Africa*,. United Nations University Press.

UNIDO (2010), *Cluster for Pro-poor Growth: the UNIDO Approach*.

4. SMEs and the informal sector

Adams, A. V. (2008), *Skills Development in the Informal Sector of Sub-Saharan Africa*. World Bank.

Akintoye, I. R. (2008), 'Reducing Unemployment Through the Informal Sector: A Case Study of Nigeria'. *European Journal of Economics, Finance and Administrative Sciences*, 11.

Bocquier, P., C.J. Nordman and A. Vescovo (2010), 'Employment Vulnerability and Earnings in Urban West Africa', *World Development*, **38**(9): 1297–1314.

Böhme, M., and R. Thiele (2012), 'Is the Informal Sector Constrained from the Demand Side? Evidence for Six West African Capitals', *World Development*, **40**(7): 1369–1381.

Falco, P., A. Kerr, N. Rankin, J. Sandefur and F. Teal (2010), *The Returns to Formality and Informality in Urban Africa*, CSAE WPS/2010-03, (November 2009).

Nichter, S. and L. Goldmark (2009), 'Small Firm Growth in Developing Countries', *World Development*, **37**(9): 1453–1464.

Shiferaw, A. (2009), 'Survival of Private Sector Manufacturing Establishments in Africa: The Role of Productivity and Ownership', *World Development*, **37**(3): 572–584.

Sparks, D. L. and T. Citadel (2010), 'The Informal Sector in Sub-Saharan Africa: Out of the Shadows to Foster Sustainability', *International Business & Economics Research Journal*, **9**(5): 1–12.

The UNU-MERIT WORKING Paper Series

- 2013-01 *Effects of innovation on employment in Latin America* by Gustavo Crespi and Ezequiel Tacsir
- 2013-02 *Revisiting the porter hypothesis: An empirical analysis of green innovation for the Netherlands* George van Leeuwen and Pierre Mohnen
- 2013-03 *Impact of external knowledge acquisition strategies on innovation - A comparative study based on Dutch and Swiss panel data* by Spyros Arvanitis, Boris Lokshin, Pierre Mohnen and Martin Wörter
- 2013-04 *Interactive knowledge exchanges under complex social relations: A simulation model* Robin by Cowan and Anant Kamath
- 2013-05 *Innovation systems framework: still useful in the new global context?* by Michiko Iizuka
- 2013-06 *The importance of intrinsic and extrinsic motivation for measuring IQ* by Lex Borghans, Huub Meijers and Bas ter Weel
- 2013-07 *Firms' innovation capability-building paths and the nature of changes in learning mechanisms: Multiple case-study evidence from an emerging economy* by Paulo N. Figueiredo, Marcela Cohen and Saulo Gomes
- 2013-08 *A set of time series data labour market stocks and flows for the Netherlands 1980 to 2010* by Manuel Müllers, Joan Muysken and Erik de Regt
- 2013-09 *Designing an optimal 'tech fix' path to global climate stability: R&D in a multi-phase climate policy framework* by Adriaan van Zon and Paul A. David
- 2013-10 *Complementarity between internal knowledge creation and external knowledge sourcing in developing countries* by Jun Hou and Pierre Mohnen
- 2013-11 *Summarizing large spatial datasets: Spatial principal components and spatial canonical correlation* by Samyukta Bhupathiraju, Bart Verspagen and Thomas Zieseimer
- 2013-12 *Regional systems of innovation in the Arab region* by Samia Satti Osman Mohamed Nour
- 2013-13 *Development and social justice: Education, training and health in Sudan* by Samia Satti Osman Mohamed Nour
- 2013-14 *The economic importance and impacts of intellectual property rights (IPRs) in Sudan* by Samia Satti Osman Mohamed Nour
- 2013-15 *Overview of knowledge economy in the Arab region* by Samia Satti Osman Mohamed Nour
- 2013-16 *The importance (impacts) of knowledge at the macro-micro levels in the Arab Gulf countries* by Samia Satti Osman Mohamed Nour
- 2013-17 *Political determinants and impact analysis of using a cable system as a complement to an urban transport system* by Diego Escobar-García, Francisco García-Orozco and Carlos Cadena-Gaitán
- 2013-18 *Women entrepreneurs in the informal economy: Is formalization the only solution for business sustainability?* By Shyama V. Ramani, Ajay Thutupalli, Tamas Medovarszki, Sutapa Chattopadhyay, Veena Ravichandran
- 2013-19 *Heterogeneity in innovation strategies, evolving consumer preferences and market structure: An evolutionary multi-agent based modelling approach* by Salih Çevikarslan

- 2013-20 *Optimal patent length and patent breadth in an R&D driven market with evolving consumer preferences: An evolutionary multi-agent based modelling approach* by Salih Çevikarslan
- 2013-21 *Innovation and productivity: An update* by Pierre Mohnen and Bronwyn H. Hall
- 2013-22 *Fathers' use of parental leave. What do we know?* by Nevena Zhelyazkova
- 2013-23 *Eliciting Illegal migration rates through list randomization* by David McKenzie and Melissa Siegel
- 2013-24 *How do ICT firms in Turkey manage innovation? Diversity in expertise versus diversity in markets* by Semih Akçomak, Erdal Akdeve and Derya Findik
- 2013-25 *Dynamic models of R&D, innovation and productivity: Panel data evidence for Dutch and French manufacturing* by Wladimir Raymond, Jacques Mairesse, Pierre Mohnen and Franz Palm
- 2013-26 *Centre-based versus home-based childcare* by Robert Baumüller
- 2013-27 *Microeconomic evidence of financing frictions and innovative activity* by Amaresh K Tiwari, Pierre Mohnen, Franz C Palm and Sybrand Schim van der Loeff
- 2013-28 *Innovation for economic performance: The case of Latin American firms* by Elena Arias Ortiz, Gustavo Crespi, Ezequiel Tacsir, Fernando Vargas and Pluvia Zuñiga
- 2013-29 *Is money all? Financing versus knowledge and demand constraints to innovation* Gabriele Pellegrino and Maria Savona
- 2013-30 *Child deprivation in Ontario - A (less than perfect) comparison with Europe* by Geranda Notten
- 2013-31 *Measuring performance: does the assessment depend on the poverty proxy?* by Geranda Notten
- 2013-32 *How big is the impact of infrastructure on trade? Evidence from meta-analysis* by Mehmet Güney Celbis, Peter Nijkamp and Jacques Poot
- 2013-33 *Using a 'Systems' Perspective to Explain the Limits of 'New' Multinational Enterprises: the role of 'members-only' location advantages* by Rajneesh Narula
- 2013-34 *Foreign direct investment as a driver of industrial development: why is there so little evidence?* by Rajneesh Narula
- 2013-35 *The end of the multifibre arrangement (MFA) and the heterogeneous performance of quota-constrained countries* by Mulu Gebreeyesus
- 2013-36 *Technological capability building in MNE-related social businesses of less developed countries: The experience of Grameen-Danone Foods in Bangladesh* by Jahan A. Peerally and Paulo N. Figueiredo
- 2013-37 *The links between economic integration and remittances behaviour of migrants in the Netherlands* by Özge Bilgili
- 2013-38 *The influence of vulnerability on migration intentions in Afghanistan* by Craig Loschmann and Melissa Siegel
- 2013-39 *How unemployment insurance savings accounts affect employment duration: Evidence from Chile* by Paula Nagler
- 2013-40 *Self-organization of knowledge economies* by François Lafond
- 2013-41 *Designing an optimal 'tech fix' path to global climate stability: Directed R&D and embodied technical change in a multi-phase framework* by Adriaan van Zon & Paul A. David
- 2013-42 *The growth of outward FDI and the competitiveness of the underlying economy: the case of India* by Rajneesh Narula and Tiju Prasad Kodiyat

- 2013-43 *The impact of migration on children left behind in Moldova* by Franziska Gassmann, Melissa Siegel, Michaella Vanore and Jennifer Waidler
- 2013-44 *Technological spillovers and industrial growth in Chinese regions* by Lili Wang, Huub Meijers and Adam Szirmai
- 2013-45 *Male use of parental leave in Luxembourg: Empirical analysis of administrative records* by Nevena Zhelyazkova
- 2013-46 *Exploring the paradox of competence-creating subsidiaries: balancing bandwidth and dispersion in MNEs* by Rajneesh Narula
- 2013-47 *Switching off or switching source: energy consumption and household response to higher energy prices in the Kyrgyz Republic* by Franziska Gassmann and Raquel Tsukada
- 2013-48 *Beyond technological catch-up: An empirical investigation of further innovative capability accumulation outcomes in latecomer firms with evidence from Brazil* by Paulo N. Figueiredo
- 2013-49 *Parental leave within the broader work-family trajectory: What can we learn from sequence analysis?* by Nevena Zhelyazkova
- 2013-50 *Transnational corruption and innovation in transition economies* by Alexis Habiyaemye and Wladimir Raymond
- 2013-51 *The pace of poverty reduction - A fractional response approach* by Richard Bluhm, Denis de Crombrugghe and Adam Szirmai
- 2013-52 *Minding Weber more than ever? The impacts of State Capacity and Bureaucratic Autonomy on development goals* by Luciana Cingolani, Kaj Thomsson and Denis de Crombrugghe
- 2013-53 *The State of State Capacity: a review of concepts, evidence and measures* by Luciana Cingolani
- 2013-54 *Institutions, Foreign Direct Investment, and Domestic Investment: crowding out or crowding in?* by Kristine Farla, Denis de Crombrugghe and Bart Verspagen
- 2013-55 *Determinants of firms' investment behaviour: A multilevel approach* by Kristine Farla
- 2013-56 *Economic development, growth, institutions and geography* by Samyukta Bhupatiraju & Bart Verspagen
- 2013-57 *Innovation and survival of new firms in Chinese manufacturing, 2000-2006* by Mingqian Zhang and Pierre Mohnen
- 2013-58 *Government support, innovation and productivity in the Haidian (Beijing) district* by Can Huang, Yilin Wu, Pierre Mohnen and Yanyun Zhao
- 2013-59 *The impact of the 2009 value added tax reform on enterprise investment and employment - Empirical analysis based on Chinese tax survey data* by Dehua Wang
- 2013-60 *Doing R&D in a closed or open mode: Dynamics and impacts on productivity* by Julio Miguel Rosa and Pierre Mohnen
- 2013-61 *Ethnic segregation and heterogeneous preferences of homeowners for housing and neighbourhood characteristics. Evidence from the Netherlands* by Cheng Boon Ong and Kristof De Witte
- 2013-62 *Promoting productive employment in Sub-Saharan Africa: A review of the literature* by Adam Szirmai, Mulu Gebreeyesus, Francesca Guadagno and Bart Verspagen