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KENYA

Jobs for Youth

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Social Protection and Labor Global Practice
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ABBREVIATIONS AND ACRONYMS

ICT	Information and Communications Technology
KIHBS	Kenya Integrated Household Budget Survey
LCA	Latent Class Analysis
NEET	Not in Employment, Education or Training
STEP	Skills Towards Employment and Productivity

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Executive Summary

A. Transformational jobs will be key to Kenya's social and economic development

1. **Jobs are at the center of Kenya's social and economic welfare.** Kenya's *Vision 2030* aims to "transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens". Kenya means to achieve this by building a globally competitive and prosperous economy, a just and cohesive society with social equity in a clean and secure environment, and a democratic political system that protects rights and freedoms of every individual.[1] Job opportunities – more productive, transformational jobs – will be key to realizing this vision.

2. **Jobs are fundamental to development: they impact living standards, bring about economic growth, and help foster a sense of identity and belonging**. In developed and industrialized countries alike, jobs matter tremendously for welfare. Economic growth can result not just from more job creation but from jobs becoming more productive or from workers moving from low to higher productivity jobs. Widely shared job opportunities are essential to sharing economic prosperity in the population at large. Whether an individual has a job, and the kind of job that person holds, influence his or her identity and role in the community; jobs and work places bring people together. Conversely, lack of job opportunities are critical source of social unrest in many places.[2]

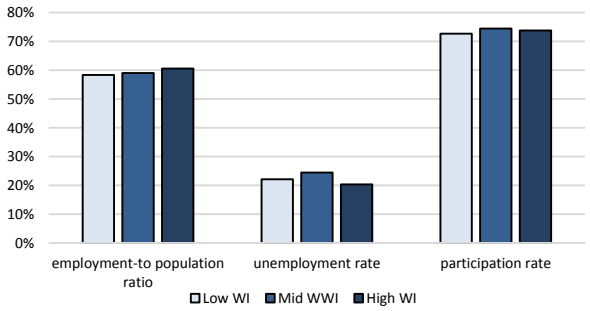
3. **In Kenya, good job opportunities are an important concern for the future**. When asked about key challenges in their society, Kenyans frequently cite unemployment (sometimes understood to include underemployment as well) as the major issue that needs to be tackled by the Government. In urban areas, unemployment is rated second only to crime and security as an issue for policy, in rural areas, it is considered the third most important problem, and deficient infrastructure, food shortages and poverty are considered less important by both rural and urban residents.[3]

4. **Lack of good jobs is slowing down poverty reduction.** Although no recent poverty data exist, other socio-economic indicators suggest that while the share of households exposed to hardship has declined across time, many households still face day to day hardship indicative of poverty.[4] In Kenya as in other developing economies, less wealthy households depend on what family members can earn on their jobs. However, it is not primarily access to jobs, but lack of access to good jobs that is slowing down poverty reduction. In Kenya, the ratio of employed family members to total family size is very similar across households, independent of how wealthy they are. But the jobs they do differ considerably, depending on whether households are wealthy or not. Individuals living in the 30 percent of households at the bottom of the wealth distribution are likely to work in low paid jobs: for themselves or their families, or in the informal wage sector. In particular, they have virtually no access to better paid wage jobs in formal firms.

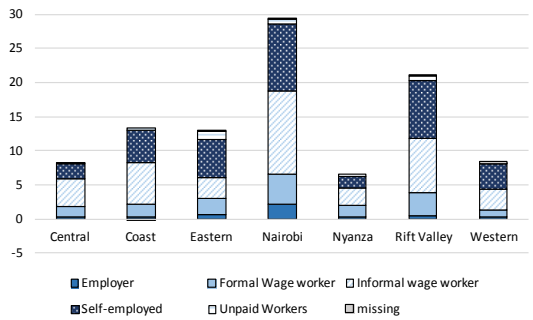
[1] Government of Republic of Kenya, 2007, *Kenya's Vision 2030*
[2] World Bank (2012), *World Development Report 2013: Jobs*, World Bank: Washington, DC
[3] Afrobarometer (2015), *Summary of Results, Afrobarometer Round 6 Survey in Kenya, 2014*.
[4] World Bank (2013), *Kenya Economic Update: Time to shift Gears – Accelerating Growth and Poverty Reduction in the New Kenya*, World Bank: Washington, DC.

Figure I: Jobs and wealth index1: Access matters less than quality of jobs

a. Labor market participation by wealth index (WI)



b. Occupations and regional distribution, low wealth index

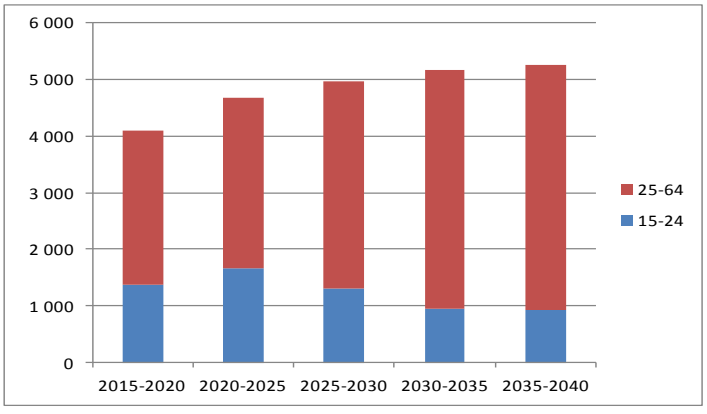


Source: estimates based on STEP survey. The wealth index is calculated using information on current household dwelling characteristics and assets. Low Wealth Index refers to those in the Bottom 30%, Mid corresponds to those in the middle 30%, and the High Wealth Index represent those in the top 40%.

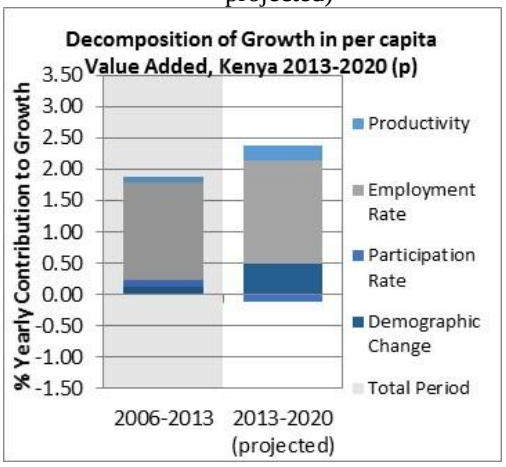
5. **For the future, Kenya is facing significant demographic pressures for job creation, which requires higher and more productivity driven growth.** Between 2015 and 2025, the working age population will increase, on a net basis, by nearly nine million people. One third of them - three million – will be made up of young people, between ages 15 and 24. These youth will want jobs, but in order for the youth bulge to find better jobs than is currently the case, the current level and composition of economic growth will not be sufficient. In the past decade, Kenya's increase in value added was largely driven by more employment, rather than more productivity. While the employment-to-growth elasticity was high, with job creation matching value added growth one-for-one, the quality of jobs did not improve. There will be a need to change growth model: if the past growth patterns continue, productivity will still have a very limited role in value added growth (Figure II, a and b).

Figure II: "Business as usual" growth will not result in better jobs

Net increase in working age population,2015-2040



Contribution to productivity growth (past and projected)



Source: Estimates based on UN population data and on Kenya National Bureau of Statistics

6. **Regionally balanced job creation in both urban and rural areas will be necessary.** Kenya is ”underurbanized” relative to its income level, with only 25 percent of the population living in urban areas, compared to e.g. 53 and 40 percent in Ghana and Zambia respectively. However, it is now a rapidly urbanizing nation. Agglomeration externalities and the need for prioritized policies in terms of sector and location suggest that it would be important to focus on policies that foster sustainable urbanization and ”job clusters” in urban cities and smaller towns. At the same time, it is clear that a majority of the population will remain in rural areas for the foreseeable future: they, too, will need more productive jobs. [5]

B. Job opportunities need to improve in Kenya

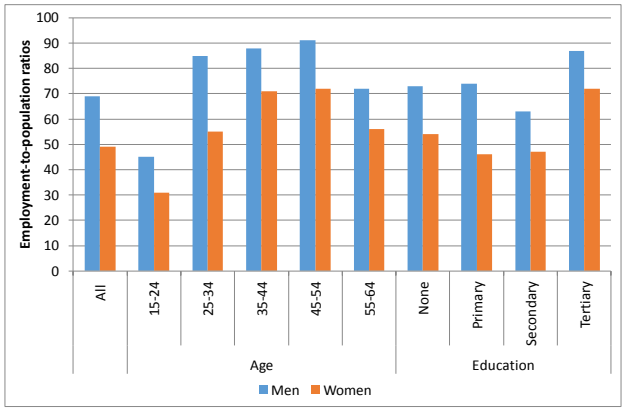
7. **In spite of high job creation, many people lack jobs in Kenya's urban areas – and youth are especially vulnerable.** The Kenyan economy created many jobs between 2006 and2013, an impressive 800,000 jobs per year. Thus, employment grew at 4.5 percent per year, by far exceeding working age population growth at 2.8 percent per year. However, high growth was was not enough to make a sizeable dent in unemployment and underemployment. The lack of jobs is evident in urban labor markets: nearly two million urban residents between ages 15 and 64 are job-less, not counting inactive students enrolled in education. Urban unemployment is pervasive, affecting some 20 percent of the active population, or about 0.9 million people. Another 0.9 million adults are inactive, and not in education or training. Young people are at higher risk than others to be out of employment: 45 percent of young men (15-24) versus 31 percent of young women are employed (Figure I, a), set against nearly 70 and 50 percent of the total adult population.

8. **The productivity level of jobs is low, and has stagnated.** A majority of Kenyans do work, notwithstanding high unemployment and inactivity rates. However, Kenyan workers are predominantly locked into low productivity jobs and sectors. Between 2006 and 2013, value added and total employment increased at roughly the same rate. As a result, value-added per worker – a measure of labor productivity – remained stagnant, limiting the potential for improving earnings. Set in international comparison, GDP per employed person is lower in Kenya than in many African peers (Figure I, b), and has been increasing at a slower rate than in other countries, both poorer (Ethopia) and richer counties (Ghana, Burkina Faso, and Cambodia).

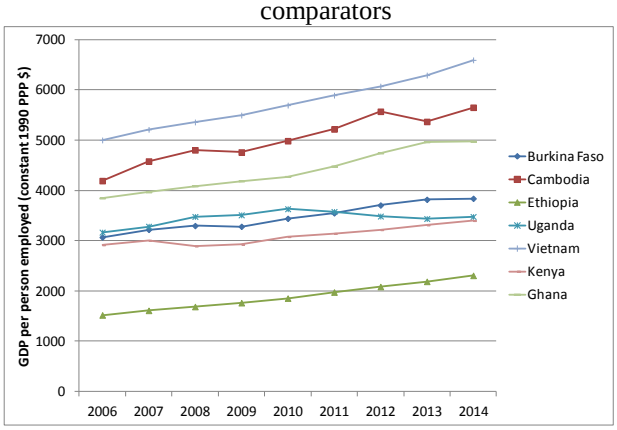
[5] Lack of data complicates the analysis of labor markets in Kenya: there is no recent data on labor market trends or rural areas. The most recent comprehensive analysis on a national basis was based only on census data from 2009 and the latest nationally representative household survey was administered ten years ago (another one is being fielded in 2015/1016).

Figure III: Lack of jobs, and lack of productive jobs

Employment-to-population ratios, 2013. Urban areas



Growth in GDP per worker, 2006-2013. Kenya and comparators



Source: Estimates based on STEP survey (left), and World Development Indicators (right).

9. **The young generation expresses their feeling of being excluded from better jobs**. Young Kenyans also voice concerns about how the lack of job opportunities confines them to low earning, and sometimes even dangerous or illegal, activities. They feel vulnerable to nepotism and sense a lack of fairness in accessing well paid and secure jobs.[6]

10. **There are indications that the private sector is not a preferred option for youth.** The public sector jobs can absorb only a small share of the youth entering the labor market, and most youth will need to find jobs in the private sector. However, job preferences among youth reveal a preference for public sector jobs. Not only do they offer high potential earnings, but other non-pecuniary rewards such as job security and career opportunities are also important factors. Results from a Discrete Choice Experiment Survey undertaken to ask young people to choose between different job options shows that Kenyan youth rate the public sector highly compared to the private sector, and job stability overall carries a high premium. Youth would also be prepared to forego some salary in exchange for job benefits – pension, vacations, etc. – which together with job stability could explain why the public sector is a preferred employer to the private sector.

C. The economy is not creating enough productive jobs...

11. **Kenya's growth model is not generating sufficient good jobs.** Economic growth in Kenya has been fuelled by public investment in infrastructure, including railways, roads and energy, and domestic consumption. As seen this growth model has generated high economic growth, and also jobs, but those jobs have not been sufficiently productive. High consumer demand has spilled over into demand for services, but has not resulted in a take-off in more dynamic, high productivity services sectors.

12. **Productivity growth is held back by limited growth in formal wage jobs**. In Kenya as elsewhere, different forms of jobs offer different opportunities: wage jobs in the formal sector in particular pays much better than self-employment or informal wage work. For jobs to become transformational in Kenya, there would be a need to transition from lower productivity to higher productivity activities

[6] World Bank (2012), *Kenya Economic Update: Kenya at Work*, World Bank: Washington, DC.

and jobs, both within sectors (jobs created in more productive firms) and between sectors (the bulk of jobs shift into more productive sectors). In particular, a shift of workers out of agriculture into more productive activities has the potential to increase overall productivity, including in agriculture. However, the Kenyan economy has not experienced such a transition in economic structure – whether in employment or output - in the past decade. **Jobs in the non-agricultural sector have been growing faster than agricultural jobs, but have not been sufficient to transform the structure of employment.** In relative terms, workers shifted out of agriculture and into the services sector: the share of employment in agriculture fell from 43 to 36 percent, and that of services increased from 44 to 50 percent. However, while the services sector accounted for most employment growth between 2006 and 2013, labor productivity actually fell in the services sectors. And most of those jobs were created in the informal trade sector, where earnings and job security is low.

13. **The drag on productivity from insufficient transformation between sectors has been compounded by slow productivity growth within sectors.** A decomposition of sources of growth shows that labor productivity contributed very little to driving economic growth (which instead was driven by increases in employment). While Kenyans were offered more jobs, those jobs were not significantly better than before. The very small contribution of labor productivity to overall value added growth was almost entirely driven by workers changing sectors, in particular from agriculture to services.

14. **While Kenya has invested in broadening access to education, the pay-off to educational investment has been low**. Many educational assets sit idle because of mismatches, reinforcing the impression that Kenya is not making productive use of its available labor force. A high share of workers report their education level to be mismatched with the requirements of their jobs: 40 percent consider themselves undereducated, but 30 percent consider they are overeducated for their job.

D. Which are needed to raise living standards and fight exclusion

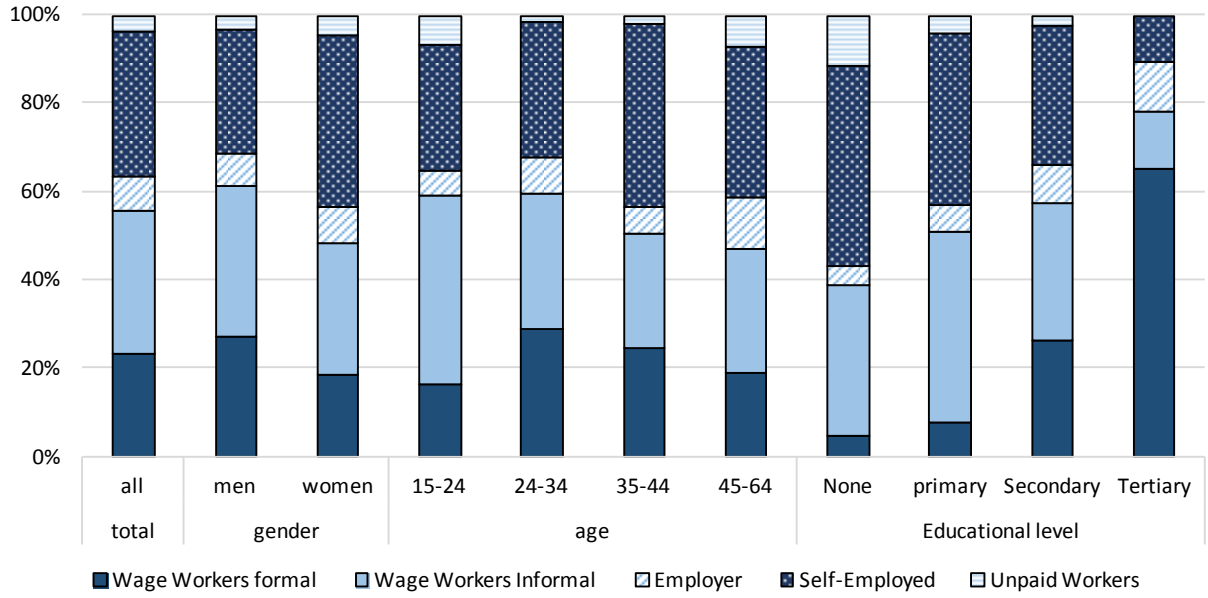
15. **As a result of slow transformation of production and labor markets, the majority of workers are confined to low earning jobs**. Kenya's labor markets are characterized by a much smaller formal wage sector, and much more work in the form of self-employment or informal wage work than is typical of more advanced economies. (Indeed, "labor markets" is something of a misnomer for the landscape of work in Kenya, since almost half of all work is not sold or bought for a wage, but takes place in self-employment.) Even in urban areas where a vast majority are engaged in non-agricultural activities the quality of jobs is low. The urban formal wage sector employs less than 900,000 people – less than one quarter of the work force – while 2.5 million workers are either in informal wage employment or engaged in self-employment or unpaid work for other family members, mostly in the wholesale and retail trade sector. Those jobs tend to offer significantly lower earnings and less job security than formal sector jobs.

16. **The vast majority of jobs are also very low skill, pointing to the lack of modernization of employment and production**. In fact, many jobs do not involve the use of some basic cognitive skills. Formal wage workers, especially in high value added services, are more likely to use their cognitive skills intensively than others but these sectors account for a small share of total employment. A majority of unpaid family workers, self-employed and informal wage workers do not use foundational skills like reading, writing, or computer at work at all.

17. **Women, youth and those with little education are excluded from good jobs**. First, youth and women are especially vulnerable in terms of unemployment. More than one quarter of all urban active women are unemployed; the unemployment rate reaches forty percent for young women, and women with little or no education are more likely to be long term unemployed than others. Although young

men fare better, 20 percent of 15-24 year old active men are also unemployed. Even more importantly, working women, youth and low educated workers are predominantly confined to low productivity activities. Urban women are more likely to be self-employed than men (39 percent versus 28 percent of total female/male employment), and female workers make up only one third of formal wage jobs. Whereas a majority of young workers are in the wage sector, only 28 percent of them have access to formal sector jobs, compared to 47 percent for older workers.

Figure IV: Age, gender and education levels matter for the kind of jobs one gets.



Source: Estimates based on STEP survey (Urban areas only).

E. What is holding back the creation of productive jobs in the formal sector?

18. **For Kenya's economy to create better jobs, there needs to be a thriving private sector that can engage workers in more productive employment**. Labor productivity is significantly higher in the formal than in the informal sector in Kenya, and within the private formal sector, more productive and more established forms offer better job conditions and higher wages. However, there are strong indications the conditions for firms do not favour entrepreneurship and expansion, especially of the more productive and competitive firms in the formal sector.

19. **The formal private sector is still small and accounts for less than one in four jobs in the non-agricultural sector**. Formal wage jobs (both public and private) make up 22 percent of all jobs in industry and 24 percent of all jobs in the services sector (including both wage and self-employment jobs). Although the small size of the formal sector suggests that efforts also must concentrate on raising productivity in the informal sector (where *de facto* most jobs will continue to be created in the short term), finding ways to remove obstacles to firm and labor demand growth is essential to improving the jobs landscape in Kenya.

20. **Firm creation is low.** Productivity can grow as more productive firms enter and force less productive firms out of business. However, firm creation is low in both the manufacturing and services sector in Kenya: less than twenty percent of manufacturing and services firms are younger than 5 years,

compared to 35 percent in the United States and Ethiopia. Whether this is due to barriers to entry or barriers to formalization is not clear. However, the low share of young firms is evidence of obstacles to job creation. In OECD Countries, young firms contribute disproportionately to job creation[7].

21. **More productive firms do not create more jobs**. In a well-functioning market economy, more productive firms should be more competitive and as such gain market shares over time. However, more productive manufacturing sector firms do not create more employment in Kenya. The relationship between firm size and productivity growth is in fact negative (this is especially true for the food and textiles sectors, the major employers in the manufacturing sector), and similarly firms with lower productivity levels employ more workers than those with higher levels of productivity.

22. **Even though formal firm creation has recently picked up in Kenya, the real challegne is the lack of growth of the more productive firms.** These allocative inefficiencies are constraining the ability of the manufacturing sector to contribute to the employment objectives in Vision 2030. Removing the constraints that prevent greater allocative efficiency could substiantially boost productivity and employment. Evidence from other countries suggests that the possible culprits are trade policy, regulatory framework related to business environment (including competition policy), market failures related to access to finance and labor market distorsions. More research is needed to assess the prevalence and magnitude of these distorsions in the context of Kenya.

23. **Skills development is also fundamental to the transition to better jobs**. Currently, the demand for higher level cognitive skills is low in Kenya's jobs market, and the World Bank's enterprise surveys do not suggest skills are the most important constraint to doing business. However, there are signs that skills are at least becoming a more important problem for firms: 30 percent of firms cite it as a major constraint. A transformation into more formal, higher productivity jobs will require a better trained labor force. A flexible skills development system that fosters basic generic skills and provides opportunities for acquiring labor market relevant technical skills is needed.

24. **Access to education has increased, but there are still important gaps: for girls, for inland regions, and for the less wealthy.** A majority of the urban population now holds at least secondary levels of education. Women are less likely than men to go beyond primary education, however, and there are also significant regional differences, with inland zones offering less access to school. There are also persistent gaps in access between individuals from low wealth households and those from families that are better off, and the gaps appear to have increased over time.

25. **Early drop-outs remain a significant problem in Kenya.** Many children in Kenya enrol later than the official school age, and they are also more likely to drop out prematurely. One third of children who drop out of school leave before completing primary education. Drop-outs are intrinsically related to socio-economic vulnerability, and largely driven by credit constraints.

26. **Higher access to school has not translated into sufficient learning.** There are also significant indications that the quality of education has not kept up with expansion in access. A vast majority of adults who have passed through secondary levels of education remain functionally illiterate in English. Even among adults with tertiary levels of education, less than one quarter reaches the minimum level of functional literacy. Second chances and other training opportunities are limited in Kenya: only 27 percent of the urban population benefited from some kind of training after school. A 2011 survey showed that 7 out of 10 children in Grade 3 could not do work at the level of Grade 2.[8] Teacher absenteeism and high (and widely varying) teacher/student ratios are among the more critical problems plaguing the education system.

[7] Criscuolo, Gal and Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", OECD Science, Technology and Industry Policy Papers no. 14, OECD Publishing.
[8] World Bank (2013), *Achieving Shared Prosperity in Kenya*.

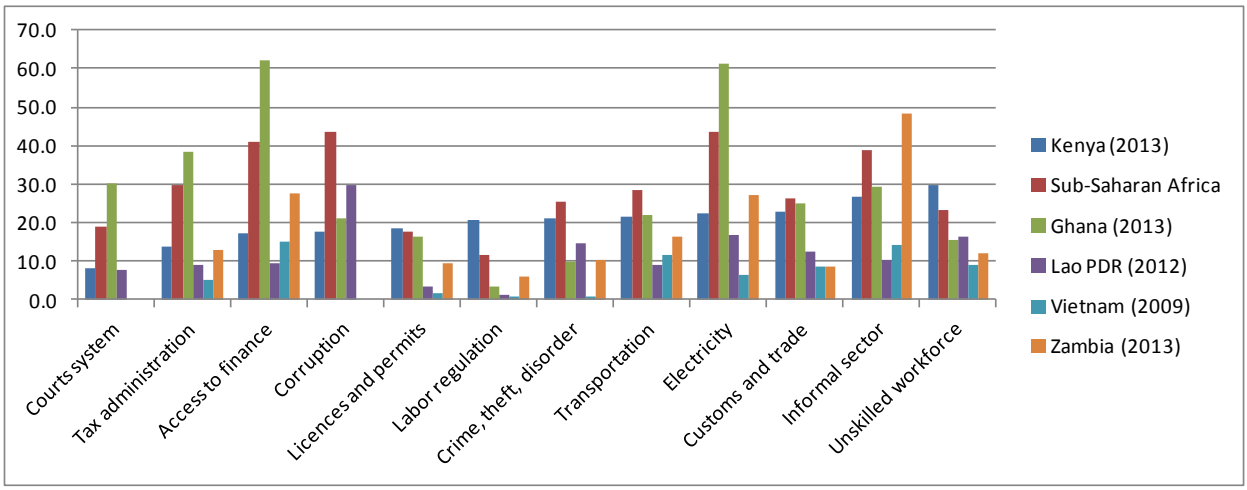
F. Policy priorities to foster more, better and more inclusive jobs

27. **Kenya is a country of great variations in opportunities and challenges.** It combines a vibrant economic activity in some of the largest cities together with a continued dependence on agriculture in rural areas, high mobile and internet use and low functional literacy, widely different access to education, and widely different access to more dynamic jobs. This means that the pillars of a jobs strategy must not only include more and better jobs, but specific and targeted policies to connect people to jobs, and jobs to people.

28. **The business environment should be improved to encourage private sector growth and, by extension, labor demand**. The World Bank's Enterprise Surveys from 2007 and 2013 suggest that the business climate is deteriorating in Kenya. Compared with 2007, firms in 2013 experienced higher financing costs, higher insecurity, and more unreliable access to infrastructure. Kenyan firms make 30 contributions a year, taking 201 staff hours to calculate, file, and pay their taxes. For traders, logistics are a major hindrance. On average, the procedures and documentation needed to import or export take 26 days; connecting to the grid in Nairobi requires 6 steps, takes more than 5 months, and costs 10 times average Gross National Income (GNI) per capita.[9]

29. **Kenyan firms perceived competition from the informal sector, electricity, and lack of access to finance as the top obstacles in 2013**. When asked to identify the biggest obstacle to business, 18.5 percent of firms cited "practices of competitors in the informal sector," 16.5 percent cited "electricity," and 12.7 percent cited "access to finance". Focusing instead on major constraints – any area that is considered a major constraint to business - over twenty percent of firms in Kenya considered infrastructure, insecurity, customs and trade regulations, informal sector practices, and – importantly – the lack of skills, as major constraints to expanding their businesses. These areas are also relatively highly ranked by Kenya, compared to peer countries.

Figure V: Major constraints to doing business, Kenya and Comparators



Source: Estimates based on World Bank Enterprise Surveys.

30. **Several measures are needed to promote productivity and employment growth in the formal sector.** Policy directions for the manufacturing sector – but with a bearing also on services –include

[9] World Bank (2014), *Kenya Economic Update 2014: Anchoring High Growth: Can Manufacturing Contribute More?*, World Bank: Washington, DC.

(i) helping firm access skills, technology and information through, for example, technology extension or technology transfer programs (ii) ensuring level playing field between informal and formal sector, by streamlining and reducing regulation and ensuring fair enforcement, (iii) decrease the cost of doing business by addressing critical infrastructure gaps, especially in electricity, developing key financial infrastructure and special programs to help enterprises access financing, and accelerate and facilitate international trade (iv) support firm entry and exit, which is low in Kenya, by facilitating starting up of a business, and simplifying the insolvency framework (v) streamline revenue raising schemes that are increasing the cost of doing business unduly in Kenya.[10]

31. **Increasing productivity of informal sector enterprises and workers is necessary to improve overall productivity and job quality in Kenya.** Even in a scenario with rapid growth in the formal wage sector, formal firms will not create jobs for all young Kenyans. Many youth will continue to find jobs in the small household enterprises, working for themselves or their family in the *Jua Kali*, the informal sector. A vast majority of these firms will remain very small: the household enterprise sector tends to expand by creating new firms (many of them own-account jobs), rather than by increasing employment.[11]

32. **Policy should identify, and support, interventions that increasing the productivity of these firms and the conditions in which they operate by increasing access to skills, technology, credit and markets, and helping them manage income risk**. Raising the skills levels of *Jua Kali* workers involves addressing broad skills needs (technical as well as general business skills like marketing and accounting), and offering flexible modes of training that permit combining work with skills upgrading. Given the granular nature of the informal sector, there is a need address information asymmetries and hook up these micro-firms with the modern economy: create linkages between informal and formal firms, connect suppliers with customers, coordinate producers, connect firms with technological solutions, and help small-scale enterprises enter into local, regional and global value chains.

33. **Safety nets are also needed that go beyond formal sector social security coverage and prevent people facing income losses from falling into poverty**. Potential avenues include voluntary social insurance programs and specific targeted schemes for informal sector firms, subsidies for low income workers, raising awareness about labor standards, and delinking social security coverage from formal contracts.

34. **More generally, skills are becoming a more important constraint, pointing to the need for rapid action.** Informality, trade regulations, and lack of access to finance became more important constraints in the past six years, while transportation, crime, theft, and disorder became less important. Firms perceived the severity to have fallen most for telecommunications (likely related to rapid technological improvements over this period, particularly the penetration of mobile networks and devices). The severity of crime, tax rates and tax administration, transport, and workings of the courts also declined. The only obstacle firms perceived to have risen in severity was the availability of educated workers**.**

35. **The quality of the education system needs strengthening and it needs to become more inclusive.** Skills development takes many years, from early childhood interventions to post-secondary training. To respond to upcoming skills shortages, efforts to increase the quality and impact of education, and improve equity in access, are sorely needed, and now. While a broad education reform implies action in a wide range of areas, cross cutting systemic problems include lack of accountability and

[10] Ibid

[11] Filmer and Fox (2014), *Youth Employment in Sub-Saharan Africa*. Washington, DC: World Bank and Agence Française de Développement.

oversight.[12] The importance of credit constraints in determining early drop-outs suggests that demand side issues – how to stimulate demand for education, by alleviating both credit and information constraints, can be important.

36. **To connect people to jobs, targeted policy conclusions are called for on the supply side.** An analysis of "risk profiles" among the vulnerable youth population[13] arrives at four groups facing similar labor market challenges within each group – and as such, could benefit from similar policy approaches. (Figure VI). These clusters are defined by type of barriers, along two axes: employability (education, experience, skills) and social barriers (gender, poverty, family responsibilities, etc.). The groups need different and targeted policy assistance, ranging from intermediation in the labor market (helping qualified workers connect to available jobs) to the other extreme, with an emphasis on building very basic functional skills:

37. **Market ready**. Males, both rural low skilled married ones working in the informal sector, and urban semi-skilled unemployed single ones, fit into this category. They require mostly i*ntermediation* in the labor market (job search assistance, information, etc). Given the comparatively high mobile and internet penetration and use in Kenya (43 percent of the population uses internet according to the most recent data), this group may be favourably served through different ICT tools.[14]

38. **Intensified actio**n. This group consists of single males, currently working in less productive employment – both rural low skilled unpaid, self-employed, or informal wage workers. They face, in particular, education/skills barriers and as such are likely to benefit from long term measures for building skills, such as increased access to education, as well as shorter term job-relevant training, to increase their employability.

39. **Special support**. This group is made up of female clusters: rural unskilled married self-employed or unpaid workers, and urban low skilled inactive married female. These two groups face social barriers as well. They are likely to need child care services to enter the labor market, as they carry large household responsibilities. They may benefit from intensified action as for the above group, but with attention to child care and other social barriers.

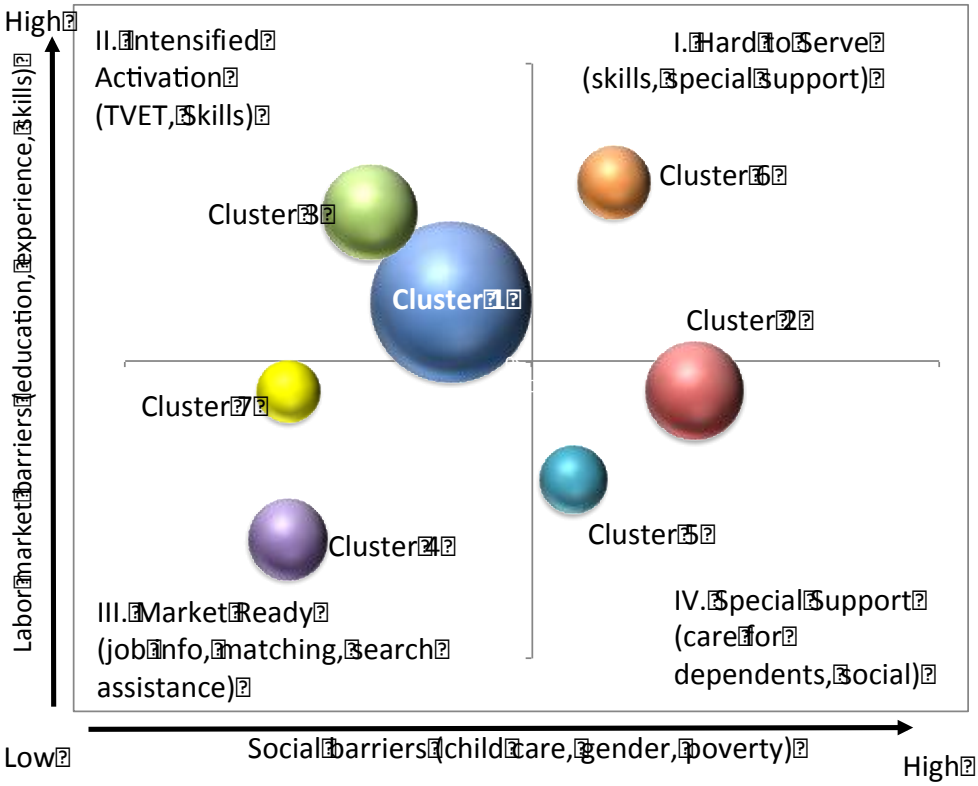
40. **Hard to serve**. This includes rural unskilled inactive single females who face high employability and family barriers. They lack work experience, have little education, and are engaged in household work. This may be the most difficult group and time consuming group to activate – they require skills development, functional literacy and numeracy, as well as socio-emotional skills.

[12] World Bank (2013), *Achieving Shared Prosperity in Kenya.* . World Bank: Washington, DC.

[13] The vulnerable youth population refers to individuals aged 15 to 24 that are economically inactive out-of-school, unemployed, or employed in the informal sector (i.e., unpaid family workers, self-employed or informal wage-workers).

[14] World Bank (2015), *World Development Report 2016: Digital Dividends.* World Bank: Washington, DC., and data from the World Development Indicators.

Figure VI: Policy targeting: identifying groups



Source: Estimates based on KIHBS 2005. The Clusters are defined as: 1. low skilled unpaid worker single male (40 percent of total sample); 2. Rural unskilled "unpaid-self employed worker" married female (15 percent); 3. Rural unskilled single male worker (14%); 4. Urban semiskilled, unemployed or informal wage workers, single male (10%); 5. Urban low skilled inactive married female (8%); 6. Rural unskilled inactive single female; 7. Rural low skilled informal married male.

Chapter 1: The Context for Job Creation in Kenya

41. **Higher growth has raised average income levels, but poverty and deprivation are still a problem in Kenya, East Africa's largest economy**. In 2015, Kenya graduated into middle-income status[15], joining the ranks of Botswana, Ghana, Nigeria, Senegal, and several other African countries. However, although economic growth has increased in recent years, it has not been sufficiently transformative – the structural change away from agriculture as a major source of production and income has been slow. Combined with significant demographic changes creating pressures for job creation, there is a need to change the patterns of job creation and increase the productivity of the jobs that already exist.

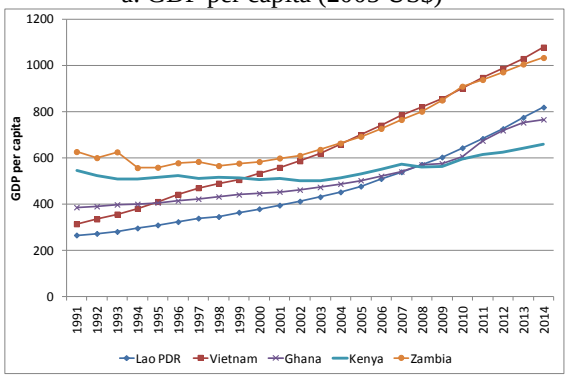
1.1. Growth and jobs in the past

42. **Kenya's economic growth rate increased as of the mid-2000s, but remained below that of African and non-African peers.** After significant economic volatility in the 1980s and 1990s, Kenya's economic growth took off, and GDP per capita growth reached an average of 2.5 percent per year between 2003 and 2014, bringing Kenya above the threshold for middle income countries. Nonetheless, Kenya's growth performance has remained subdued compared to that of African economies like Ghana or Zambia, or non-African peers like Lao PDR and Vietnam – countries that, with the exception of Zambia, were poorer in 1991, but by 2014 all had surpassed Kenya (Figure 1 a)

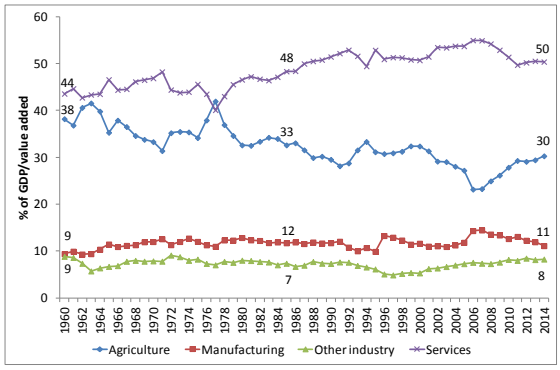
43. **In the four decades that have passed since independence, the structure of Kenya's economy has not changed significantly.** Economic growth was predominantly fuelled by domestic consumption and the expansion of the services sector. However, the structural transformation away from low productivity agriculture as a main source of output has been slow, and manufacturing in particular has not been able to increase its share over time. Services account for half of GDP; but agriculture still makes up nearly 30 percent, compared to 33 percent in the early 1980s (Figure 1, b).

Figure 1: Kenya's economic performance has not been sufficient to change the structure of output

a. GDP per capita (2005 US$)



b. Share of GDP



Source: World Development Indicators

[15] Defined by the World Bank as countries with a per capita income between $1,046 and $4,125.

- **Economic growth therefore did not bring with a significant increase in the quality of jobs.** The slow structural transformation of output was mirrored in a slow structural transformation of employment. Jobs in the non-agricultural sector have been growing faster than agricultural jobs, but not sufficient to transform the structure of employment. Information from the 1999 and 2009 censuses show that in absolute terms, wage jobs in the non-agricultural sector increased by 1.5 million, while self-employment in the non-farm sector increased by 1 million over the same period (Figure 2, a). The shift out of farming happened for both young and old. However, the very young (age 15-19) were most likely to be working on family farms, possibly representing the limited options for rural youth leaving school early. While this represented a relative shift out of agriculture, some 300,000 jobs were nonetheless crated in the agricultural sector (on a net basis). Importantly, farming still made up the largest single sector of employment. Unsurprisingly, opportunities still differed significantly between urban and rural areas. In rural areas, family farming dominated employment, while wage work was the predominant form of work in urban areas (Figure 2, b).

Figure 2: Employment in urban and rural Kenya

a. Trends employment, 1989-2009

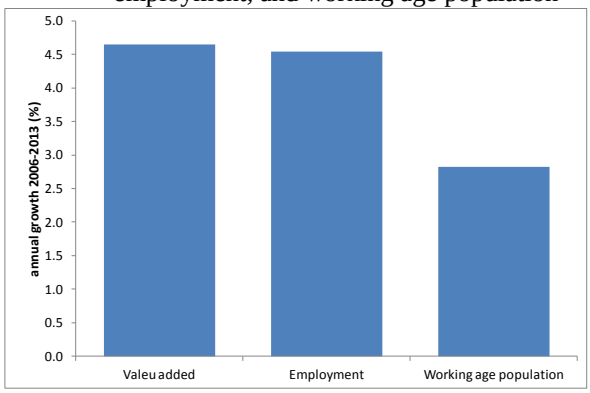
b. Rural and urban jobs, 2009

Source: World Bank (2012), *Kenya Economic Update: Kenya at Work*.

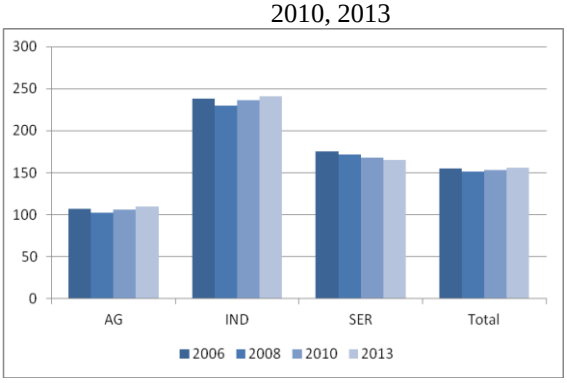
44. **In the past decade, value added and employment increased at similar pace, meaning that jobs did not become more productive**. Between 2006 and 2013, value added increased by 4.6 percent per year, translating into roughly 2 percent per capita growth per year. Job creation matched value added growth almost one for one, at 4.5 percent per year, in the same period and some 5.5 million jobs were created in the Kenyan economy. Meanwhile, the working age population increased by some 4.4 million people (2.8 percent per year), meaning that the share of employed adults actually increased (Figure 3, a). However, with value added and employment growing in tandem, labor productivity stagnated. While the services sector accounted for most employment growth between 2006 and 2013, most of those jobs were in the informal trade sector. Value added growth in services was limited and thus, labor productivity growth in services actually fell (Figure 3, b).

Figure 3: Job creation, but very little labor productivity growth.

- Annual growth in value added, employment, and working age population



- Value added/employment, 2006, 2008, 2010, 2013



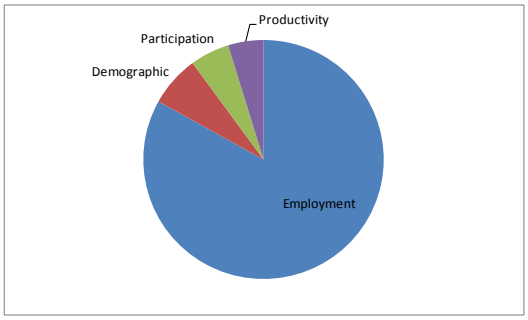
Source: Estimates based on Kenya National Bureau of Statistics Economic Surveys complemented by 2009 census.

45. **The growth in value added (on a per capita basis) was mostly driven by an increase in the share of the employed labor force.** A Shapley decomposition separates out the contribution to per capita value added growth of different phenomena, holding other factors constant: an increase in the share of working age adults in the population (demographic), an increase in the participation rate of working age people (participation), and increase in access to employment of the active labor force (employment), and an increase in labor productivity (productivity). Estimates for Kenya show that between 2006 and 2013, the by far most significant contribution to per capita value added growth was an increase in employment in the active labor force, accounting for 83 percent of total per capita value added growth. Employment growth was in turn driven by a strong growth in employment in services, mostly in the (largely informal) trade sector (Figure 4, a). Higher participation and demographic changes contributed 7 and 5 percent.

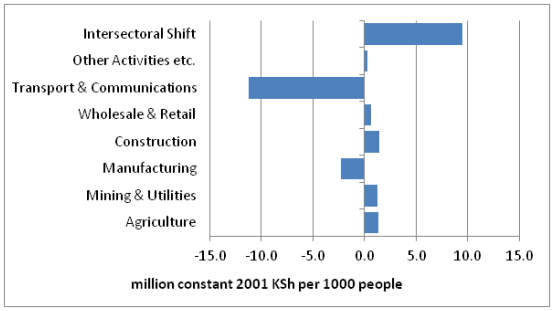
46. **The contribution of labor productivity to growth was minimal and labor productivity within sectors remained stagnant, limiting the potential for improved job quality.** Given the stagnation in labor productivity growth, its contribution to value added growth was limited, to 5 percent of total value added per capita growth. Thus, while Kenyans were offered more jobs, those jobs were not significantly better – they were not associated with higher value added. The very small contribution of labor productivity to overall value added growth was almost entirely driven by intersectoral shifts: a net relative increase in the services sector and a net relative loss in agriculture. However, the shift from agriculture into the informal trade sector did not signify a significant improvement in productivity and further, productivity growth within sectors was negligible (Figure 4, b). Given the perception of significant pockets of underemployment in the farm sector, it is remarkable that a reduction in the agricultural work force was not accompanied by an increase in agricultural productivity.

Figure 4: The contributions of growth – not a significant change into more productive jobs.

a. Shapley decompositions: contribution to growth in value added per capita, 2006-2013



b. Contribution to labor productivity growth: intersectoral shifts vs. productivity growth within sectors

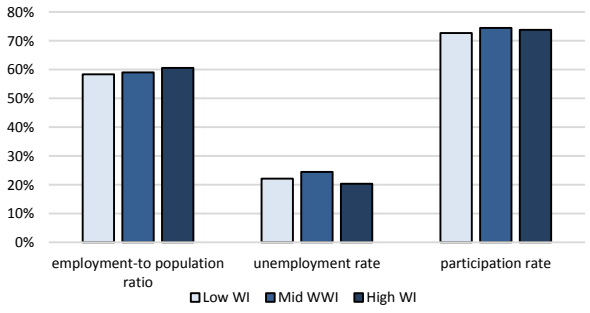


Source: Estimates based on Kenya National Bureau of Statistics Economic Surveys complemented by 2009 census.

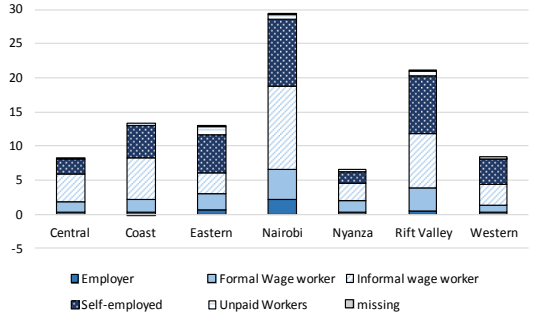
47. **The lack of productive job creation is an important obstacle to reducing poverty in Kenya.** Less wealthy households have few assets apart from labor and therefore depend relatively more on labor income for their subsistence than more wealthy households do. However, it is not access to jobs, but lack of access to good jobs that matters. In Kenya, the employment-to-population ratio is very similar across households, in dependent of how wealthy they are (Figure 5, a). It is not access to jobs that matter, however, but lack of access to good jobs. Individuals living in the 30 percent of households at the bottom of the wealth distribution are likely to work for themselves or their families, or in the informal wage sector. They have very limited access to wage jobs in formal firms (Figure 5, b).

Figure 5: Jobs and wealth index1: access matters less than quality of jobs

a. Labor market participation by wealth index (WI)



b. Occupations and regional distribution, low wealth index



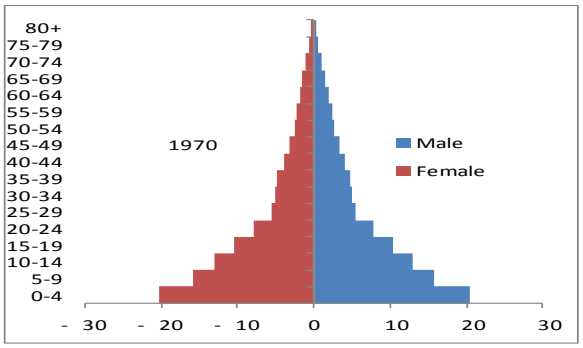
Source: Estimates based on STEP survey. The wealth index is calculated using information on current household dwelling characteristics and assets. Low Wealth Index refers to those in the Bottom 30%, Mid corresponds to those in the middle 30%, and the High Wealth Index represent those in the top 40%.

1.2. Improving the quantity and quality of jobs in the future

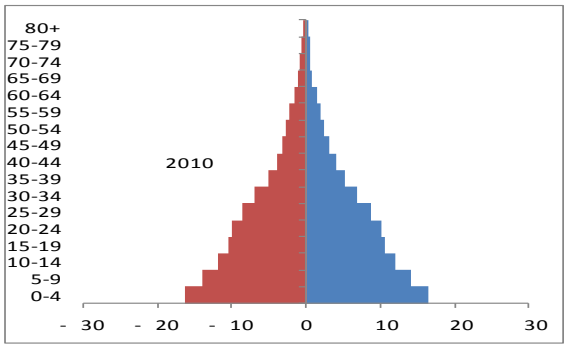
48. **Demographic pressures put pressure on job creation.** The share of working age population – ages 15-64, those that potentially could be working after school and prior to retirement – increased from 47 percent in 1970, to 57 percent by 2010 (Figure 6, a, b). These trends continue: by 2050, the working age population is expected to account for nearly two thirds of the total population (Figure 6, c). In the coming decade, the working age population will increase, on a net basis, by nearly nine million people, of which one third – three million, will be between ages 15 and 24. The youngest adults, aged between 15 and 24, will in fact account for an increasing share of net additions to the working age population (Figure 6, d). With an annual increase in the working age population of just under one million people, job creation will need to keep pace.

Figure 6: Population dynamics in Kenya put pressure on job creation

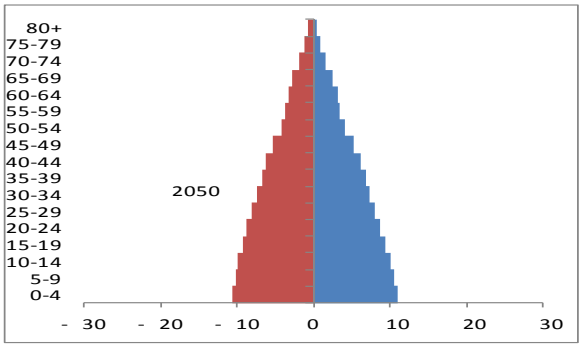
a. Population pyramid: 1970



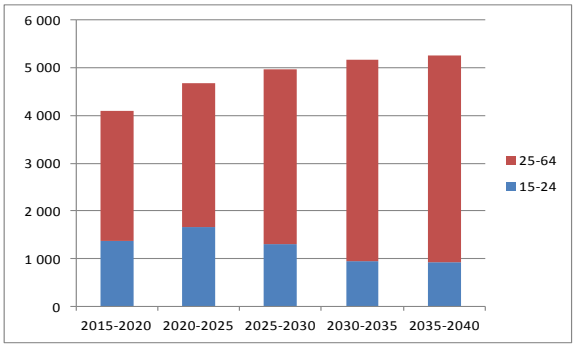
b. Population pyramid: 2010



c. Population pyramid: 2050



d. Net increase in the population by age group (thousands)

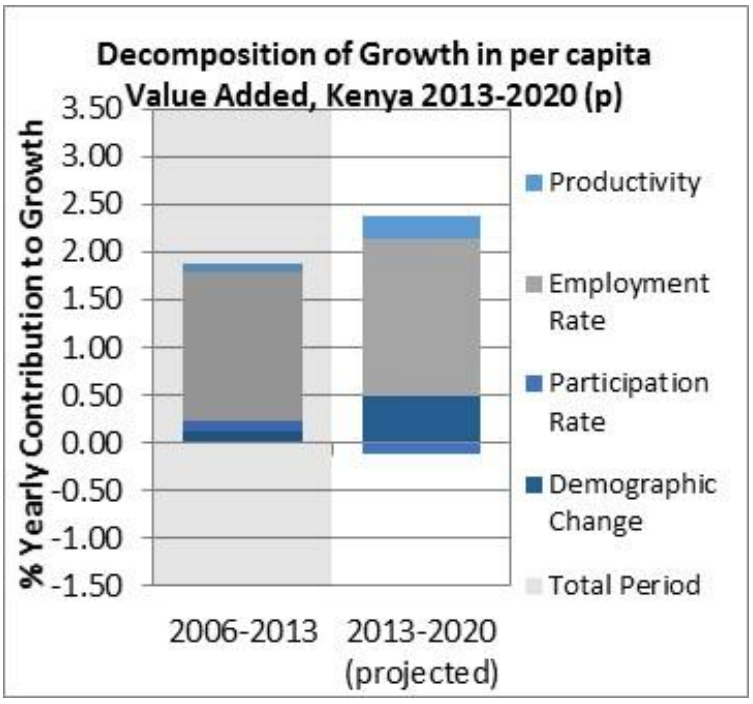


Source: Estimates based on UN populations data.

49. **Young people will want to find better jobs than is currently the case, which in turn will require a change in the current level and composition of economic growth.** ”Business as usual” growth, at the levels registered in the past and centered on low productivity activities, will not be sufficient to provide Kenya with much needed jobs. Assuming that the increase in economic growth can be sustained in the near future, and that current patterns in employment growth continue, per capita value added growth will increase slightly faster in the period 2013-2020, as more young people enter the working age population. However, this “demographic dividend” will be very limited unless the

quality of jobs also improves. Whereas continued shifts out of the (low productivity) agricultural sector and into the (somewhat higher productivity) services sector will result in some productivity growth, it will be limited (Figure 7). Continued reliance on job creation in the low skill trade sector will not be sufficient to foster better and more inclusive jobs. Policies that also help increase within sector productivity growth in different sectors, that expand jobs in both industry and higher productivity services, will be necessary, as well as interventions and reforms to equip workers with the skills, information and incentives necessary to access these jobs.

Figure 7: Business-as-usual scenario will not result in a transformation of jobs



Source: Estimates based on Kenya National Bureau of Statistics Economic Surveys complemented by 2009 census.

50. **It will also be important to help lower productivity occupations increase their earnings potential.** Even with high employment growth rates in the formal urban wage sector, agriculture and non-farm household enterprises, together with informal wage jobs are likely to continue to absorb the vast majority of the work force. Raising the productivity of these occupations must therefore also be a priority. Unfortunately, there is no recent data available on rural labor markets. A national household survey is being fielded in 2015/2016, the first such comprehensive attempt since 2005/2006. When available (in 2017), the survey should provide a much needed update in the understanding of rural (as well as urban) labor, how jobs in Kenya are related to poverty and deprivation, and how dynamics have changed over time.

Chapter 2. Jobs and workers

51. **What does the landscape of jobs look like in urban areas?** This chapter presents a more recent diagnostic of workers and the jobs they do in urban areas, drawing on a STEP household survey administered in urban areas in 2013 (Box 1). Kenya is still in the early stages of urbanization, with only one quarter of the population living in urban areas. Further urbanization, however, will be an essential part of Kenya's strategy to diversify and increase the economy. Urban areas currently provide most opportunities for more productive jobs in especially the wage sector, but also the non-wage sector. The analysis below provides an updated view of urban jobs and workers.[16] Definitions of key labor market indicators are provided in Annex 1.

Box 1: Skills towards Employment and Productivity—the STEP Surveys

The STEP Skills Measurement Program, launched in October 2010 by the World Bank, is the first systematic attempt to fill knowledge gaps related to skills that enhance productivity and earnings. The program is designed to provide policy relevant information on labor market characteristics and how they relate to skills, much beyond basic information on education levels and literacy. Among large-scale surveys, the program is unique in measuring a broad set of skills, including not only cognitive ability, but also socio-emotional skills, and in providing firm level views on skills needs through a stand-alone Employer Survey (no employer survey has been administered in Kenya).

In Kenya, the STEP household survey was implemented in 2013, with field work carried out from August to November 2013. The target population was the urban population ages 15 to 64. The sample was stratified by 4 geographic areas: 1-Nairobi, 2-Other Large Cities (over 100,000 households), 3- Medium cities (60,000 to 100,000 HHs) and 4-Other Urban Areas. War marred and unstable regions of Kenya were excluded from the survey and Itinerants (as classified in the Population Census 2009 in Kenya) were also excluded.

[16] Definitions of key labor market indicators are provided in Annex 1. The STEP Household Survey is detailed in Annex 2.

2.1. A snapshot of the urban population and their jobs in 2013

52. T**he majority of Kenyans living in urban areas work.** Chapter 1 showed that although no recent poverty data exist, other socio-economic indicators suggest that while the share of households exposed to hardship has declined across time, many households still face day to day hardship indicative of poverty.[17] High labor force participation rates are typical of lower and middle income countries, precisely because lack of productive jobs or alternative sources of income such as social protection systems means that most able bodied household members are obliged to work. As a result, out of the 6.7 million adults, a majority – 4.6 million people, or over 70 percent – of the urban labor force is active in the labor market, either holding a job or actively looking for one (Figure 8).

Table 1: Key Labor Market Indicators for Urban Kenya

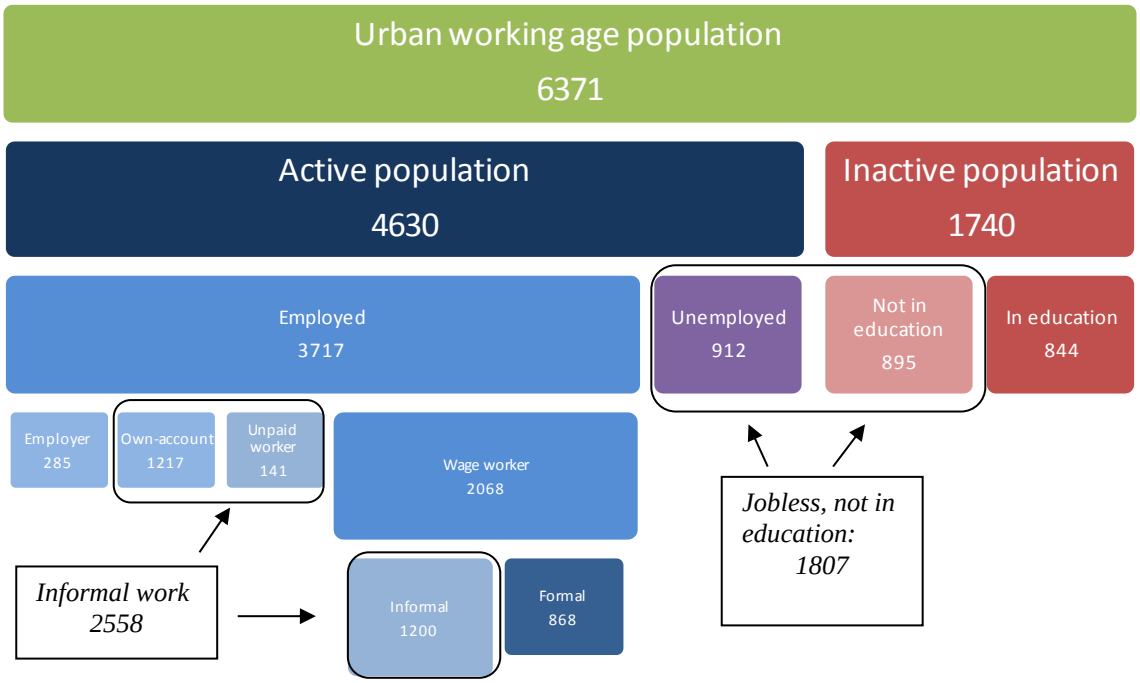
	Labor force participation rate		Unemployment rate		Employment-to-population ratio	
	Men	Women	Men	Women	Men	Women
ALL 15-64	**79**	**67**	**13**	**27**	**69**	**49**
Age						
15-24	56	52	20	41	45	31
25-34	96	74	11	25	85	55
35-44	97	86	10	18	88	71
45-54	97	85	6	15	91	72
55-64	76	57	4	3	72	56
Education						
None	81	70	9	22	73	54
Primary	83	64	10	29	74	46
Secondary	74	66	15	30	63	47
Tertiary	97	84	10	15	87	72

Source: estimates based on STEP survey.

53. **Nonetheless, there are many job-less in Kenya's urban areas – and youth and women are especially vulnerable.** Urban unemployment is pervasive, affecting some 20 percent of the active population or about 0.9 million people. Another 1.7 million are inactive, i.e. not in a job, nor looking for one, of which 0.9 million are neither in employment, education or training. Young people, as well as women, are more likely than others to be out of a job (unemployment rates among women between 15 and 24 are by far the highest of all groups, reaching 40 percent), and young people and women consequently have the lowest employment-to-population ratios.

[17] World Bank (2013), *Kenya Economic Update: Time to shift Gears – Accelerating Growth and Poverty Reduction in the New Kenya*, World Bank: Washington, DC.

Figure 8: Distribution of Kenya's urban population (thousands, 15-64 age category)



Source: estimates based on STEP survey. Note: the numbers presented in the 2013 STEP survey differ slightly from those of the 2009 census data, with a smaller employed urban labor force (3.7 million compared to 4.9 million), a smaller number of self-employed (1.6 million compared to 2.0 million) and a smaller number of wage workers (2.1 million compared to 2.9 million).

2.2. Who is working where?

54. **While many people work, most jobs are not sufficiently productive: they are not likely to offer significant earnings opportunities or income security**.[18] Kenya's labor markets are characterized by a much smaller formal wage sector, and much more work in the form of self-employment or informal wage work than is typical of more advanced economies. Indeed, "labor markets" is something of a misnomer for the landscape of work in Kenya, since much of the work is not sold or bought for a wage, but takes place in self-employment. Non-wage work – self-employment or unpaid work for businesses run by another family member – account for 44 percent of total urban employment, with the remainder in wage work. However, half of wage employees are working in the informal sector, and less than one million urban workers hold formal wage jobs. In all, three out of four jobs in urban areas are outside the formal wage sector, mostly in jobs that generally offer low levels of earnings and income security. The lack of productive employment explains why relatively high deprivation can co-exist with a high share of employed adults – work is a necessity, but work does not pay well, so most household members are expected to contribute (

55. Figure 9).

56. **Women, youth, and those with little education are more likely to be working outside the wage sector**. Women are more likely to be self-employed than men, and female wage workers are less

[18] The profile is based on primary employment. However, primary jobs are fairly representative of the labor situation overall: few people (5 percent of all employed) in urban Kenya actually report holding a second job.

likely to be formally employed. A majority of young workers (aged 15-24) are wage workers – but they have much less access to formal wage work than older workers. However, education appears to be the most significant factor explaining access to wage work, especially formal employment.

Figure 9: Age, gender and education levels matter for the kind of jobs one gets.

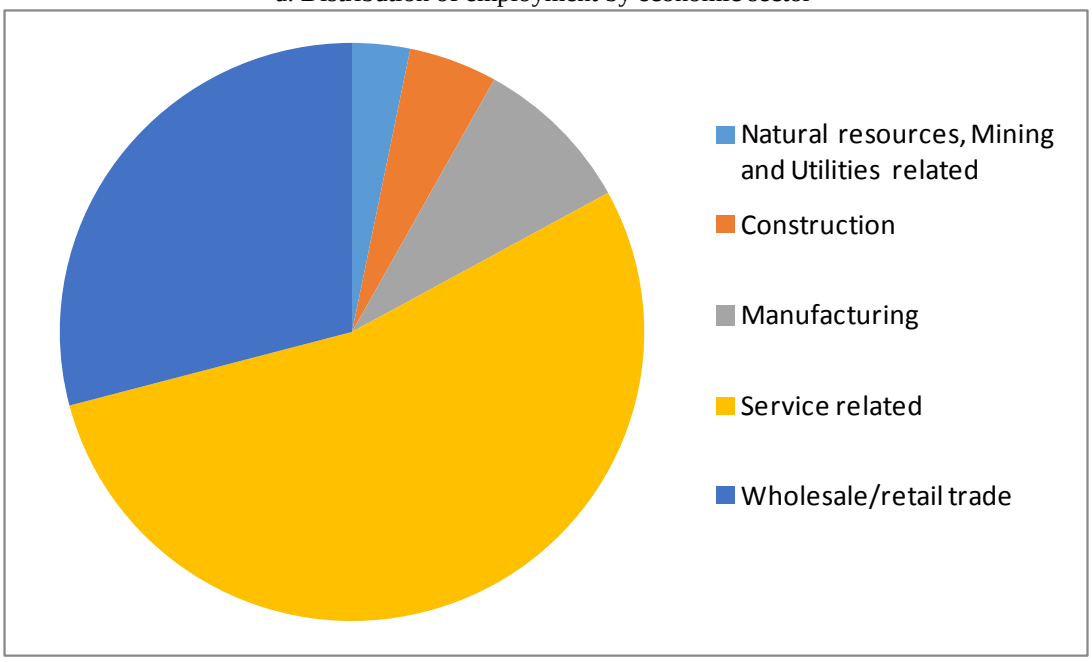
Source: Estimates based on STEP survey.

57. **Four out of five jobs in urban areas are in the services sector.** Wholesale and retail trade (29 percent) and other services related jobs (54 percent) make up the vast majority of urban jobs. The manufacturing sector is small, employing less than ten percent of urban workers (Figure 10, a). The trade sector is dominated by self-employment, while wage employment is more common in other forms of services. Informal wage work is most prevalent in the construction sector. Secondary complementary jobs are not common; only 5 percent of workers report having a second occupation (Figure 10, b).

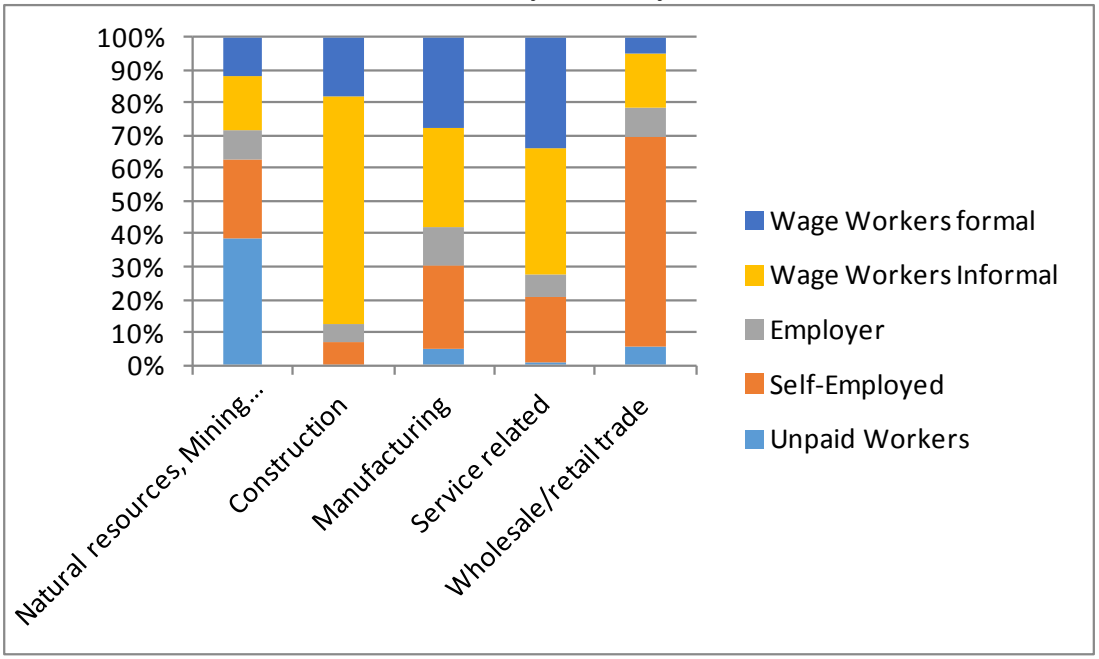
58. **The youngest urban workers are more likely to be in the trade sector, and in other services:** unsurprisingly, since many of them have left school early, they are less likely to be in the public administration, and in professional activities, where education levels are higher. But patterns change significantly for the workers between 25 and 34, who are more likely to be working in manufacturing, in the public sector, or in professional activities (Figure 10, c).

Figure 10: Distribution of employment by sector, occupation and education

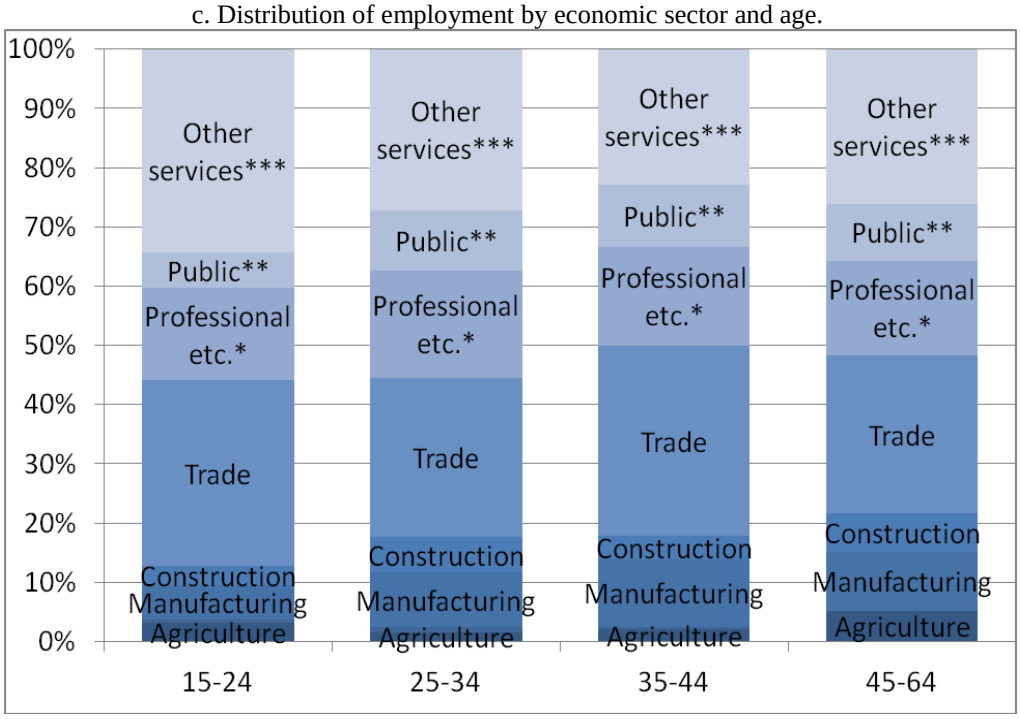
a. Distribution of employment by economic sector



b. Distribution by informality status



c. Distribution of employment by economic sector and age.



Source: Estimates based on STEP survey. *Professional etc. = Professional, scientific and technical activities; administrative and support service activities; arts, entertainment and recreation. **Public = Public adminstration, education; human health and social work, *** Other services = Repair of motor vehicles and motorcycles; repair of computers and personal and household goods, Transportation and Storage, Acommodation and food Services Activities, Other personal service activities, Other Activities.

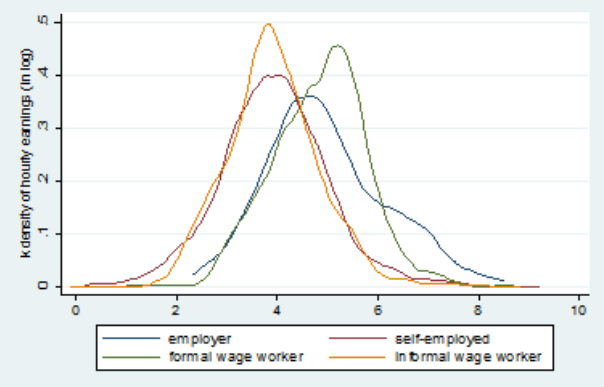
59. **A major criteria for "jobs quality" – earnings – differs significantly between different sectors and most workers, consequently, are in low earning jobs**. Multivariate analysis shows that more experienced, more educated workers earn more in the labor market (See Annex 4 for regression specifications). More particularly, employers and formal wage workers are significantly better paid than the self-employed or the informal wage workers Figure 11 (a). There are also other aspects of job quality that tend to increase preferences for formal wage jobs further – job security and additional benefits like access to social security systems, for example. It is nonetheless important to recognize that self-employment is not always a reflecting lack of options: those choosing to work for themselves may appreciate the individual freedom and flexibility it can offer. Indeed, although young people value job security and formal sector jobs, they also reveal preferences for flexibility in hours, something which supports the notion that self-employment can be a voluntary choice.[19]

60. **Gender gaps in pay are more evident in informal work than in the formal sector**. Men tend to earn more than women as informal wage workers, and as self-employed, as witnessed by the fact that the distribution of earnings for men is placed higher (to the right in Figure 11 b,c) than that of women. However, there are virtually no gender gaps in formal wage work (Figure 11, d).

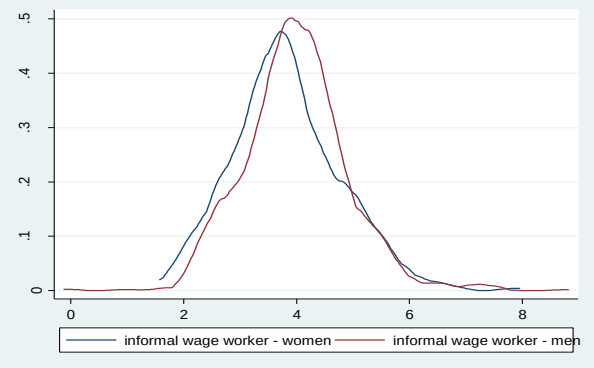
[19] Results from a Discrete Choice Experiment

Figure 11: Distribution of earnings differs significantly between different types of jobs and workers

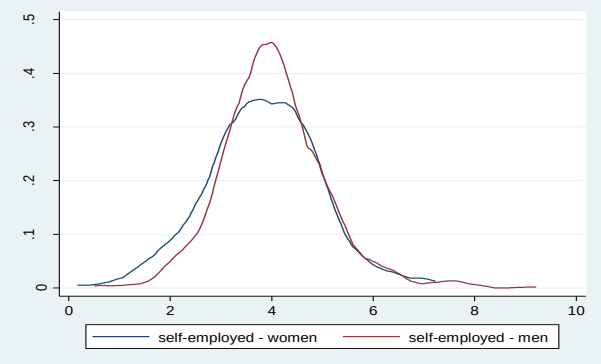
a. Hourly earnings, by type of job



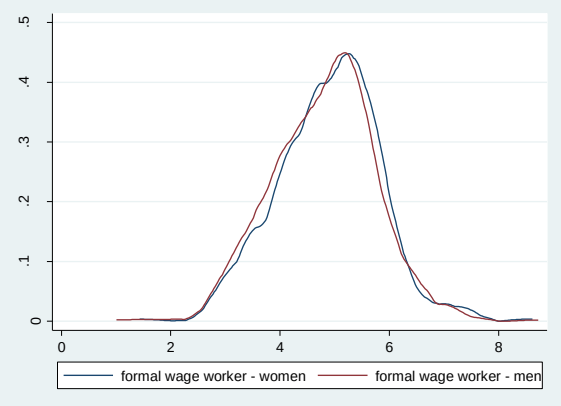
b. Hourly earnings, by gender: informal wage work.



c. Hourly earnings, by gender: self-employment



d. Hourly earnings, by gender: formal wage work

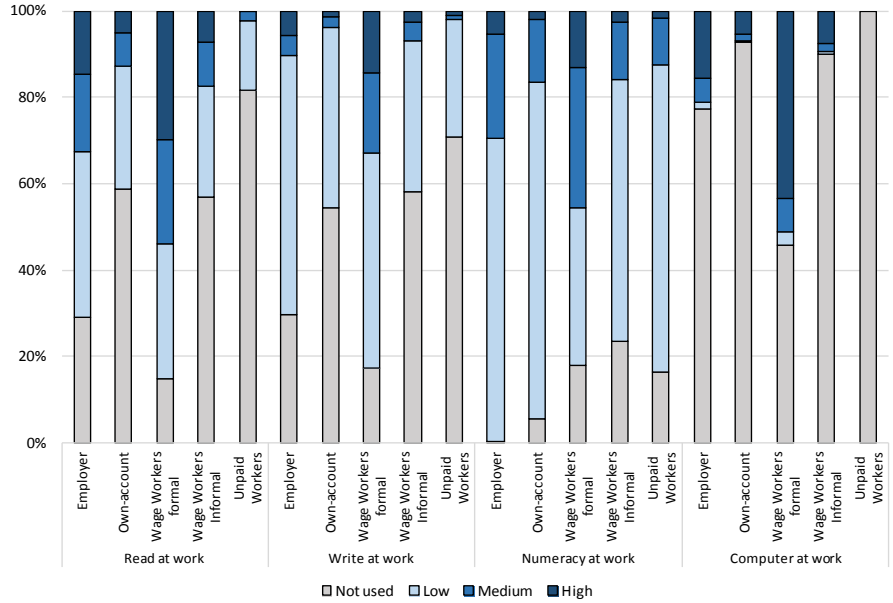


Source: Estimates based on the STEP survey.

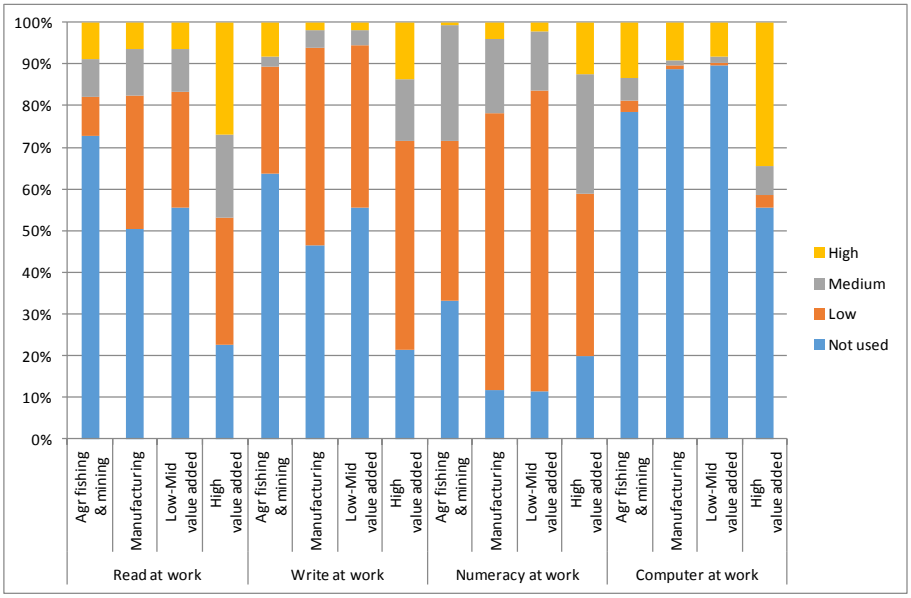
61. **And most jobs are very low skill.** In fact, many jobs do not involve the use of some basic cognitive skills. Formal wage workers use – by far – more cognitive skills than other occupational groups. Sectors of employment also explain the differences in use of skills: those working in high value added services are more likely to use their cognitive skills intensively than others. With the exception of numeracy, a majority of unpaid family workers, self-employed and informal wage workers do not use reading, writing, or computer at work at all (Figure 12). This fact could relate to the literature on coordination failures. Vacancy externalities that may occur where firms do not hire skilled workers because there are not many of them and therefore their wages are high. This reduces low-skilled workers' incentives to invest in training resulting in a low-skill/low-productivity trap.

Figure 12: Low intensity of skills used on the job

a. Use of skills at work, by occupation status



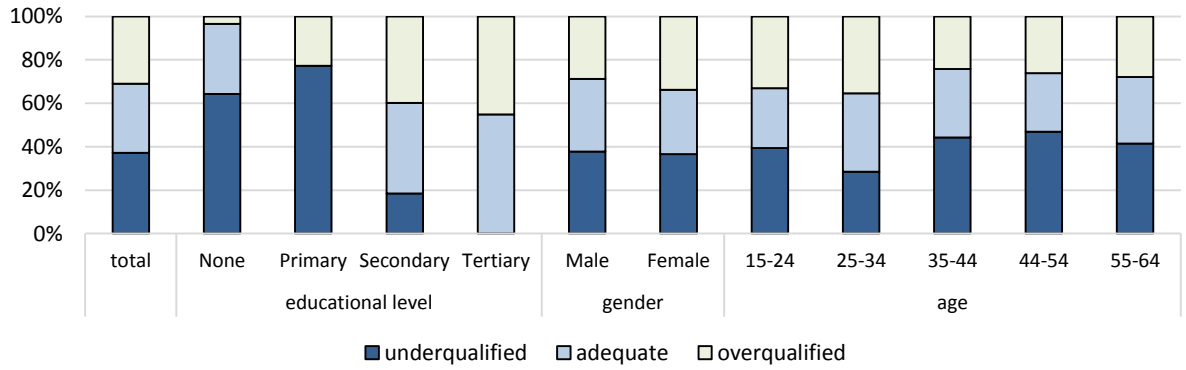
b. Use of cognitive skills at work, by sectors of employment



Source: Estimates based on STEP skills survey

62. **There is significant occupational mismatch in Kenya with a high share of workers considering themselves either under- or overqualified for their jobs.** The occupational mismatch is measured as a discrepancy between the level of education respondents have, and the level of education they report is the adequate one for their specific occupation. Against this measure, only 30% of the workers report to have the educational level adequate to their job; almost 40% of the workers are underqualified and 30% are overqualified. Finding jobs that correspond to their education levels appears to be particularly difficult for women, and for youth (Figure 13).

Figure 13: Mismatch by gender, educational level and age categories

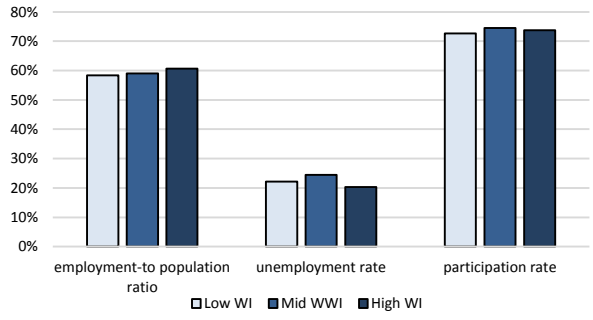


Source: Estimates based on STEP survey

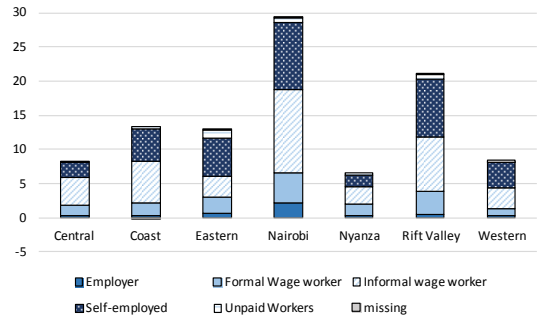
63. **Household welfare is strongly related to the types of jobs that workers have.** Individuals from less wealthy households are as likely as those from more wealthy households to be employed. They are, however, confined to lower earning jobs: they are disproportionately engaged in self-employment and informal wage work, and in agriculture and low value added sectors. Most of them work in Nairobi, Rift Valley and Coast Provinces (Figure 14).

Figure 14: Jobs and wealth index[1]: access matters less than quality of jobs

Labor market participation by wealth index (WI)



Occupations and regional distribution, low wealth index



Source: Estimates based on STEP survey. The wealth index is calculated using information on current household dwelling characteristics and assets. Low Wealth Index refers to those in the Bottom 30%, Mid corresponds to those in the middle 30%, and the High Wealth Index represent those in the top 40%.

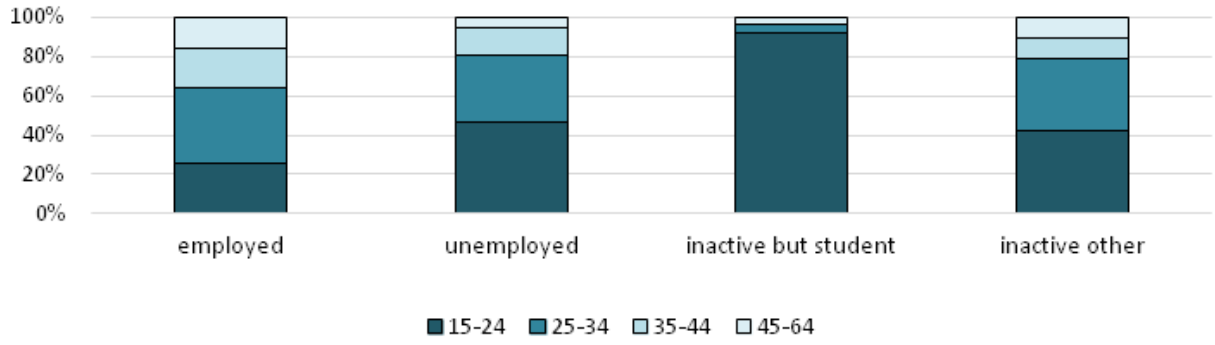
2.3. Who are the job-less?

64. **There are many jobless in Kenya, both those actively seeking jobs and those not actively looking.** The STEP survey suggests that urban unemployment is pervasive, affecting some 20 percent of the active population, or about 0.9 million people. Another 1.7 million are inactive, i.e. not in a job, nor looking for one. Out of these, some 0.8 million are in school, where they should be building skills for future entry into labor markets. However, another 0.9 million are neither in employment,

education or training – the so called NEETs[20]. Taken together, the unemployed and the NEETs make up 1.8 million, or nearly 30 percent of the adult population.

65. **Youth are disproportionately barred from work.** Fifty percent of the unemployed and 35% of the inactive are young adults (aged 15 -24). The group of 25-34 year olds make up another significant chunk of these jobless. However, it is the 15-24 group that are less likely to work, even when accounting for the fact that many of them are inactive because they are in school.

Figure 15: Labor market indicators by age



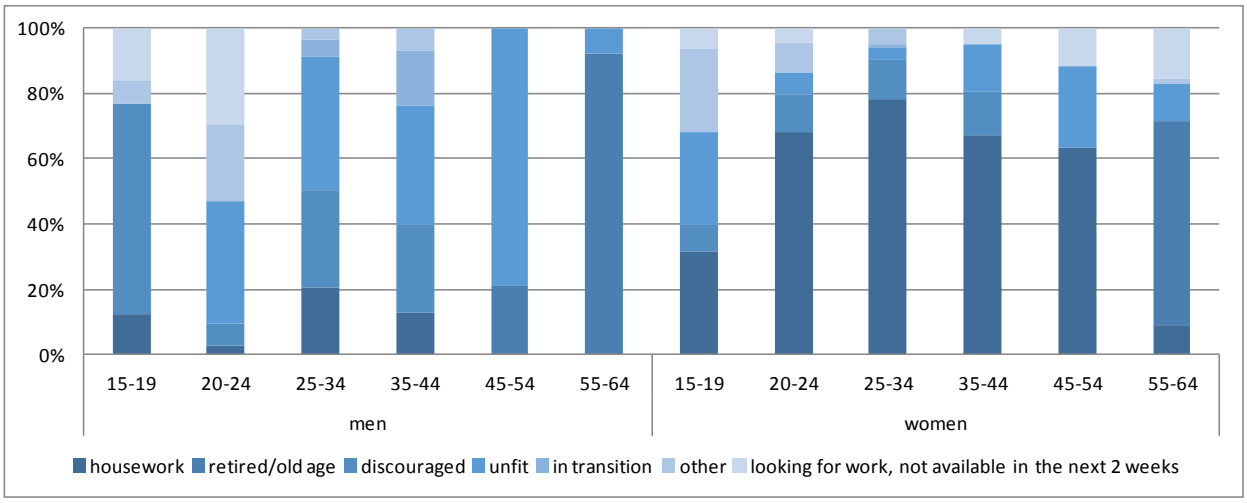
Source: Estimates based on STEP survey

66. **Women also lack access to jobs, while the impact of education is less clear for joblessness.** Women, and those without higher levels of education, are less likely to hold jobs – the same groups that also are disproportionately likely to be in "worse" jobs. Unemployment is considerably higher for women than for men -- two in five urban women aged between 15 and 24 are unsuccessful in finding jobs in spite of looking actively for one. Women are also more likely to be inactive, especially during younger adulthood which includes the school and then child rearing age. For example, female labor force participation is just over 70 percent for the 25-34 age group, compared to near universal activity rates for men. Having a tertiary level education helps accessing jobs, but unemployment and inactivity is higher for those with secondary education than for those with primary education or less (Table I above).

67. **Young women, especially those in the age of forming families, are not active in labor market because of household work**. Although both men and women are among the inactive, their reasons for not looking for a job are widely different. Focusing on the jobless that are not in education, inactive young men are closer to the labor market than women. Young men are either discouraged – would like to work but have no hope of finding one and therefore don't look – or are looking for a job, but not available within the two weeks following the survey (and therefore not counted as unemployed). Women, however, are predominantly absorbed by household work, especially between ages 20 to 34, when they are more likely to have young children. Women are more likely than men to be inactive, however, and also make up a majority of the discouraged workers (Figure 16).

[20] Strictly speaking, our definition of NEET should be referred to as NEE, since no information on who is currently in training (T) is available.

Figure 16: Reasons for inactivity, by gender and age.

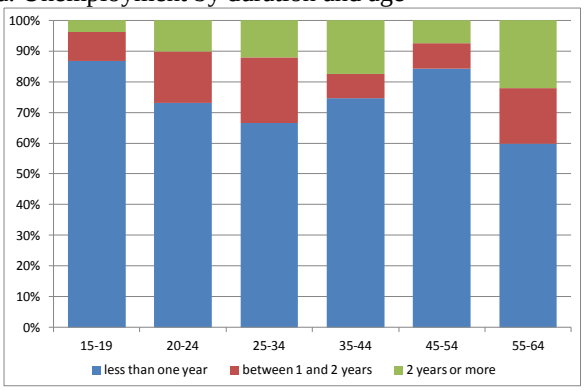


Source: Estimates based on STEP survey

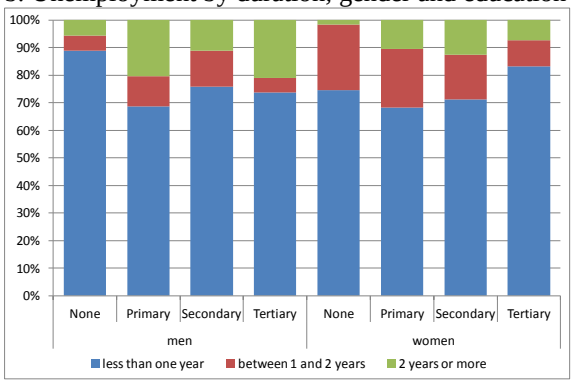
68. **There is a significant risk of long-term unemployment in Kenya.** Almost one third of the unemployed have been looking for a job for at least one year, and more than ten percent for over two years, suggesting that some of unemployment is structural rather than frictional. Those between 25and 34 are most likely to be long term unemployed, with one third of the unemployed in this age group having looked for a job for more than one year. Women with little or no education are also significantly at risk for long term unemployment (Figure 17).

Figure 17: There is a risk of long spells of unemployment

a. Unemployment by duration and age



b. Unemployment by duration, gender and education



Source: Estimates based on STEP survey

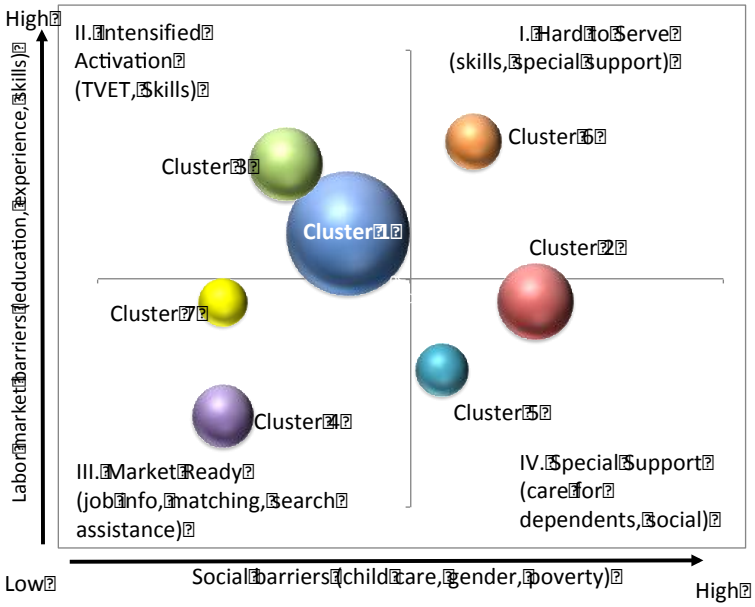
2.4. Addressing heterogeneous jobs challenges

An analysis of "risk profiles" reveals the existence of four groups facing similar labor market challenges (Figure 18).[21] These clusters are defined by type of barriers, along two axes: employability (education, experience, skills) and social barriers (gender, poverty, family responsibilities, etc.).

- **Market ready**. Males, both rural low skilled married ones working in the informal sector, and urban semi-skilled unemployed single ones, fit into this category. They require mostly i*ntermediation* in the labor market (job search assistance, information, etc).
- **Intensified actio**n. This group consists of single males, currently working in less productive employment – single males that are working, both rural low skilled unpaid, self-employed, or informal wage workers. They face, in particular, education/skills barriers and as such are likely to benefit from long term measures for building skills, such as increased access to education, as well as shorter term job-relevant training, to increase their employability.
- **Special support**. This group is made up of female clusters: rural unskilled married self-employed or unpaid workers, and urban low skilled inactive married female. These two groups face social barriers as well. They are likely to need child care services to enter the labor market, as they carry large household responsibilities. They may benefit from intensified action as for the above group, but with attention to child care and other social barriers.
- **Hard to serve**. This includes rural unskilled inactive single females who face high employability and family barriers. They lack work experience, have little education, and are engaged in household work. This may be the most difficult group and time consuming group to activate – they require skills development, functional literacy and numeracy, as well as socio-emotional skills.

[21] Defining sub-groups of individuals who share similar observable characteristics (for example in their labor status, in their financial situation, in their location, as well as in their education, marital status and gender) helps refine the view of vulnerable groups, and can help direct policy initiatives to meet what are in fact very different needs. Latent Class Analysis provides an approach of identifying individuals in this manner. Based on the Kenya Integrated Budget Household Survey of 2005, a Latent Class Analysis has been undertaken for Kenya (Annex 3).

Figure 18: Policy targeting: identifying groups



Source: Estimates based on KIHBS 2005.

Chapter 3. Equipping youth with education and skills

69. **Equipping people with skills that are relevant and in demand in a dynamic economy is vital for Kenya**. As seen in Chapter 2, education is an important factor to help youth as well as older workers take advantage of new economic opportunities and adapt to technological change. It also fosters economic development: countries with more skilled workforce that is better equipped to develop, adapt to or adopt new challenges in the work place, grow faster than others. Ensuring sufficient, continuous, and equitable access to skills development systems is therefore an important precondition for providing more and better jobs.

70. **There is new evidence that skills are becoming an important bottleneck and constraints are more severe for firms in typically more dynamic sectors**. In Kenya, as indeed in many African countries, skills are not considered *the* most significant bottleneck to expansion by formal firms: competition from informal firms and high levels of corruption take precedence. Nonetheless, in a 2013 enterprise survey, some 30 percent of firms (and nearly 40 percent in the services sector) considered lack of skilled work force a major problem.[22]

71. **At the same time, building skills takes time**. Skills formation begins in early childhood and is ideally nurtured throughout education systems and in the work place throughout adulthood. During childhood, an effective system helps children develop foundational skills, such as literacy and numeracy, general problem solving and analytical skills, and soft skills, including those valued highly in the job market such as discipline, tenacity, communication and people skills. Job specific technical skills begin developing at secondary and tertiary levels of education, through traditional as well as formal apprenticeships systems, and through training provided by firms to its employers. Because of the time-lag involved in building labor market relevant skills, it is important to begin address potential inefficiencies and shortages now. Against this background, the current chapter provides a diagnostic overview of skills in the urban labor force, including access to education and training, but also on the availability and use of skills in the urban population. The analysis thus takes advantage of a unique source of information – the STEP Household Survey – which has been designed to systematically measure different labor market relevant skills, rather than just education, and how these relate to labor market outcomes (Box 2).

Box 2: The STEP Household Survey: Measuring Skills in Kenya

In the economic literature, "level of skills" has often been approximated by "years in school" or "highest degree obtained". However, attending school is not a guarantee for developing skills. Designed as a lighter version of the OECD's Survey of Adults Skills (PIAAC), the STEP household survey thus looks beyond education levels and focuses on individuals and their supply and use of actual skills. More particularly, the STEP is an attempt at a systematic assessment of:

(i) Cognitive skills, that is, analytical, logical, intuitive and creative thinking and problem solving skills are assessed directly, through a reading literacy assessment, and indirectly, through self-reported information of use of skills in daily life and work.

(ii) Socio-emotional skills and personality traits (behavioral skills soft skills, life skills, personality traits), include behavioral aspects, including openness to new experiences, conscientiousness, extraversion, agreeableness, hostile bias (the tendency to interpret others' behaviors as hostile), perseverance and focus on long term goals (grit), and attitudes and preferences with respect to decision making, time and risk.

[22] World Bank (2013), *Enterprise Survey: KENYA.*

(iii) Job-relevant skills are task related and include technical skills directly related to the specific occupation (e.g., accounting for an accountant) and computer use, repair/maintenance of machinery, operation of machinery, but also soft skills like client contact, problem solving, learning, supervision, and so on.

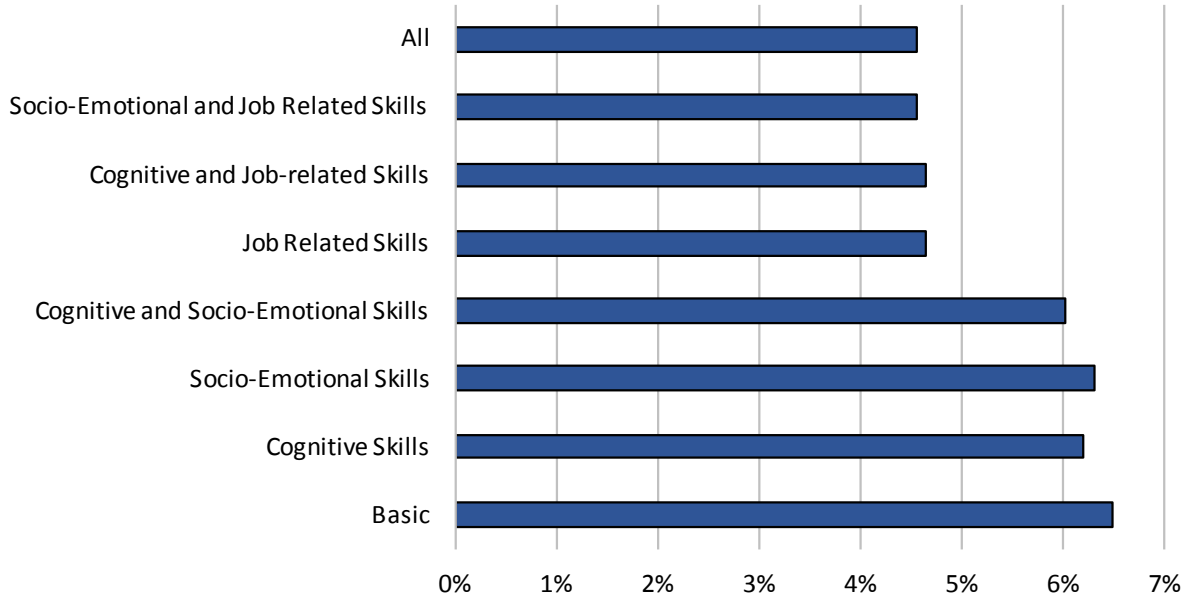
3.1. Skills are important for labor market outcomes

72. **Socio-emotional skills and technical skills are well rewarded in the labor market.** Some particular skills captured in the STEP survey emerge as related to earnings. Socio-emotional skills – openness to new experiences and being thorough and careful in work in particular correspond to higher hourly earnings. Technical skills and job related skills are also related to higher hourly earnings. However, these returns tend to vary across age groups. For example, rewards from using a computer at work increases with age.

73. **Do skills and education both impact earnings?** That is, are the skills that are produced through the education system what matters, or is there a signalling or other effect from education that has a positive impact on jobs and earnings, separately from the skills? Following a standard estimation of returns to education[23], an additional year of education increases hourly earnings by 4.4 to 6.5 percent (Figure 20). This is similar to Ghana, where a similar exercise shows that an additional year of education increases monthly earnings by 3 to 7 percent. However, the rate of return decreases by 2 percentage points once skills are taken into account. Similarly, once different skills are accounted for, the returns to education are only significant for those with secondary or tertiary education, and the impact of tertiary education is much more significant. There is thus a separate effect of years of schooling, over and above of the skills that attending school can produce (and that are measured in the STEP survey).Returns on education varies across age groups. For example, for individuals between 15 and 24 years old, returns to an additional year of education are greater than for those between 25 and 34 years old. The oldest group (55-64) also derives positive returns from an additional year of education, whereas other age groups do not show significant results. Potential explanations for this include a signalling effect of education, for example that having passed through tertiary education is a sign of some innate ability that is not well measured in the skills defined by the STEP survey.

[23] Regression model with log hourly earnings as dependent variables. The model takes into account the following variables: gender, years of education, Reading Proficiency Score, cognitive skills, socio-emotional skills and job-related skills. In addition, it controls for potential experience, potential experience squared, mother's education, an indicator variable for wage workers, and dummy variables for occupations and economic sectors.

Figure 19: Returns to education are positive for secondary education and above, controlling for skills and other characteristics



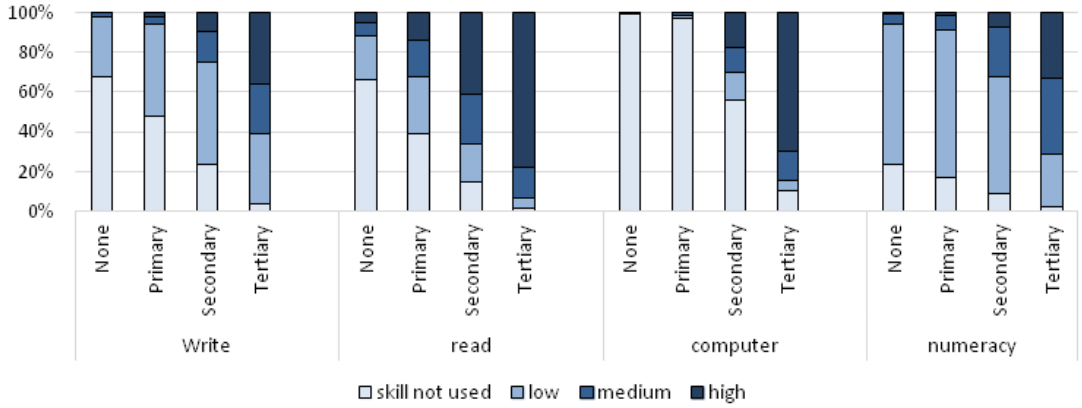
Source: Estimates based on the STEP survey. Note: excluding those currently in school.

74. **The use of skills differs significantly across economic sectors in urban areas.** The use of skills varies considerably between jobs in different economic sectors. Higher value added services provide more skills intensive jobs than others. As Figure 20c shows, and as would be expected, agriculture tends to display the lowest use of skills, with a majority of jobs not involving either writing, reading, or computer, although some numeracy skills are used. Jobs in the manufacturing sector, and in low value added services, require some limited use of across the skills spectrum. However, jobs in the high value added services sector are different. All forms of skills are used quite intensely. To the extent that these jobs represent more productive jobs, skills will be an important factor in increasing access for youth.

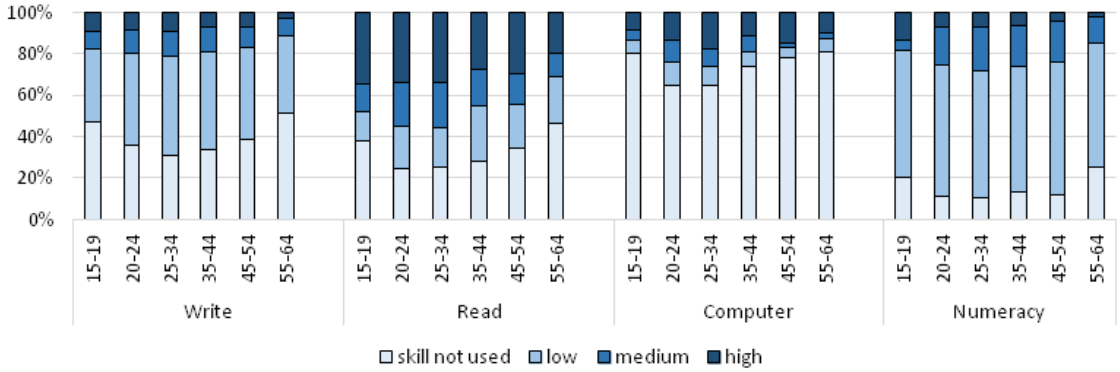
75. **Education helps accessing jobs with more intensive use of cognitive skills.** The intensity of use of skills like writing documents, reading, computer, or numeracy, is higher for those with higher levels of education –except for numeracy, which is used more intensely than other types of skills, denoting the need to perform some market related calculations in most adult life buying produce or charging for one's products or services (Figure 20a). There is, in particular, a clear "digital divide" with low educated never using computers. Those with a higher level of education also tend to have higher scores in non-cognitive skills, in particular some people related skills like openness and agreeableness, also when other characteristics such as age group, socio-economic status and parental education levels. In addition, youth are more likely than older cohorts to use skills – with the exception of the 15-19 year olds, who most likely are early drop-outs from the education system and as such in unemployment or low skill jobs (Figure 20b).

Figure 20: The intensity of skills used at work

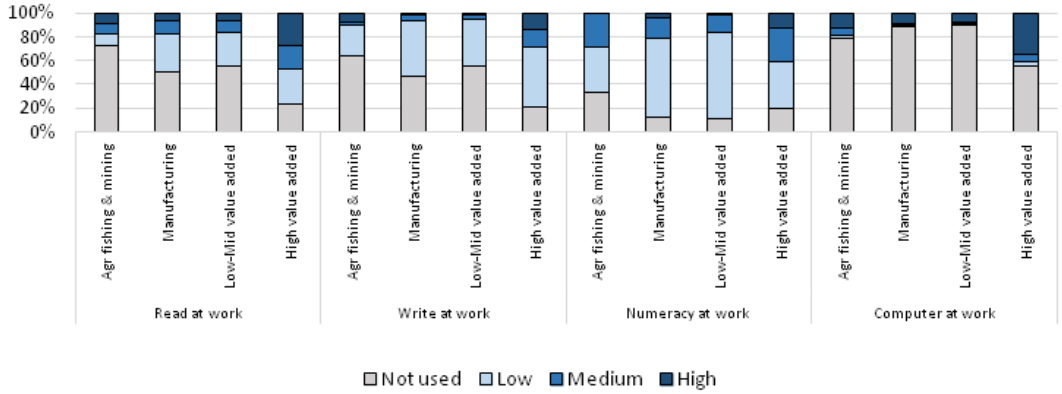
a. Proportion of adults using reading, writing, numeracy and computer skills by intensity level and education



b. Proportion of adults using reading, writing, numeracy and computer skills by intensity level and age



c. Proportion of adults using reading, writing, numeracy and computer skills by intensity level and sector

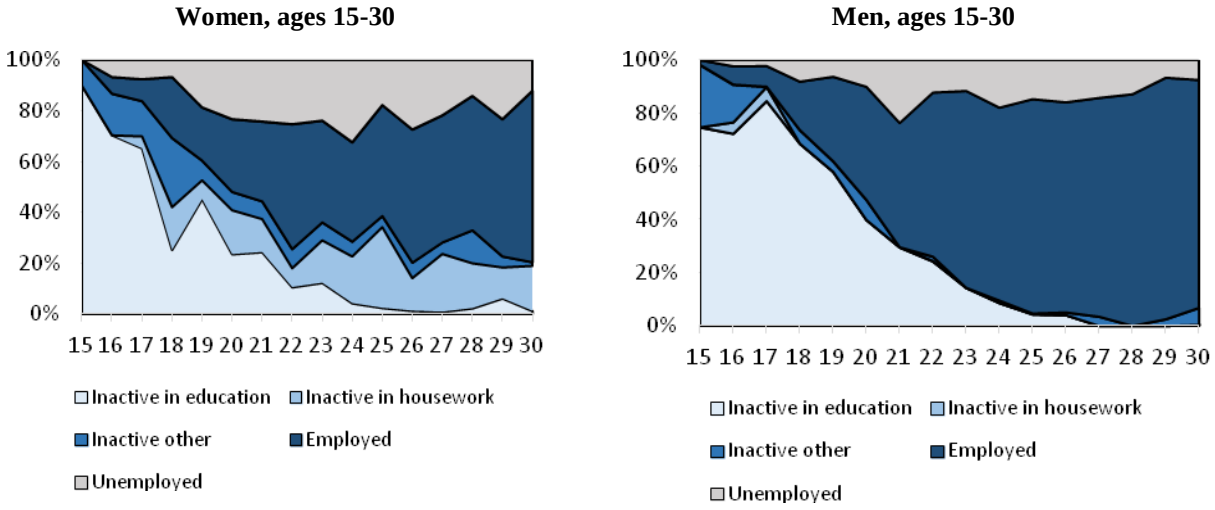


Source: Estimates based on the STEP survey. Note: excluding those currently in school.

3.2. Transition from school to work

76. Today transition into work is slow or incomplete, and transition patterns are very different across gender.24 **At the age of 15, the large majority (around 90%) of women are at school. In contrast, the share of boys in school at the same age is slightly lower (around 80%). With time however, boys move either into work or stay in education. There is not such a clear division for girls, however – many girls are inactive, either working at home or for other reasons. Hence at the age of 20, one in four women are still in school compared to nearly half of all men, but the share of women in employment is not higher. Early family formation – pregnancies, child minding, household work - is contributing to these differences between men and women. However, young women leaving education systems are also more likely to fall into unemployment than men, suggesting that even when looking for work, they are more handicapped in the labor market** (Figure 21).

Figure 21: School-to-work transition patterns across gender

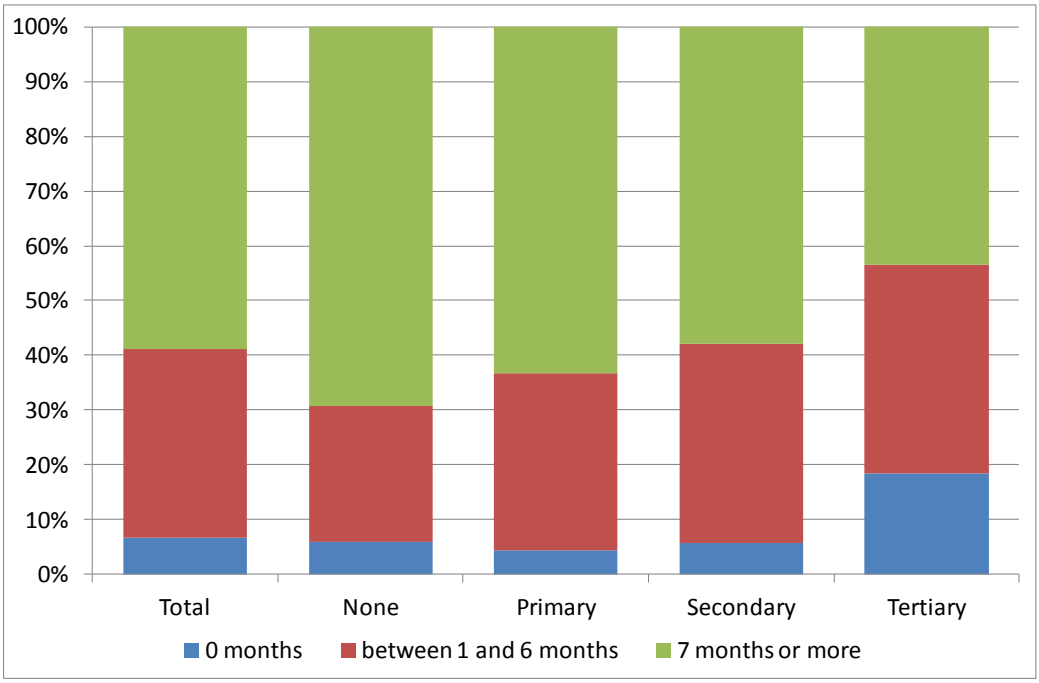


Source: Estimates based on STEP survey

77. **Those with tertiary education also make a shorter transition from school to work**. As noted earlier, transition into work is slow or incomplete and a majority have been looking for a job for more than 7 months. The duration of job search is reduced with education, however, especially for those with tertiary education (Figure 22).

[24] It is important to recall that these are not times series following cohorts over time, but cross-sectional information. Care must be exercised in interpreting differences across cohorts as transition.

Figure 22: Job search length before first job, by educational attainment

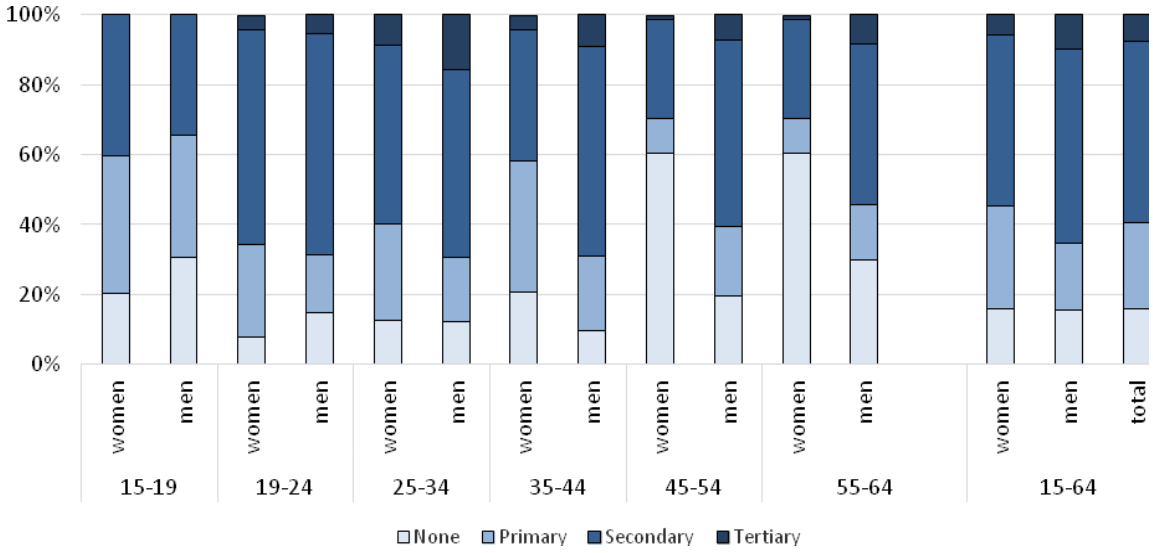


Source: Estimates based on STEP survey

3.3. Foundation of skills – do all Kenyans access the education system?

78. **A majority of urban Kenyan adults have at least secondary education and in particular women have been given higher access.** Kenya's general education system is based on an 8-4-4 curriculum: 8 years in primary school, 4 years in secondary school and 4 years of college or university. Access to primary and secondary education has increased considerably over time and in particular women have seen greater access to primary and secondary education. Three out of five women aged between 25 and 34 have completed at least secondary education but only two out of five women among the 55-64 year-olds have done so (Figure 23).

Figure 23: Distribution of population by age, gender and highest level of education.

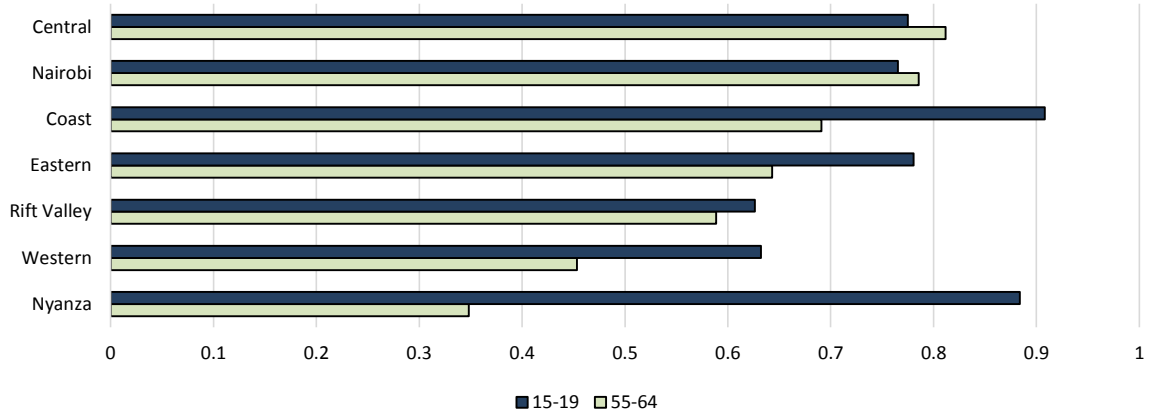


Source: Estimates based on STEP survey

79. **But there are still gender gaps in educational attainment.** Almost half of all women – 45 percent- have completed primary education at the most, against 35 percent for men. The largest drop in the gap seems to happen for secondary education. At the other end, the share of tertiary educated is higher among men than women.

80. **There are significant regional differences as well, although they have been reduced with time**. Even when comparing for the 15-19 year olds (reflecting the most recent state of the school system among adults), the primary completion rates for urban areas in the coastal areas reaches above 90 percent while those of the Western inland zones, Rift Valley and the Western Zone reach just over 60 percent. Nonetheless, as the enrolment rates for the 55-64 year olds show, the gaps between different regions has been falling (Figure 24).

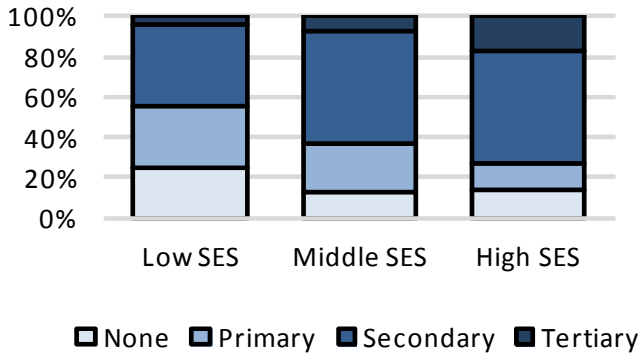
Figure 24: Primary completion rates by provinces



Source: Estimates based on STEP survey. Note: Excludes those currently at school

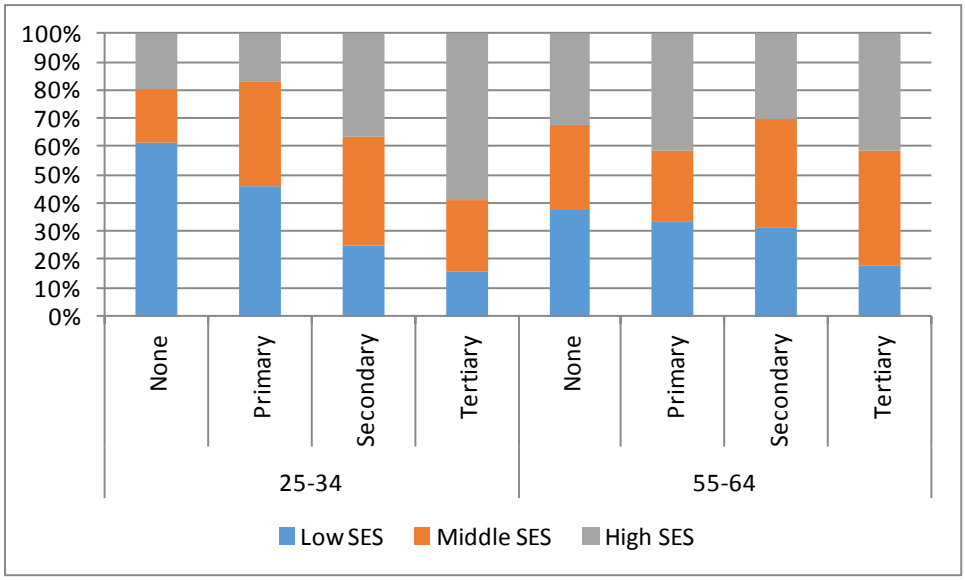
81. **Adults from poorer households have less access to education than others, and the divergence has increased over time.** The socioeconomic status of the household in which individuals lived when they were 15 years old is related to their education attainment. In particular, a majority of individuals from household with low socio-economic status have no more than primary education, and one in four had no education at all. By contrast, more than three in five individuals with middle socio-economic status, and three in four with high socio-economic status, and at least finished secondary education (Figure 25). Access to tertiary education in particular seems to be confined to individuals from well off households. Moreover, these inequities appear to have increased over time – the differences between 25-34 year olds are more significant than for the 55-64 year cohort – suggesting that the expansion in education at secondary and tertiary level has left poorer households behind (Figure 26).

Figure 25: Highest education achieved, by socio-economic status



Source: Estimates based on STEP survey.

Figure 26: Population by highest level of education, by socio-economic status and for young and old cohorts.

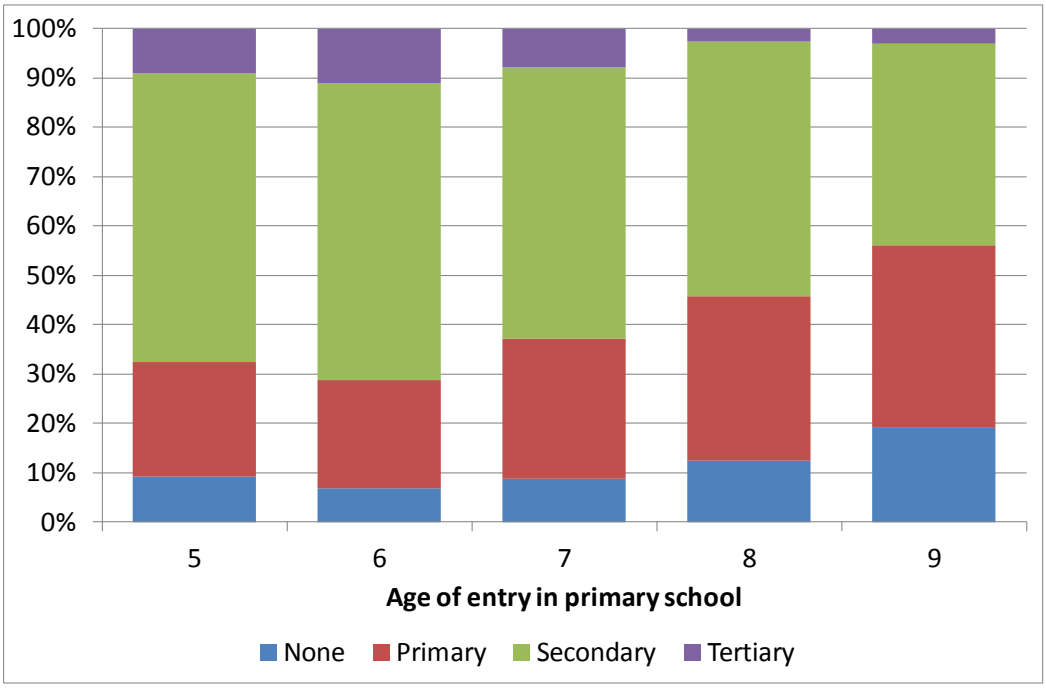


Source: Estimates based on STEP survey

82. **Many children are delayed in entering school, which delays and reduces the development of important cognitive skills and penalizes future academic development**. The official age of entry for primary school is six years. However, many children enroll at a higher age. This is in fact a problem, because delayed entry is in turn related to early drop-out.[25] Among those that started school at age 9, more than fifty percent did not get further than primary school. Among children who started at age 5 or 6, however, two thirds were likely to finish at least secondary school. Though not shown here, those who started school much later than usual (around 10 or 11 years of age) are more likely to not finish even primary education than those who entered earlier (Figure 27).

[25] Lewin (2009) notes that high variance in age of entry in Sub-Saharan Africa is an important factor for explaining early drop-outs of those with delayed entry. Lewin (2009), "Access to education in sub-Saharan Africa: patterns, problems and possibilities". *Comparative Education*, 45 (2). pp. 151-174.

Figure 27: Highest education completed by age of entry.



Source: Estimates based on STEP survey

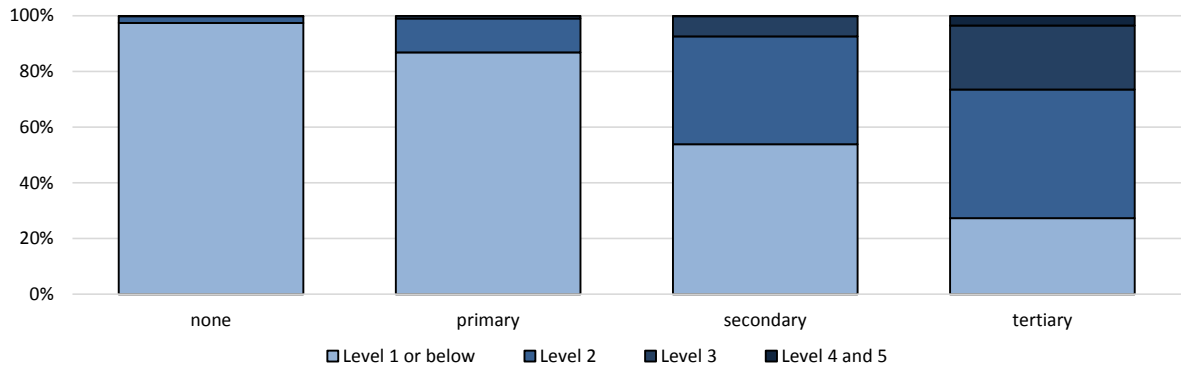
83. **The cost associated with schooling is a constraint for increasing education levels.** Early drop-outs are in fact a significant problem in Kenya, as one third of dropouts happen before completion of primary education, preventing the development of basic functional competencies like literacy and numeracy. And importantly, drop-outs is more common among those belonging to households with low socio-economic status (specifically, those who were living in such a household at the age of 15). Almost 40 percent of those with low socio-economic background drop out of school – twice as high as those from a high socio-economic background. Drop-outs are also generally driven by financial considerations – it is too expensive to attend school, perhaps because of the opportunity cost of not working – and by early family formation (especially for women).

3.4. Do education and training systems produce skills?

84. **Access to schooling has increased in Kenya, but the education system still needs to strengthen the quality of learning.** Quantity and quality of education does not always go hand in hand, and as discussed, delayed entry and early drop-outs point to important inefficiencies in the existing education system. A key purpose of the STEP survey is to provide direct estimates of skills levels – the output of the skills development system, including formal education.

85. **A large share of Kenya's urban population is functionally illiterate in English – signalling important quality issues with the education system**. In Kenya, it is not only possible but in fact very likely to complete secondary levels of education without actually learning how to read in English: a majority do not reach level 3, considered the minimum proficiency level (Figure 28). These low levels of basic functional skills raises important questions about the quality of learning imparted in the general education system.

Figure 28: Results on literacy tests



Source: Estimates based on the STEP survey. The literacy test is developed by the Educational Testing Service (ETS) and follows ETS standards. Level **3** is considered minimum proficiency.

86. **Beyond school, individuals can acquire skills through various complementary sources:** apprenticeship programs, training programs, on-the-job training, etc. Individuals can have access to such programs after school before entering the labor market, but also while they are employed in order to complement their set of skills, or during unemployment or inactivity periods, to update and improve their job-related skills.

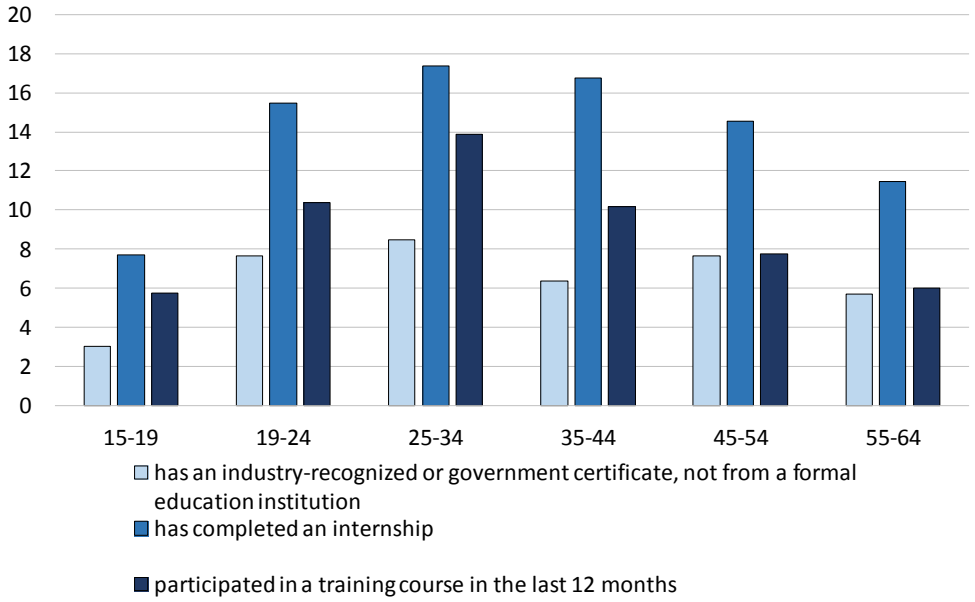
87. **Training opportunities after school are limited even in Kenya's urban areas.** The share of the Kenyan urban population who benefited from some kind of training (certificate, traineeship or on-the-job-training) is around 27%, very close to the results observed in the Ghana STEP survey (32%). Opportunities to participate in training programs appear to have increased as older generations (35+) have lower participation rates to training programs than young ones (Figure 29, a).

88. **And access to training differ according to labor market status and occupation**. Access to different forms of training programs is also much higher for the active than for the inactive, among whom only about 5 percent have benefited from a training program. And access to further training is another strong correlate of formal sector work. Almost 30% of formal wage workers participated in a training course over the last 12 months, against only 7% for informal workers. Self-employed and unpaid workers are less likely to participate in any kind of training. Since education is a strong correlate of where one ends up working, with formal wage workers holding higher education levels, skills development becomes "path dependent" – relatively more education gives access to sectors where one is, in turn, relatively more likely to continue to receive training (Figure 29, b).

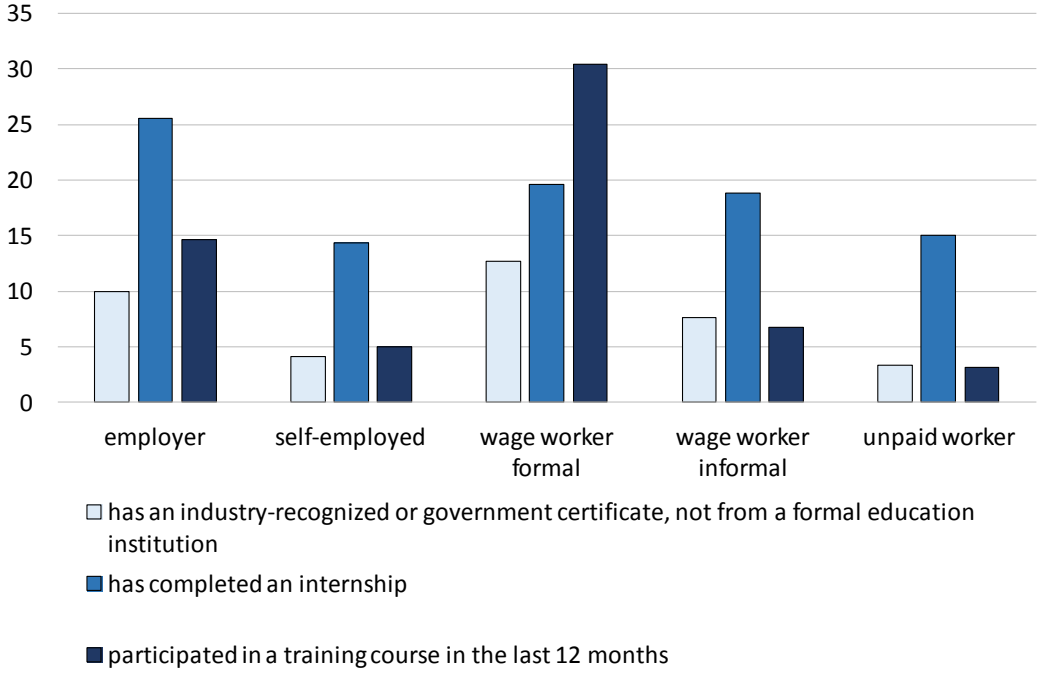
89. **These limitations to further skills development outside the formal sector is likely to contribute to holding back productivity growth.** Participation in training programs seems to assist in acquiring job relevant skills. For example, those who attended on-the-job training programs are more likely to use their cognitive skills (learning and thinking). Computer use is also much higher for those who acquired a professional certificate. Participation in apprenticeships, however, does not seem to have much of an impact on the use of skills of autonomy - freedom to decide on how to do your work- and repetitiveness - frequency of performing short and repetitive tasks (Figure 29, c).

Figure 29: Training opportunities after school

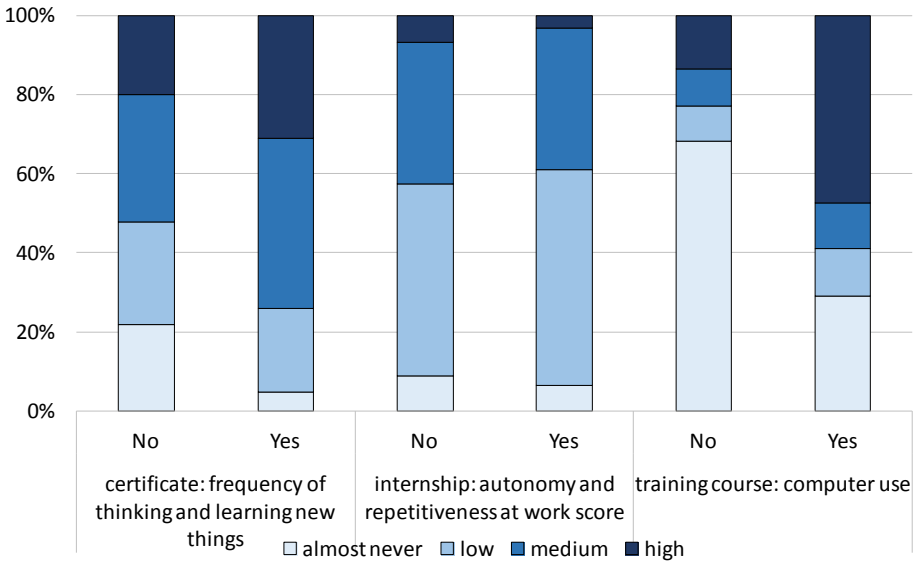
Share of adult population who benefited from training programs, by age.



b. Access to training by occupational status of the employed



c. Differences in the frequency of use of skills



Chapter 4. Where will jobs come from? A look at the demand side.

90. **The availability of better jobs depends on a thriving private sector that can hire workers.** The private sector is the main engine of job creation. It is therefore important to understand more about what kind of jobs are created in different firms and whether there are indications of inefficiencies that hold back higher growth in employment in firms that have a greater potential to provide "good jobs". This section presents and overview of the demand side of jobs, focusing on the following questions:

- Where is most employment concentrated?
- What are the firm characteristics that are more correlated with higher quality jobs?
- How different are formal and informal firms?
- What is the extent of distortions and factor misallocation that is likely to prevent high quality employment growth in the country?

4.1. A profile of demand in the formal sector

91. **The formal wage sector accounts for less than one in four jobs in the industry and services sectors in Kenya**. According to household data, formal wage jobs make up 22 percent of all jobs in industry, and 24 percent in the services sector (including both wage and self-employment jobs). Among formal wage workers, the vast majority – 84 percent –are in the services sector, of which 6 percent in the wholesale/retail sub-sector and the remaining 78 percent in other forms of services, including public administration. The manufacturing sector employs 11 percent of formal wage workers, while remaining industry accounts for 6 percent. The following section provides an analysis of firm level data from the formal manufacturing and services sectors, as well as from a survey of the informal sector.

A. The Manufacturing sector

92. **The formal manufacturing sector is small in Kenya**. It employs less than 300,000 people, this in an urban active work force of nearly 5 million people. It is clear that even if competitiveness were to increase in the manufacturing sector and it were to take break the current trend, and take off rapidly, it cannot be expected to provide a major source of employment in the short term. The base from which to grow is simply too small. This section uses the 2010 Census of Industrial Production to analyze the manufacturing sector. (Box 3).

Box 3: The 2010 Census of Industrial Production

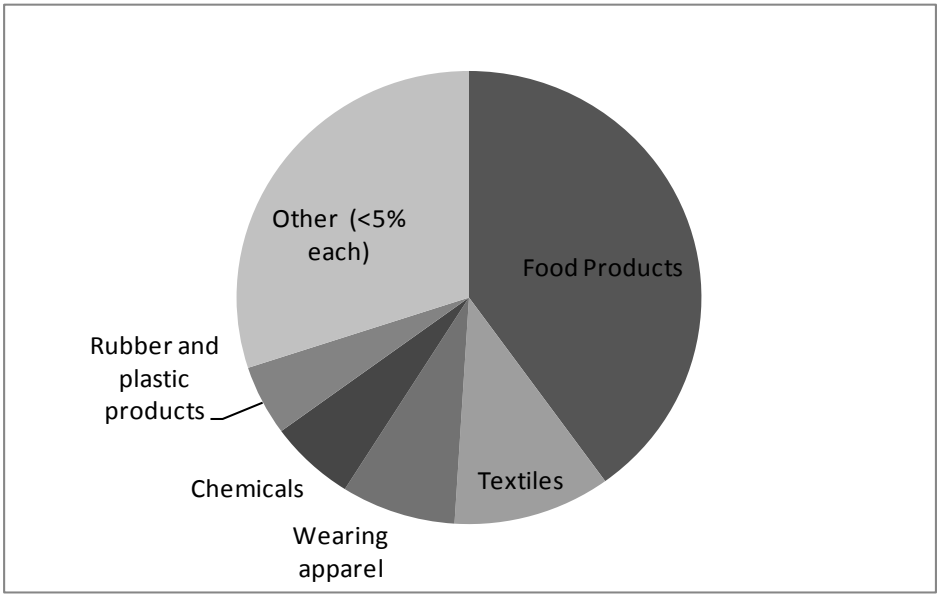
The 2010 Census of Industrial Production is a survey jointly realized by KNBS and the Ministry of Industrialization. Reporting information for 2 252 firms (1814 firms responded and information for 438 others have been imputed on other regular surveys), this survey gathered information relating to the calendar year 2009, although some information are available for 2010. Targeted firms belong to ISIC Rev 4 sections B (Mining and quarrying), C (Manufacturing), D (Electricity, gas, steam and air conditioning supply) and E (Water supply, sewerage, waste management and remediation activities).

This part focuses on firms belonging to the Manufacturing sector. Due to the large number of subsectors, the "other small subsectors" gathers subsectors which have less than 10 firms, namely 'Manufacturing of tobacco products', 'Manufacture of coke and refined petroleum products', 'Manufacture of computer, electronic and optical products' and 'Manufacture of other transport equipment'.

Any analysis illustrating labor productivity uses a restricted sample of firms (71%) for which the computed value added per worker is positive.

93. **Two sectors account for a majority of manufacturing jobs**:(i) Food products; and (ii) Textiles and apparel. Together these two sub-sectors employ 60 percent of the manufacturing work force. By comparison with other sectors, these two sub-sectors are large firms, especially so the textiles sectors, where the average size of firms is 400 employees (Figure 30). These two sub-sectors also make up the two largest sub-sectors of Kenya's manufacturing exports.[26]

Figure 30: Most employment in food and textiles



Source: Estimates based on the 2010 Census of Industrial Production

94. **Formal employment is concentrated in comparatively large firms in Kenya.** Most formal firms have between 20 and 99 employees, suggesting that small firms face constraints entering the formal sector. Large firms, with more than 100 employees, account for a vast majority – 86 percent – of all formal manufacturing employment (Figure 31, a, b). The dominance of medium and large firms is similar to the employment structure in Ethiopia's manufacturing sector, but it is much above that of Ghana, where 40 percent of all employment is in firms with less than 100 employees.

95. **Exporting firms tend to have more employees**. A majority of firms (69 percent) work towards the domestic market only, but 19 percent of firms export (12 percent exporters, and 9 percent two-way traders); some 10 percent are only exporters. However, the exporting firms account for 46 percent of

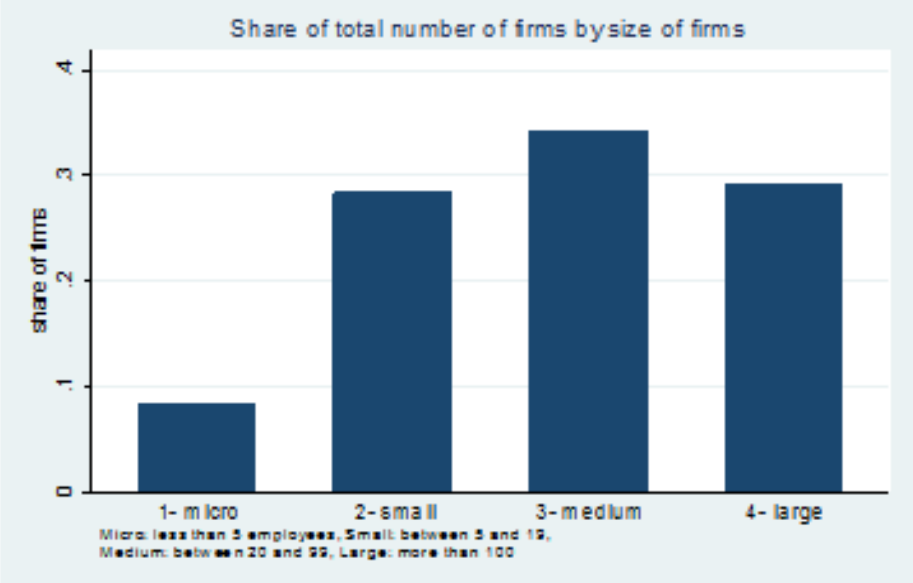
[26] World Bank (2014), *Kenya Economic Update: Anchoring High Growth: Can Manufacturing Contribute More?*, World Bank: Washington, DC.

all jobs in the manufacturing sector - exporting firms are in other words larger firms (in terms of employment) than those directed to the domestic market (Figure 31, c).

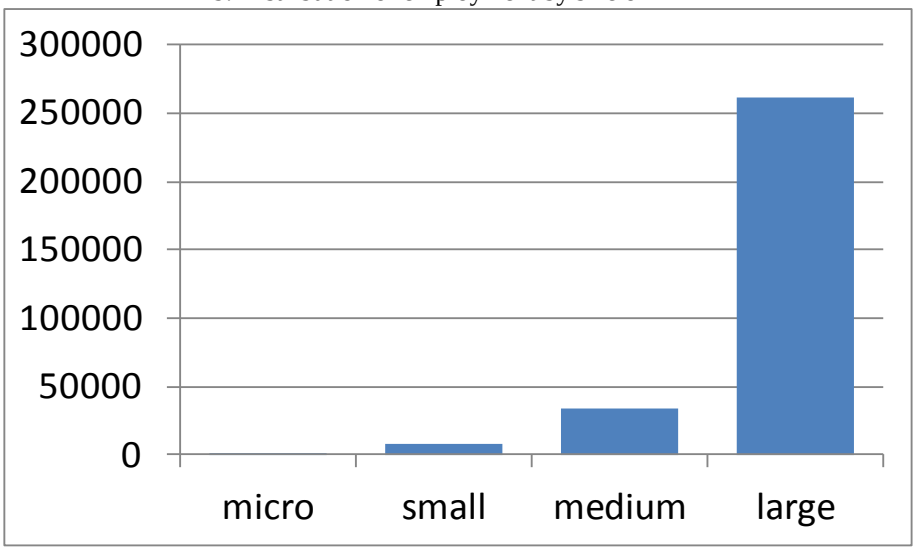
96. **Both firms and jobs are highly concentrated in Nairobi**. Half of the firms are in Nairobi whereas the second half is spread across the rest of the country, and mostly in the Central region. Employment shows a similar distribution, except that the firm size appears more significant in the Rift Valley than the Central region. Formal manufacturing jobs are, in other words, mainly concentrated in the capital, and spread in the rest of the country, mostly in the Rift Valley region. (Figure 31, d).

Figure 31: Large firms dominate employment

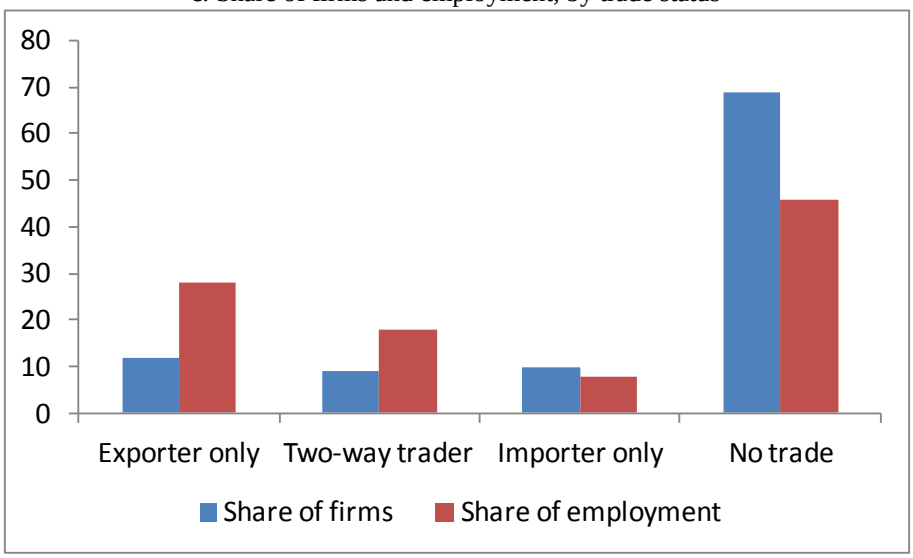
- Distribution of firms by size of firm



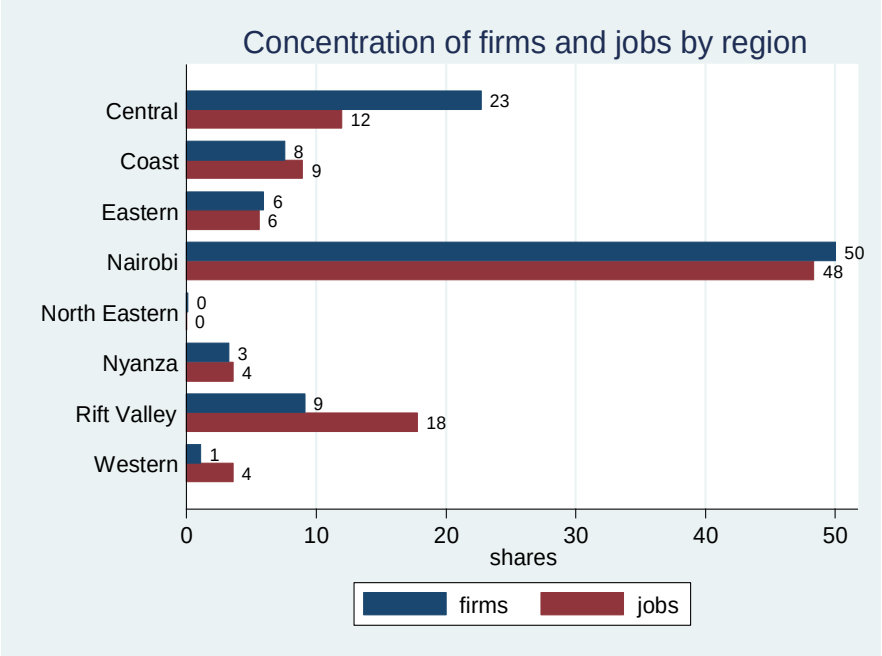
b. Distribution of employment by size of firm



c. Share of firms and employment, by trade status



d. concentration of firms and jobs by region



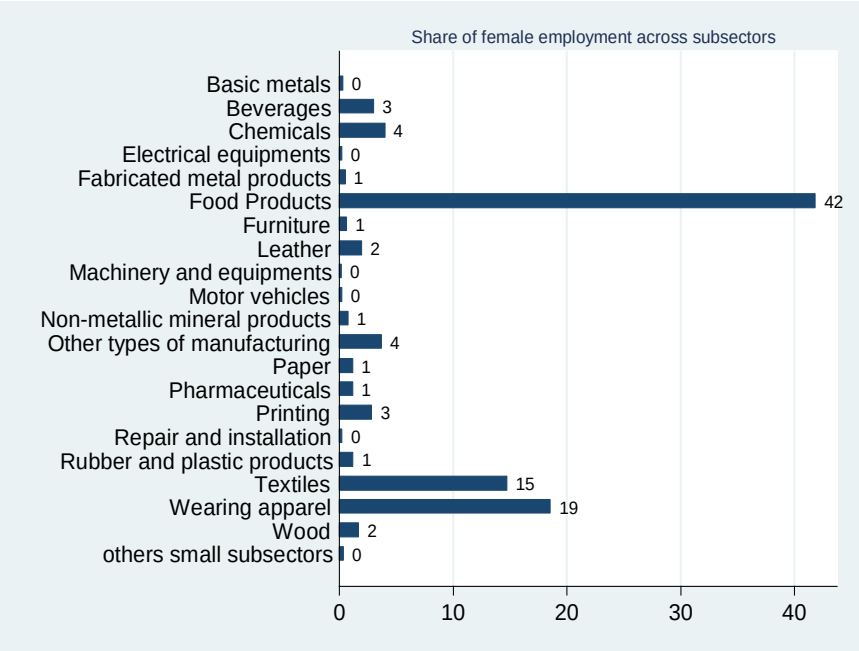
Source: Estimates based on the 2010 Census of Industrial Production.

97. **There is significant gender segregation in terms of sector of employment.** Female employment is concentrated in the food sector, but apparel has the largest female labor intensity. In sectors such as basic metals or motor vehicles, women are in minority. Looking at the firm level, the ratio of female to total employment varies from 4% in basic metals to 37% in wearing apparel (Figure 32).

98. **Women are much less likely than men to run a business; when they do, they are more likely than men to hire women workers, however**. Among the firms for which information are available on the gender of the owners, the majority is run by men, but the firms run by women tend to hire more women. Most of the firms are run by men and only as small share of firms have women as part of their owners. The average ratio of female to total employment at the firm level is highest in firms

run only by women, followed by those run by both men and women. The average female to total employment per firm does not seem to depend on the age of the firm. Younger firms are not particularly inclined to hire more women than old firms.

Figure 32: Share of female employment across sub-sectors



Source: Estimates based on the 2010 Census of Industrial Production.

99. **More productive and more established firms offer better job conditions and higher wages.** In the formal manufacturing sector, job security is relatively high, with more than half of employees holding a permanent job. Some 56 percent of workers have a permanent contract, 26 percent are casual workers, and 17 percent have a temporary contract. Multivariate analysis shows that older, more productive and capital intensive firms, firms investing in ICT, and exporting firms, offer a better contractual situation than others.[27] Larger firms tend to pay higher wages than medium or small firms (excluding micro-firms, that surprisingly account for higher wages than the sector average). Again, multivariate analysis allows us to separate out the firm characteristics that are more strongly correlated with higher wages. More productive firms pay higher wages, as do larger firms. In addition, firms which have exposure to foreign markets, and those which invest more in ICT than their comparators, tend to pay more. Wages in Nairobi are higher than in the more remote regions. [28]

[27] Refers to estimates of a model of the determinants of the share of permanent employment in total employment, based on the following variables: a set of dummy variables for the age of the firm (the excluded category is the young ones, i.e. from 1 to 3), a set of dummies accounting the foreign exposure of the firm (exporter, importer), ICT equipment level (relative to the sector average), a dummy for investments in R&D, the ratio of capital to labor, value added per worker and we control for location and subsectors. A full table with regression results is available in Annex 5.

[28] Wage regressions are based on a set of variables including dummies for the size and age of the firm, its foreign exposure, some innovation indicators as well as the value added per workers. Results are available in Annex 5.

B. The Services Sector

100. **The formal services sector shows a similar concentration of employment as manufacturing.** analysis of services sector is based on the 2011 Integrated Survey of Services (Box 4). The survey shows nearly one third of total services employment to be in wholesale and retail trade. Another 40 percent are employed in accommodation and food, administrative and support service activities, finance/insurance and transport and storage. However, as would be expected, firms in the trade sector are generally small. Indeed, the average employment is much lower in trade than in other sectors – these are generally smaller firms, with on average 40 employees, compared to 133 and 128 in administrative and transport and storage firms, respectively (Figure 33, a).

101. **On the whole, average employment by establishment is lower in services than in manufacturing.** A majority of firms are small or micro-sized. One third of firms have between 20 and 99 employees (Figure 33, b).

Box 4: The 2011 Integrated Survey of Services

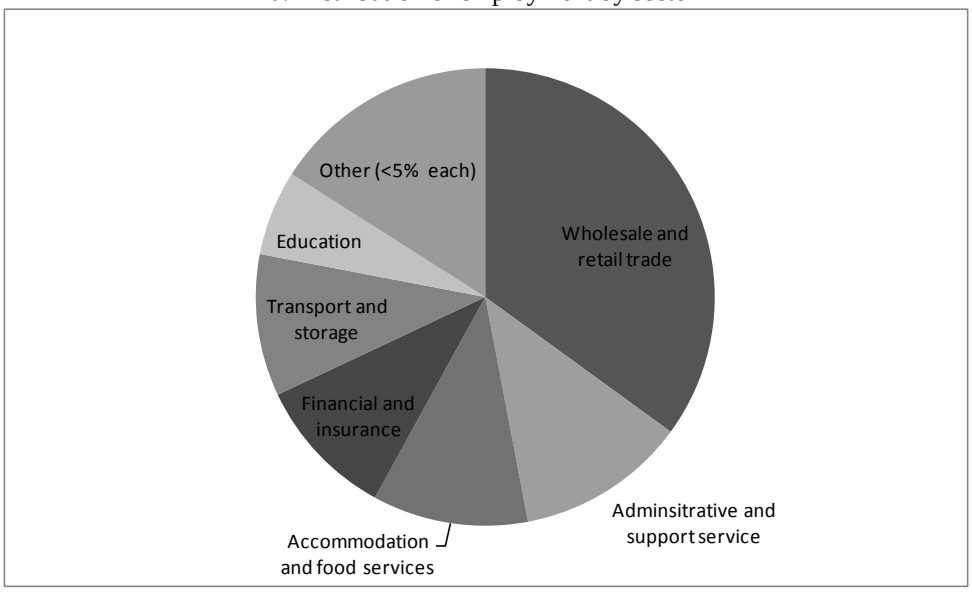
The 2011 Integrated Survey of Services focuses on businesses in the service sector, over the 2009 fiscal year. KNBS collected data on 3191 formal services firms (over 4464 targeted), spread across 13 different service subsectors (following ISIC rev.4).

Some data cleaning has been perform in order to cope with the low quality of the data. Firms reporting an activity which does not belong to the usual services category have been excluded from the sample. Also, firms reporting total employment levels (including the owners of the firms) equal to 0 have been excluded from the sample.

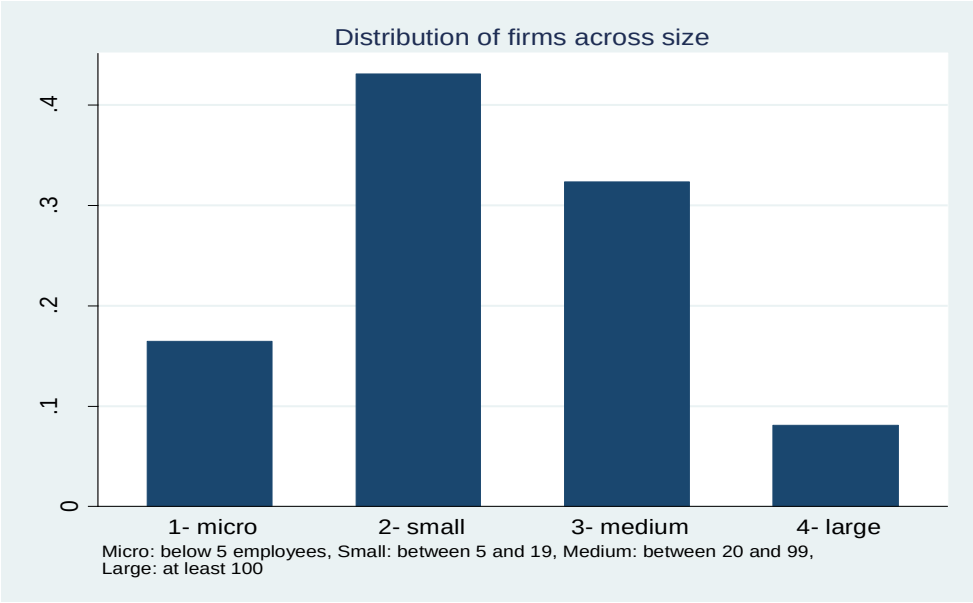
Finally, any analysis performed on an estimation of labor productivity has been performed on a sample of data (80%) excluding the firms with negative value added.

Figure 33: The trade sector accounts for the largest share of employment, and the firm and employment structure is skewed towards smaller firms.

a. Distribution of employment by sector



b. Distribution of firms by size of firm



Source: Estimates based on the 2011 Integrated Survey of Services

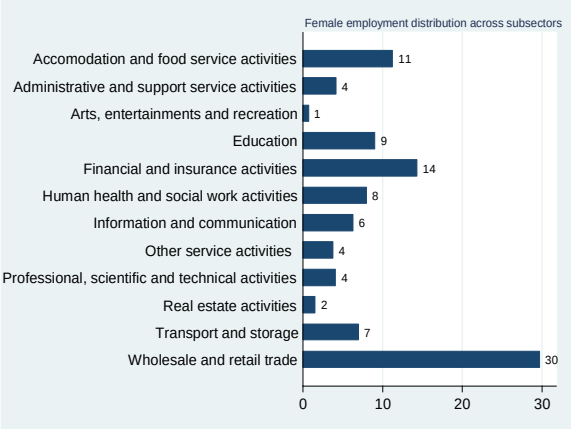
102. **Most women work in trade (wholesale and retail), finance, and accommodation and food services**. The health and social work sector is the one with the highest ratio of female to total employment. Compared with the manufacturing sectors, the share of women in firm employment is much higher in services. It is interesting to see that knowledge intensive services are also female labor intensive (Figure 34).

103. **Firms owned by women typically hire more women**. Although a lot of firms have missing information on the gender of their owner, the firms for which data is available show that the ratio of

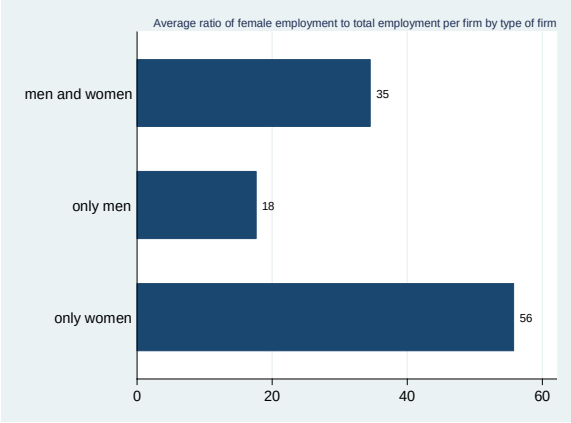
female to total employment by firm is the highest in firms owned by women – as in the manufacturing sector. In addition, the average ratio of female employment to total employment per firm is the same for entrant or established firms (30%).

Figure 34: Women employees in the services sector

Women employment (%) by sector



Ratio of female to total employment



Source: estimates based on the 2011 Integrated Survey of Services

104. **There are more stable employment conditions in the services sector than in the manufacturing sector**. Over seventy percent of workers have a permanent contract; only in the predominantly public sub-sector (administration, health, and education) are term contracts more common. Again, older and more productive firms tend to hire more permanent workers, and as such offer more job security. As for the manufacturing sector, relative wages are also strongly linked to productivity levels. More productive firms are likely to be better able to sustain higher wages, as they can reallocate resources to cover fixed costs.[29]

4.2. A profile of firms and jobs in the informal sector

105. **Informal firms account for a majority of jobs in Kenya**. As shown in Chapter 2, informal employment is pervasive in Kenya, and exists both in the form of self-employment and informal wage work. Informal firms tend to operate under the radar of official authorities, not because they are illegal (they should not be seen as such) but because they are small, unregistered, often operated outside –the term *jua kali*, "fierce sun", which is used to denote the informal sector in Kenya, points to this notion – or from the household, and at any rate without regular business addresses.

106. **Informal firms are very small, and, compared to formal firms, also young**.[30] In both manufacturing and services sector, average employment is below 2 persons per firm, suggesting that a

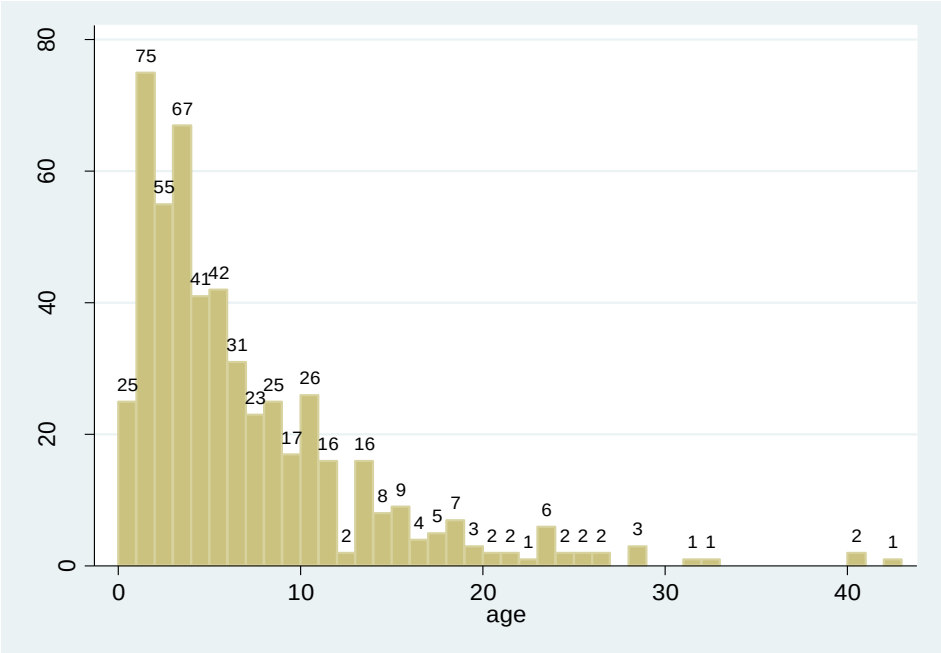
[29] See Annex 5

[30] Data are from the Enterprise Informal Survey, undertaken in 2013, which provides information on 533 non-registered business activities, located in urban centers. In Kenya, the urban centers identified are Nairobi, Mombasa, Central, Nyanza and Nakuru. The sample covers firms with activities belonging to the manufacturing or services sector. Although the survey has been realized following a sampling methodology, weights are not available in the dataset. Consequently, results of this section should be taken with a precaution.

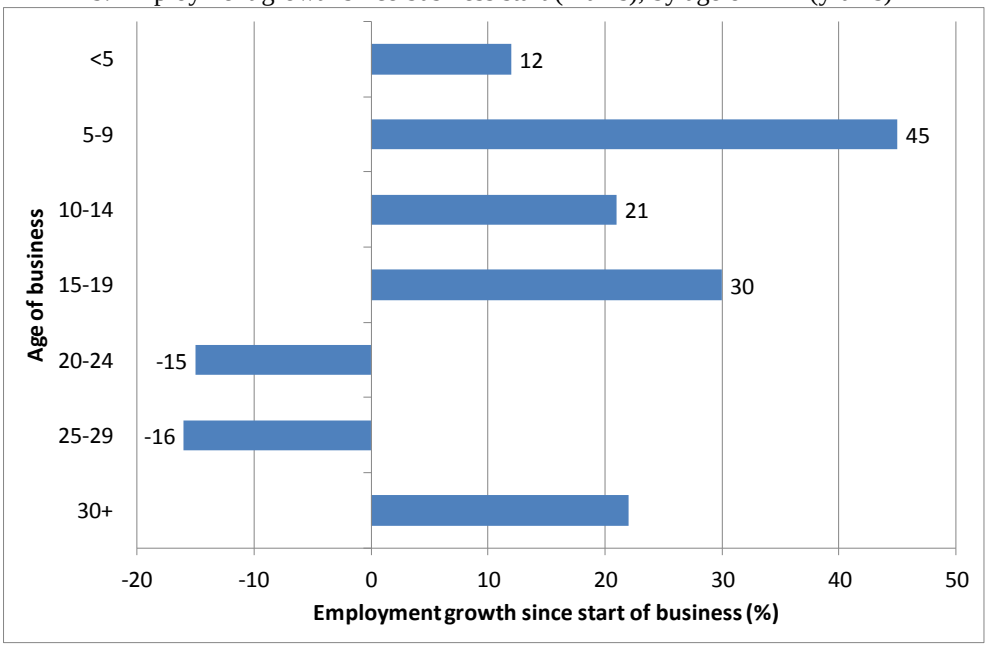
majority of firms in fact are own-account work – people working for themselves only, without unpaid or paid employees. A vast majority (over 80 percent) have been in business for less than ten years, and 60 percent have been in business for less than five years and as such are considered "young firms" (Figure 35, a). Informal firms grow up until they are twenty years**,** but stop beyond that. Firms younger than twenty years had experienced employment growth since the start of the business. However, firms with between 20 and 30 years of age experienced employment losses (Figure 35, b).

Figure 35: Informal firms are young and grow up until they have 20 employees

a. Distribution of firms, by age



b. Employment growth since business start (x-axis), by age of firm (y-axis)

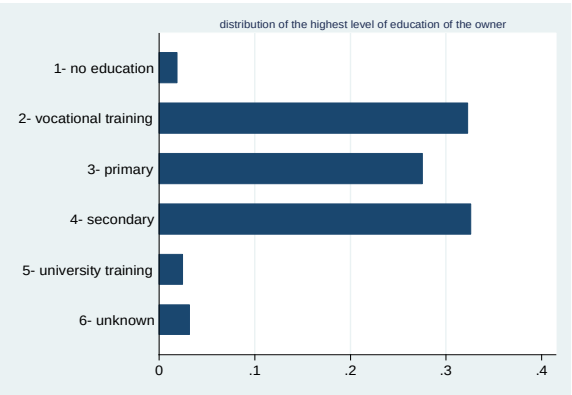


Source: Estimates based on Kenya Enterprise Informal Survey 2013

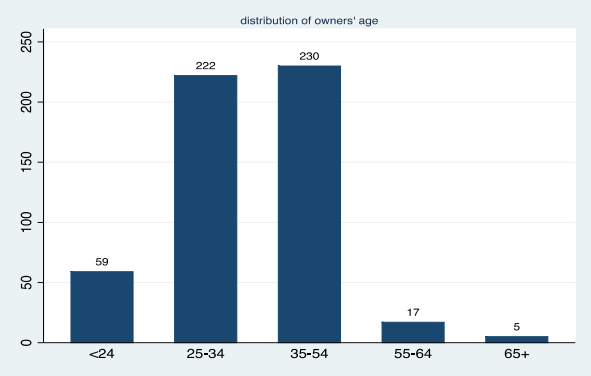
107. **Informal business owners have relatively low levels of education but have been active in the labor market prior to opening their firm.** A vast majority of informal business owners have below tertiary levels of education, and many have only finished primary education. Unsurprisingly, compared to wage workers in the formal enterprise sector (c.f. chapter 3), they have lower levels of education (Figure 36). They are generally not new labor market entrants: nearly half of all business owners (44 percent) had earlier been employed, either in the same activity or in a different activity, before opening their own firm; another 28 percent had been self-employed. However, a significant share (21 percent) had been unemployed. A (vast) majority are more than 25 years of age.

Figure 36: Informal business owners: Middle levels of education, and not new labor market entrants

a. Education levels of owner



b. Age of owner



Source: Estimates based on Kenya Enterprise Informal Survey 2013

108. **There are many more men than women in the informal sector**; especially in the manufacturing sector, where firms are also slightly larger in terms of employment. The ratio of women to men is nevertheless much higher in the *informal* services sectors compared to the *formal* services. While generally less able to access jobs, women are clearly more easily able to access informal work than to formal work.

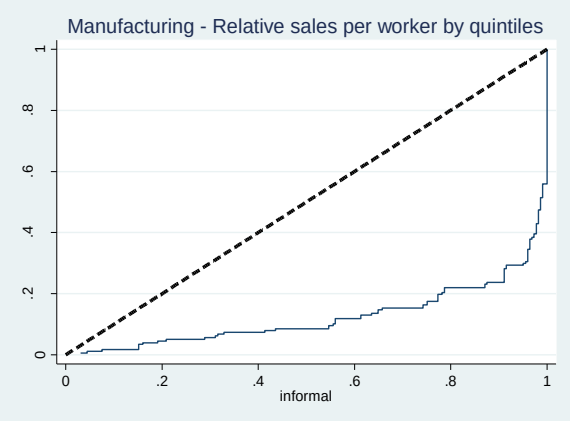
109. **Informal is normal – but different from formal.** In fact, small informal firms differ from (small) formal firms, even when size is taken into account. In order to compare formal and informal firms, a synthetic data-set was constructed, incorporating formal firms with less than six workers. The purpose is to allow comparisons between firms of similar size, thus ensuring that what is truly "informal" characteristics are not simply a proxy for small firms.

110. **Small firms in the formal sector are older than small informal sector firms – in particular in the services sector.** Unsurprisingly, **e**ntry is less difficult in informal sector than in the formal sector, resulting in a higher share of younger firms. Without panel data, we cannot determine whether young firms in general formalize or exit, and therefore do not grow older within the informal sector.

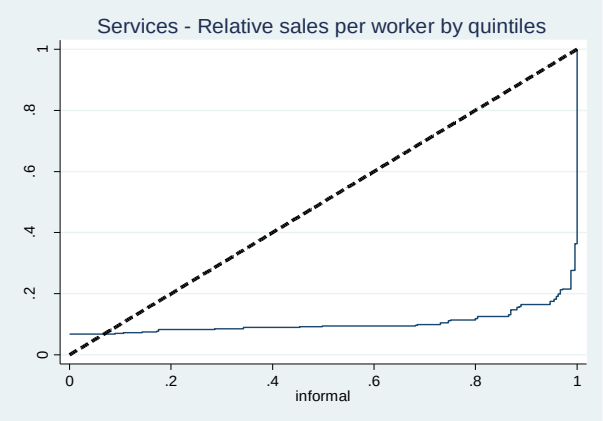
111. **Small formal firms are significantly more productive than small informal firms.** Labor productivity – imperfectly measured by sales per worker – is higher in formal firms, even when size is accounted for. The differences are quite significant in both the services and manufacturing sector. More productive firms are more likely to start-up in the formal sector, likely as a result of having larger revenues to cover the costs of formality. These labor productivity differences are reflected in a concomitant wage gap in the services sector; less so in the manufacturing sector (Figure 37).

Figure 37: Labor productivity is significantly higher in the formal sector.

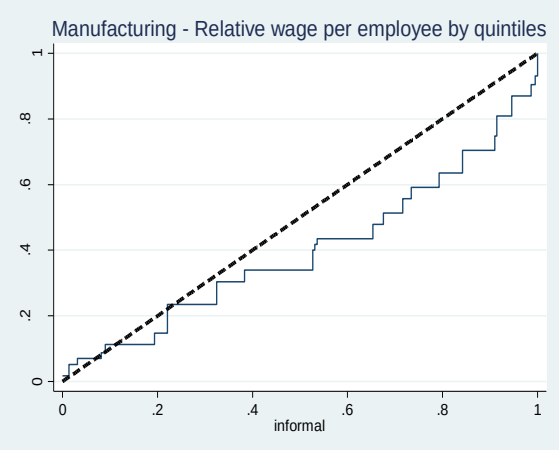
Relative distribution of sales per worker by firms in the manufacturing sector
Informal sector as a reference



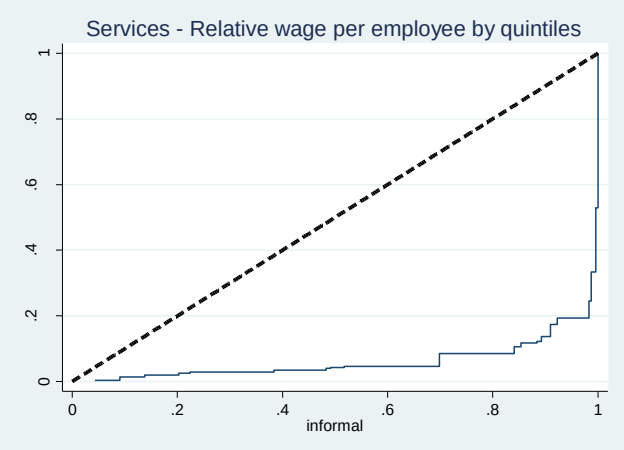
Relative distribution of sales per worker in the service sector
Informal sector as a reference



Relative distribution of wage per employee by firms in the manufacturing sector
Informal sector as a reference



Relative distribution of wage per employee by firms in the service sector
Informal sector as a reference



Source: Estimates based on the 2010 Census of Industrial Production for Kenya, the 2011 Integrated Survey of Services and the Kenya Enterprise Informal Survey 2013

112. In short, there are significant differences in terms of productivity and remuneration between formal and informal firms. This begs the question what is holding back labor productivity in the informal sector: lack of skills, lack of access to technology, or lack of access to capital?

4.3. Resource allocation and constraints to job creation

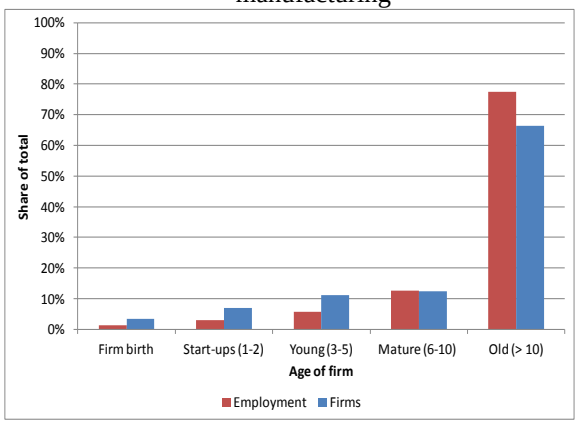
113. **There is evidence of a misallocation of resources in Kenya's economy that is affecting the creation of productivity growth and good jobs**. Evidence of distorted resource allocation can be found through several traits: low firm entry and exit: in a competitive economy, productive firms should enter, unproductive firms are should be forced out of business); large productivity differences within and across sectors: competitive forces should be evening out such differences; low correlation between size and productivity: more productive firms should be growing because they are more

competitive. Evidence of "stunted" growth among productive firms is a sign of inefficiencies; and higher employment growth in older firms than in newer firms: normally, small firms should be catching up with older firms.

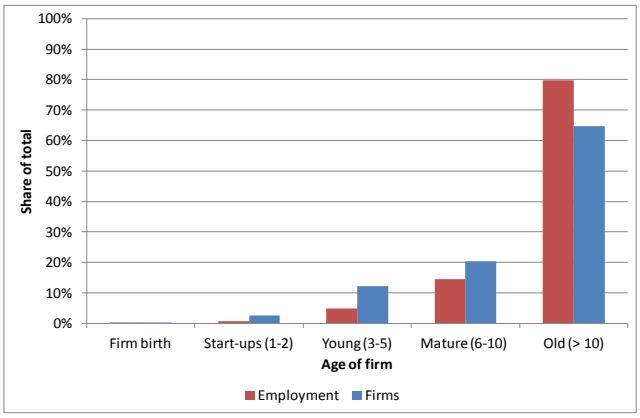
114. **Firm creation is quite low in Kenya's formal sectors, in both the manufacturing and services sectors.** In the manufacturing sector, less than 19 percent of firms are young, here defined as firms created less than 5 years ago, set against 35 percent in the United States and Ethiopia. The low entry rate of formal firms points to a lack of dynamism. Whether this reflects barriers to start-up, or barriers to formalization, is beyond the scope of this study. However, it remains a fact that entry into formal sector is limited. The potential for dynamic changes to employment through firm entry and exit is therefore by necessity limited (Figure 38). In the services sector, new entrants, start-ups, and younger firms account for an even lower share of total firms than in the manufacturing sector. A majority of firms are "old"; they have been in business for ten years or more. Again, this compares unfavourably with the structure of firms in OECD countries. Although old firms in OECD countries account for a majority of employment, their share is much lower than in Kenya. [31]

Figure 38: Firm creation is limited in the formal sector

Distribution of firms and employment by age of firm, manufacturing



Distribution of firms and employment by age of firm, services



Source: estimates based on the 2010 Census of Industrial Production for Kenya and the 2011 Integrated Survey of Services

115. **Lack of young firms indicates a problem – a lack of potential for job creation in the formal sector.** In more developed economies such as the OECD members, most firms are old, and most employment is in older firms, but the share of older firms is lower than in Kenya. For example, young firms (0-5) in the US account for some 35 percent of all firms, and nearly 30 percent in the OECD as a whole, compared to 21 percent of Kenyan firms. And in the OECD, some 15 percent of firms are newborn or start-ups (0-2 years), compared to ten percent in Kenya. This is an important characteristic, because young firms in OECD countries contribute disproportionately more to job creation - and much less to job destruction. [32] The lack of young firms in Kenya may therefore be evidence of a lack of potential for job creation in the formal sector.

[31] Criscuolo, Gal and Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", OECD Science, Technology and Industry Policy Papers no. 14, OECD Publishing
[32] Ibid.

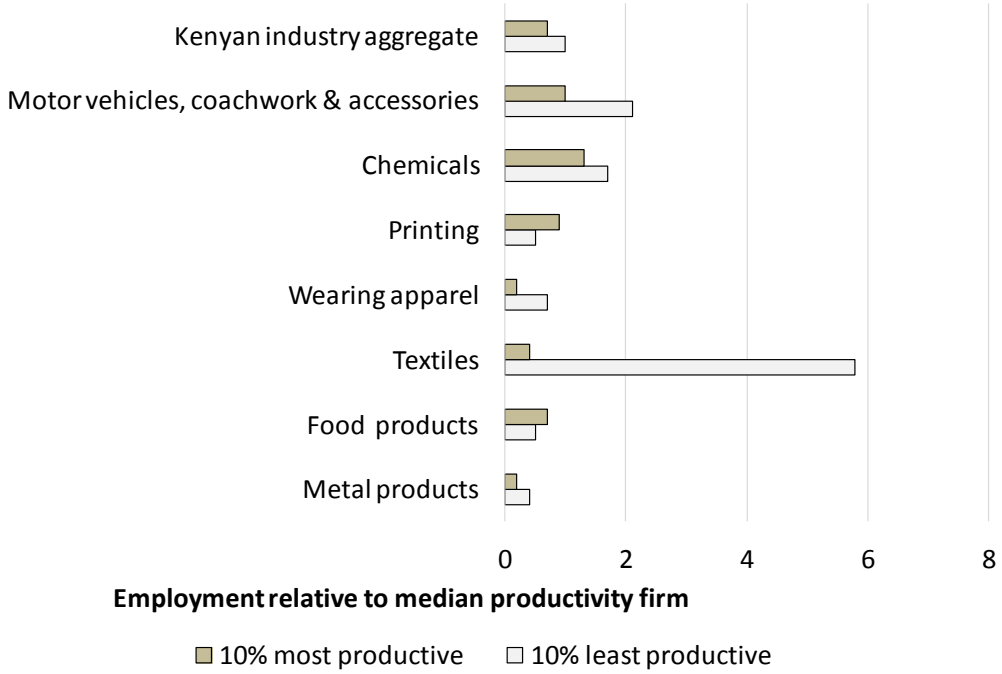
116. **Manufacturing firms experiencing productivity growth do not see more job creation.** The lack of relationship between productivity levels and employment growth does indeed suggest that productive firms are held back in the Kenyan economy. In a well-functioning market economy they should be more competitive than other firms, and as a result be expanding business (and employment). However, the correlation between firm size and productivity growth is in fact negative in Kenya, suggesting the opposite. This is particularly true for the food and textile sectors – the major employers in the manufacturing sector.

117. **And larger firms are not more productive.** Similarly, firms with lower productivity levels are larger in terms of employment than higher productivity firms. With time, Kenyan manufacturing firms only grow to two or three times the size of young (less than five years) firms. The services sector is also suffering from distortions; again, the main employing sector (the trade sector), shows evidence of misallocation, with the larger firms being less productive (Figure 39). For comparison, older US firms grow up to six times the size of small firms; there are middle income countries like Lebanon and Tunisia, where younger and more productive firms appear to have been creating proportionally more jobs than other firms. [33]

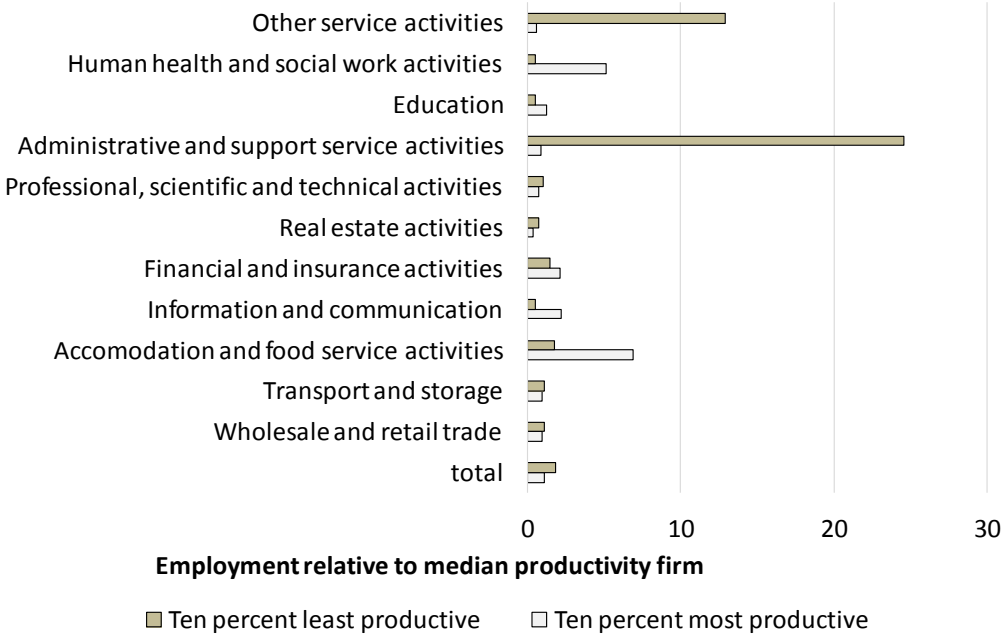
[33] World Bank (2014) "Jobs or Privileges—Unleashing the Employment Potential of the Middle East and North Africa". Macro and Fiscal Management Global Practice. Middle East and North Africa Region.

Figure 39: Stunted Firms: Size and Productivity Levels

Manufacturing sector: no positive relationship between size and productivity levels.



Services sector: no positive relationship between size and productivity levels.



Source: Estimates based on the 2010 Census of Industrial Production for Kenya and the 2011 Integrated Survey of Services

4.4. What are the constraints to doing business?

118. **The analysis of the firm landscape in Kenya has shown that while there is a significant private wage sector in Kenya, there is a lack of dynamism in the formal private sector.** In particular, there is a lack of young and more dynamic firms that could lead the way with employment and productivity growth. Meanwhile, the informal sector, where entry is easier, offers less productive jobs overall. Resources allocation is not efficient: although many firms in the manufacturing sector in particular are relatively large, more productive firms appear to be held back in the economy, and do not see significant employment growth.

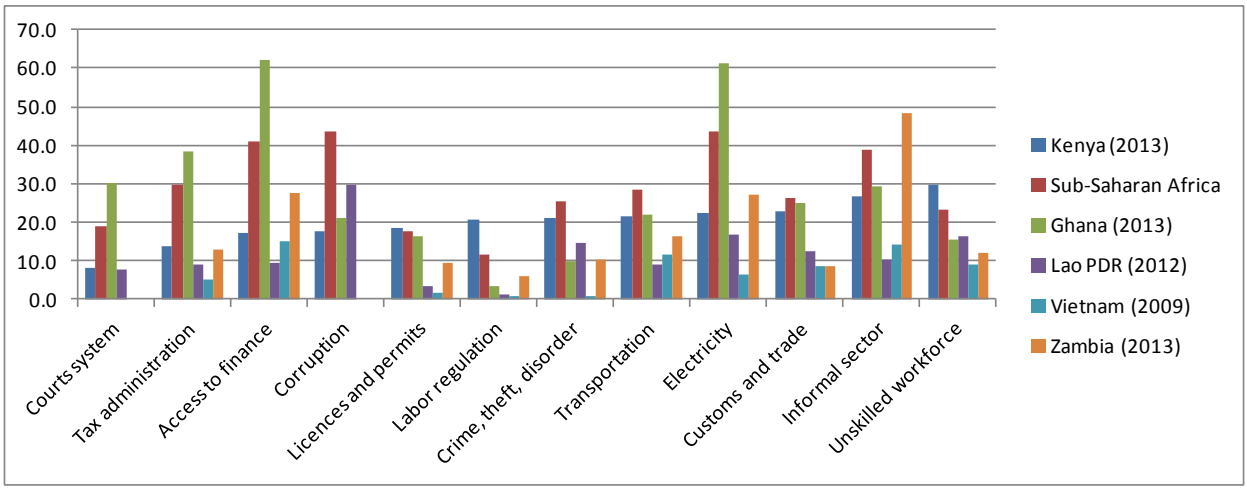
119. **This raises several questions with respect to the overall business environment and job creation in Kenya**: (i) What are the key constraints to more efficient resources allocation? (ii) How can more start-ups be encouraged in the formal sector and are there specific barriers to formalization? (iii) what are the key constraints to informal sector productivity growth- skills, technology, capital, or something else? Although beyond the scope of this report, these questions will be critical to look at to address key constraints to creating more productive jobs in the formal and informal firm sectors.

120. **Clearly, the business environment could be improved, to help firms:** cumbersome procedures for taxes and international trade, lack of infrastructure, and skills are becoming important constraints. The Enterprise Surveys from 2007 and 2013 suggest that the business environment is deteriorating in Kenya. Compared with 2007, firms in 2013 experienced higher financing costs, higher insecurity, and more unreliable access to infrastructure. Kenyan firms make 30 contributions a year, taking 201 staff hours to calculate, file, and pay their taxes. For traders, logistics are a major hindrance. On average, the procedures and documentation needed to import or export take 26 days; connecting to the grid in Nairobi requires 6 steps, takes more than 5 months, and costs 10 times average Gross National Income (GNI) per capita.[34]

121. **Kenyan firms perceived competition from the informal sector, electricity, and lack of access to finance as the top obstacles in 2013.** When asked to identify the biggest obstacle to business, 18.5 percent of firms cited "practices of competitors in the informal sector," 16.5 percent cited "electricity," and 12.7 percent cited "access to finance". Focusing instead on major constraints – any area that is considered a major constraint to business - over twenty percent of firms in Kenya considered infrastructure, insecurity, customs and trade regulations, informal sector practices, and – importantly – the lack of skills, as major constraints to expanding their businesses.

[34] World Bank (2014), *Kenya Economic Update 2014: Anchoring High Growth: Can Manufacturing Contribute More?*, World Bank: Washington, DC.

Figure 40: Major constraints to doing business, Kenya and Comparators



Source: Estimates based on World Bank Enterprise Surveys.

122. **Skills are becoming a more important constraint.** Informality, trade regulations, and lack of access to finance became more important constraints in the past six years, while transportation, crime, theft, and disorder became less important. Firms perceived the severity to have fallen most for telecommunications (likely related to rapid technological improvements over this period, particularly the penetration of mobile networks and devices). The severity of crime, tax rates and tax administration, transport, and workings of the courts also declined. The only obstacle firms perceived to have risen in severity was the availability of educated workers**.**

123. **Measures to promote productivity and employment growth in the manufacturing sector – but with a bearing also on services – suggested by the Kenya Economic Update 2014 include** (i) helping firm access skills, technology and information through, for example, technology extension or technology transfer programs (ii) ensuring level playing field between informal and formal sector, by streamlining and reducing regulation and ensuring fair enforcement, (iii) decrease the cost of doing business by addressing critical infrastructure gaps, especially in electricity, developing key financial infrastructure and special programs to help enterprises access financing, and accelerate and facilitate international trade (iv) support firm entry and exit, which is low in Kenya, by facilitating starting up of a business, and simplifying the insolvency framework (v) streamline revenue raising schemes that are increasing the cost of doing business unduly in Kenya.

ANNEXES

Annex 1. Indicators for Jobs Diagnostics

The following definitions are used in the jobs diagnostics:

The working age population includes population between 15 and 64 years of age.

The labor force is made up of the employed and unemployed.

The labor force participation rate is the share of the active labor force in the population.

The employed are those who held a job: they reported having worked for pay or for profit for at least one hour in the previous week, in an economic activity that is remunerated in cash or in kind. Apart from wage jobs it includes income generated at the household (rather than individual) level, whether from farming or off the farm (note that while goods produced for household consumption, e.g. food, is counted towards economic activity, household level services such as child minding or food preparation are not.)

The employment-to-population ratio is the share of employed in the population.

Wage workers are those that work for somebody else in exchange for a salary, daily wage, or "per-task" pay.

To be self-employed is to work for oneself, making income from the profits of one's activity. This includes employers, own account workers, and unpaid family workers in household enterprises. (Note that in some surveys the distinction can be blurred between own account work and unpaid, contributing family workers.)

Unemployment is defined according to the approach established by the International Labour Organization (ILO). Using the STEP survey, it includes those who do not hold a job but are actively looking for one and available in the next two weeks.

Unemployment rates are the share of unemployed in the active population.

The inactive are those who do not work and who are not looking for work. They include students, discouraged workers (who have given up looking for jobs), people engaged in household work, sick people, etc.

Those not in employment, education, and training (NEETs) are here defined as the inactive who are not studying. Being in school is, at least potentially, a means of increasing future labor productivity and earnings. A high share of inactive youth because of high schooling compared to a high share of inactive youth that are NEETs, depict very different situations.

Annex 2. The STEP Skills Measurement Program: The Household Survey

1. Geographic coverage

The STEP Skills Measurement household survey program covers a large sample of low and middle-income countries, including Armenia, Bolivia, Colombia, Georgia, Ghana, Kenya, Lao PDR, Macedonia, Sri Lanka, Ukraine, Vietnam, and the Yunnan Province in China. Surveys were carried out between 2011 and 2013. In Kenya, the household survey was implemented in 2013. The field work was carried out from August to November 2013.

2. Target population

The STEP target population is the urban population ages 15 to 64. The sampling strategy was designed to ensure that the target population represents at least 95 percent of the urban working-age population (aged 15 to 64) in each country.

The Kenya sample design is a stratified 3 stage sample design. The sample was stratified by 4 geographic areas: 1-Nairobi, 2-Other Large Cities (over 100,000 households), 3- Medium cities (60,000 to 100,000 HHs) and 4-Other Urban Areas. War marred and unstable regions of Kenya were excluded from the survey and Itinerants (as classified in the Population Census 2009 in Kenya) were also excluded. The specifics for the Kenya data are included below:

Kenya STEP Household Survey main characteristics

Target population	All non-institutionalized persons 15 to 64 years of age (inclusive) living in private dwellings in urban areas of the country at the time of data collection. This includes all residents except foreign diplomats and non-nationals working for international organizations. Exclusions: • Itinerants (as classified in the Population Census 2009 in Kenya) • War marred and unstable regions • Residents of senior homes and hospices • Residents of other group dwellings such as college dormitories, hallway homes, workers' quarters, etc. • Persons leaving outside the country at the time of data collection
Sample size	3911 households (initial and final sample size are equivalent as there was no non-eligible household in Kenya) and 3894 participating selected persons.
Response rate	92%

Source: WB, 2014 STEP Survey Weighting Procedures Summary: Kenya, March 28, 2014.

	individuals	share
total	6371179	
Nairobi	2135294	33.5
rest of the country	4235885	66.5
men	3015557	47.3
women	3355621	52.7
15-19	843,301	13.2
19-24	1734202	27.2
25-34	2078301	32.6
35-44	951,039	14.9
45-54	509,169	8.0
55-64	255,167	4.0
None	852,443	13.4
Primary education	1458651	23.0
Secondary education	3547392	55.9
Tertiary education	490,606	7.7
Employed	3717839	58.4
Unemployed	912,671	14.3
Inactive	1740668	27.3

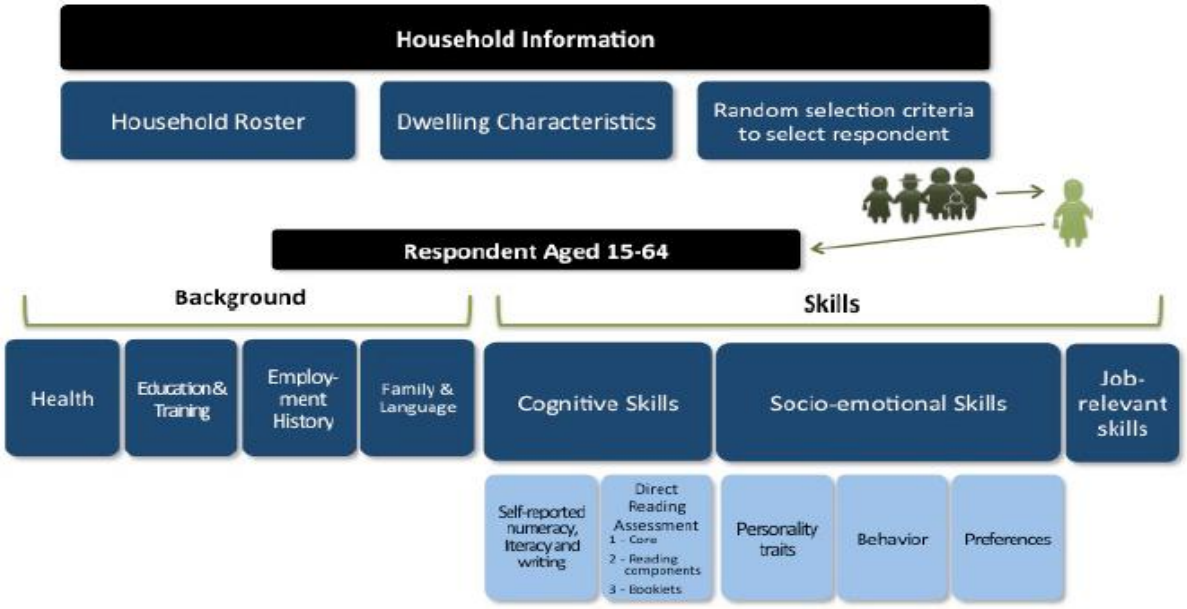
3. Background questionnaire

The STEP survey collects comprehensive information not typically captured by traditional household surveys. It includes two distinct instruments: a background questionnaire and a reading literacy assessment. The background questionnaire is organized in three household background modules and seven thematic modules. Module 1 starts with a standard household roster and a section on dwelling characteristics. It concludes with the random selection of a household member aged 15 to 64 to whom the remainder of the survey is administered. The random selection is based on strict guidelines set by the STEP technical standards. Modules 2 to 11 are applied to the randomly selected respondent. Module 2 collects in-depth information on education, training, and the person's first job. Module 3 asks health-related questions. Module 4 gathers extensive information on the respondent's current occupation(s). Modules 5 and 6 include some of STEP's most innovative features. Module 5 asks detailed questions on the respondent's use of reading, writing, and numeracy skills in daily life and at work, as well as job-relevant skills used at work. Module 6 provides information on personality traits, behavior, and preferences. It is important to note the survey gathers skills information from the entire sampled population, regardless of their labor force status (employed, unemployed or inactive) and type of employment. Job-relevant skills, however, are captured only for respondents who are currently working or have worked at some time in the 12 months prior to the survey. Finally, Module 7 focuses on family background.

4. Reading literacy assessment

The second part of the STEP survey consists of a reading literacy assessment, which was specifically developed for the STEP survey by Educational Testing Services (ETS). This assessment provides a direct measure of respondents' reading proficiency. It is organized in three parts. The first part focuses on foundational reading skills, including word meaning, sentence processing and passage comprehension. The second part consists of a core literacy assessment, which is used as a screener intended to sort the least literate from those with higher reading skill levels. The third part is only administered to respondents having passed the core literacy assessment. It provides a finer evaluation of reading skills for the most literate individuals in the sample.

Appendix 1 table 2: Structure of the household survey



5. Technical standards

The STEP Skills Measurement household survey was specifically designed to ensure data comparability. Coordination and supervision were centralized so survey instruments were administered in a standardized way across all participating countries, including Kenya. All survey firms benefited from the STEP team's technical assistance throughout the implementation process and complied with the STEP technical standards. Each survey firm's implementation plan was summarized in a National Survey Design Planning Report. The sampling strategy and data weighting were carried out by a single survey methodologist to ensure consistency across methodologies (see Pierre, G., Sanchez-Puerta, M.L., Valerio, A., and Rajadel, T. (2014). "STEP Skills Measurement Surveys: Innovative Tools for Assessing Skills" World Bank, Washington, DC, July 2014)).

Annex 3. Latent Class Analysis: Mapping Individuals to Groups

Latent Class Analysis is used to identify an organizing principle for a complex group of variables. It is a particularly useful approach to classify individuals. Whereas traditional descriptive statistics can only show a limited number of characteristics at the time, LCA enables the use of various characteristics to define and describe latent clusters. The method involves using categorical observed variables, representing characteristics for organizing individuals into meaningful homogeneous subgroups (Collins and Lanza 2010).

Formally, LCA enables a characterization of a categorical unobserved variable (latent variable), starting from an analysis of the relationships among several observed variables (indicators), using a maximum likelihood estimation method. The estimations may also include active covariates, which are "variables that may be used to describe or predict (rather than to define or measure) the latent classes and to reduce classification error" (Vermunt and Magidson 2005).

LCA does not estimate causal effects but rather assigns scores to observations according to the likelihood of belonging to each of the estimated latent groups. Statistics such as the Bayesian Indicator Criterion are used to identify the most adequate number of clusters (latent classes), that is, the model that has on average the highest likelihood of predicting class membership in the given sample. Once the latent classes have been defined, "inactive covariates" that were no included in the model are used to define better the groups.

In this analysis, the LCA aims to classify the vulnerable youth into groups with similar labor market barriers. It uses:

Indicators:

- Labor market status: inactive, unemployed, unpaid family worker, self-employed and informal worker.
- Financial dependency: number of working individuals contributing to the household income (excluding the respondent).
- Location: rural or urban.

In addition to indicators, the model includes "active covariates (used to improve the classification of individuals in each class)

- Gender
- Marital status
- Education: highest educational level attained (4 groups)

Inactive covariates were chosen keeping in mind those characteristics that might provide valuable information for the design of tailored policies that address barriers to formal employment, including:

- Individual level demographics
- Individual labor market characteristics
- Household welfare conditions
- Household demographics
- Household location and characteristics

Annex 4: Mincer regressions

	Years of education only			
	(1)	(2)	(3)	(4)
VARIABLES	ln_earnings_h	ln_earnings_h	ln_earnings_h	ln_earnings_h
exp	0.0276***	0.0352***	0.0299***	0.0358***
	(0.0091)	(0.0093)	(0.0085)	(0.0086)
exp2	-0.0004**	-0.0006***	-0.0005***	-0.0006***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)
gender	-0.1029**	-0.1191**	-0.0109	-0.0251
	(0.0513)	(0.0509)	(0.0501)	(0.0501)
ww	0.0147	0.0096	-0.1341**	-0.1346**
	(0.0549)	(0.0543)	(0.0648)	(0.0638)
1.educ_mf	-0.0700	-0.0392	-0.0732	-0.0486
	(0.0881)	(0.0882)	(0.0853)	(0.0854)
2.educ_mf	0.5804***	0.5740***	0.3760***	0.3787***
	(0.0959)	(0.0993)	(0.0916)	(0.0936)
3.educ_mf	1.7874***	1.6829***	1.2866***	1.2221***
	(0.1319)	(0.1305)	(0.1319)	(0.1334)
1.occupation			-0.0449	-0.0608
			(0.1552)	(0.1952)
2.occupation			0.0787	0.0829
			(0.1234)	(0.1753)
3.occupation			0.1171	0.1017
			(0.1263)	(0.1713)
4.occupation			-0.1797	-0.2007
			(0.1192)	(0.1671)
5.occupation			-0.6979***	-0.6737***
			(0.0980)	(0.1531)
6.occupation			-0.7563**	-0.6811*
			(0.3521)	(0.3731)
7.occupation			-0.6828***	-0.6731***
			(0.1228)	(0.1775)
8.occupation			-0.5079***	-0.4849***
			(0.1220)	(0.1721)
9.occupation			-0.8483***	-0.8148***
			(0.1179)	(0.1682)

Continues on next page.

Miner regressions continued

	Years of education only			
	(1)	(2)	(3)	(4)
VARIABLES	ln_earnings_h	ln_earnings_h	ln_earnings_h	ln_earnings_h
2.econ_sect3			-0.3385	-0.2888
			(0.3638)	(0.3674)
3.econ_sect3			-0.2599	-0.2129
			(0.2606)	(0.2672)
4.econ_sect3			0.1110	0.1586
			(0.2524)	(0.2579)
5.econ_sect3			-0.3938	-0.3732
			(0.2545)	(0.2599)
6.econ_sect3			-0.6072	-0.5683
			(0.4957)	(0.4921)
7.econ_sect3			0.5866	0.6859
			(0.4187)	(0.4299)
8.econ_sect3			-0.0474	-0.0403
			(0.2627)	(0.2683)
9.econ_sect3			0.5369*	0.6318**
			(0.2875)	(0.3001)
10.econ_sect3			-0.0694	-0.0461
			(0.2690)	(0.2721)
11.econ_sect3			-0.1869	-0.1842
			(0.2453)	(0.2523)
12.econ_sect3			-0.4643*	-0.4295*
			(0.2429)	(0.2531)
13.econ_sect3			-0.4418	-0.4091
			(0.2710)	(0.2760)
14.econ_sect3			-0.4201*	-0.4035
			(0.2469)	(0.2550)
15.econ_sect3			-0.0489	-0.0095
			(0.2515)	(0.2605)
1.mother_educ		-0.0590		-0.0530
		(0.0707)		(0.0665)
2.mother_educ		0.2094***		0.1742**
		(0.0743)		(0.0702)

Annex 5: Multivariate analysis: job security and wages.

A. Manufacturing sector: determinants of the share of permanent and casual workers per firms.

	(1)	(2)	(3)	(4)
		Share of permanent workers		
age group: 4-10	0.0414	0.0385	0.0438	0.0405
	(0.302)	(0.339)	(0.277)	(0.314)
age group: 10-19	0.0649+	0.0622	0.0659+	0.0627+
	(0.088)	(0.105)	(0.083)	(0.100)
age group: 20-29	0.0547	0.0473	0.0519	0.0463
	(0.158)	(0.230)	(0.184)	(0.239)
age group: 30+	0.118***	0.106**	0.111**	0.104**
	(0.001)	(0.003)	(0.002)	(0.004)
exporter		0.0437*		0.0348
		(0.045)		(0.113)
importer		0.00962		0.00423
		(0.712)		(0.871)
value added per worker		0.00272***	0.00243***	0.00248***
		(0.000)	(0.000)	(0.000)
ICT			0.00845*	0.00714*
			(0.018)	(0.039)
R&D			0.0451	0.0429
			(0.182)	(0.202)
capital to labor			1.26e-11***	1.31e-11***
			(0.000)	(0.000)
Constant	0.583***	0.570***	0.577***	0.567***
	(0.000)	(0.000)	(0.000)	(0.000)
Observations	1020	1016	1016	1016
R-squared	0.108	0.118	0.120	0.122
Adjusted R-squared	0.080	0.087	0.089	0.089

Note: the excluded dummy for location is Nairobi; the excluded dummy for the subsector is wearing apparel, which is the most labor-intensive subsector; the excluded dummy for age group is below 4. P-values in parentheses: + p<0.10, *p<0.05, ** p<0.01, *** p<0.001

B. Services sector: determinants of the share of permanent and casual workers per firms.

	(1)	(2)	(3)
	Share of Permanent workers		
age group: 4-9	0.0651	0.0496	0.0498
	(0.125)	(0.237)	(0.235)
age group: 10-19	0.101*	0.0867*	0.0875*
	(0.015)	(0.033)	(0.032)
age group: 20-29	0.118**	0.103*	0.103*
	(0.006)	(0.016)	(0.016)
age group: 30+	0.122**	0.108**	0.108**
	(0.004)	(0.010)	(0.010)
value added per worker		0.000788***	0.000799***
		(0.000)	(0.000)
ICT			-9.49e-08**
			(0.006)
capital to labor ratio			-2.66e-10
			(0.711)
Constant	0.685***	0.704***	0.704***
	(0.000)	(0.000)	(0.000)
Observations	1982	1978	1978
R-squared	0.059	0.062	0.062
Adjusted R-squared	0.052	0.054	0.054

Note: the reference subsector is Administrative and support service activities and the excluded dummy for age group is below 4. P-values in parentheses: + p<0.10, *p<0.05, ** p<0.01, *** p<0.001

C. Determinants of wages: Manufacturing sector.

	(1)	(2)	(3)	(4)	(5)
	wage per employee (in log)				
age group: 4-10		0.462***	0.457***	0.491***	0.470***
		(0.001)	(0.001)	(0.000)	(0.000)
age group: 10-19		0.430***	0.423**	0.450***	0.438***
		(0.001)	(0.001)	(0.000)	(0.001)
age group: 20-29		0.408**	0.387**	0.420**	0.387**
		(0.003)	(0.006)	(0.002)	(0.005)
age group: 30+		0.446***	0.409**	0.420***	0.380**
		(0.000)	(0.001)	(0.001)	(0.002)
size: small (6-19)	0.181	0.243	0.243	0.279	0.239
	(0.283)	(0.189)	(0.196)	(0.131)	(0.201)
size: medium (20-100)	0.416*	0.419*	0.357+	0.441*	0.343+
	(0.016)	(0.024)	(0.062)	(0.017)	(0.070)
size: large (>100)	0.538**	0.509**	0.289	0.392*	0.164
	(0.003)	(0.008)	(0.171)	(0.048)	(0.442)
value added per worker			0.0112**	0	0.00853*
			(0.005)	(.)	(0.022)
exporter			0.357***		0.325***
			(0.000)		(0.001)
importer			0.246*		0.216*
			(0.013)		(0.026)
ICT				0.0782**	0.0715**
				(0.003)	(0.006)
R&D				0.00963	-0.000236
				(0.948)	(0.999)
capital to labor				2.31e-11	2.32e-11+
				(0.127)	(0.076)
Constant	11.43***	11.11***	11.04***	11.11***	11.09***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	1048	948	946	946	946
R-squared	0.163	0.180	0.206	0.209	0.224
Adjusted R-squared	0.139	0.150	0.174	0.176	0.190

p-values in parentheses: + p<0.10, *p<0.05, ** p<0.01, *** p<0.001; Note: the excluded dummy for location is Nairobi; the excluded dummy for the subsector is wearing apparel, which is the most labor intensive subsector, the excluded dummy for age group is below 4 and the excluded dummy for size of the firm is micro.

D. Determinants of wages: Services sector.

	(1)	(2)	(3)	(4)
		wage per employee		
age group: 4-9		0.196	0.185	0.103
		(0.159)	(0.181)	(0.470)
age group: 10-19		0.394**	0.390**	0.306*
		(0.004)	(0.004)	(0.028)
age group: 20-29		0.511***	0.511***	0.403**
		(0.000)	(0.000)	(0.007)
age group: 30+		0.616***	0.604***	0.516***
		(0.000)	(0.000)	(0.001)
small	-0.126	-0.157+	-0.158+	-0.145
	(0.102)	(0.065)	(0.060)	(0.101)
medium	-0.101	-0.155+	-0.144	-0.0992
	(0.212)	(0.090)	(0.110)	(0.297)
large	-0.0639	-0.164	-0.147	-0.113
	(0.612)	(0.244)	(0.291)	(0.464)
value added per worker			0.00821**	0.00835+
			(0.005)	(0.053)
ICT				0.000700
				(0.271)
R&D				omitted
capital to labor ratio				1.08e-08+
				(0.068)
Constant	12.54***	12.19***	12.16***	12.21***
	(0.000)	(0.000)	(0.000)	(0.000)
Observations	2313	1953	1953	1759
R-squared	0.106	0.123	0.134	0.137
Adjusted R-squared	0.100	0.115	0.125	0.129

Note: the reference subsector is Administrative and support service activities, the excluded dummy for age group is below 4, and the excluded dummy for the size of the firm is micro. P-values in parentheses: + p<0.10, *p<0.05, ** p<0.01, *** p<0.001