

## Exploiting Job Creation Potential for Youth in Industries Without Smokestacks in Kenya

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### Introduction

The Kenyan economy has over the last two decades experienced an upward trajectory in economic growth. The country's real Gross Domestic Product (GDP) more than doubled from Ksh 2,150 billion in 2001 to Ksh 5,049 billion in 2019. This notwithstanding, the country faces significant labour market challenges in form of unemployment, time-related under-employment and inactivity.<sup>1</sup> Unemployment is disproportionately high among marginalized groups such as youth and women. Whereas the overall unemployment of the working age group (15 to 64 years) was estimated at 7.4% as per the most recent Kenya Integrated Household Budget Survey (KIHBS) 2015/16, the prevalence for youth (15 to 24 years) and women were 17.7% and 9.6%, respectively. Further, time related under-employment was estimated at 20.4% for the overall population and 35.9% and 26.0% for the youth and women, respectively.<sup>2</sup>

Industrialization has been a key channel for job creation since independence. Despite the policies to boost its growth, Kenya's industrial sector lacks the dynamism to generate adequate formal sector employment opportunities in a manner akin to the newly industrialized emerging economies. The Kenya Vision 2030 targets annual manufacturing sector growth rate of 10% with a medium-term aspiration of increasing its share in GDP to 15% by 2022. The sector's contribution to GDP has, however, declined from 11.3% in 2010 to 7.5% in 2019, reflecting its slow growth rates relative to other sectors of the economy, particularly services, thus reflecting depressed opportunities for employment creation through the industrial sector.

Recognizing the relatively slow growth of the manufacturing sector, recent policy debate in addressing unemployment has widened its focus to include emerging sectors that have similar characteristics to manufacturing in terms of productivity and potential for creating decent jobs.<sup>3</sup> The emerging sectors include tourism, information and communication technology, and horticulture. These sectors are collectively referred to as Industries Without Smokestacks (IWOSS) to differentiate them from traditional 'smokestack' industry anchored on manufacturing. The IWOSS sectors are considered to have high potential for job creation to supplement the performance of the manufacturing sector. Like manufacturing, these sectors are highly tradable in international markets and demonstrate capacities for learning and productivity growth.<sup>4</sup>

This policy brief is based on a Kenya case study report 'Industries Without Smokestacks in Africa: A Case Study of Kenya', that used a mixed methods approach to assess job creation potential of IWOSS. The main approaches/methods encompassed review of sectoral performance with respect to growth and wage employment; assessments of current and projected levels of employment and productivity using the Jobs Structure Tool developed by World Bank;<sup>5</sup> and application of value chain approach to examine job creation potential and the key constraints. The main data sources included Kenya's Social Accounting Matrix (SAM, 2015), the World Bank Jobs Group Database, Occupational Network Data (O\*-NET), and various survey data sets including the KIHBS 2015/16 and the World Bank's Enterprise Survey for Kenya 2018. This was complemented by targeted key informant

interviews with industry representatives. KIPRA undertook a skills survey by administering key informant questionnaires to selected firms in horticulture, Information and Communication Technologies (ICT) and tourism sub-sectors in December 2020 to supplement insights from the secondary data sources.

The findings reveal that the IWOSS sectors with strong employment creation opportunities are tourism, horticulture, and ICT; with projected total wage employment shares in 2030 of 5.9%, 4.3% and 3.4%, respectively. The importance of these sectors to employment creation remains robust even when sectoral growth rates are varied. The focus on the three sectors was predicated on their strong sectoral growth performance, contribution to GDP and export performance (for horticulture). The sectors have significant backward and forward linkages with the rest of the economy, and each enjoys strong policy support from the government.

### **Employment Creation Potential across IWOSS Sectors**

The IWOSS and non-IWOSS sectors together recorded higher growth rates compared to the manufacturing sector, which grew at 4.3% in the period 2001-2018. The IWOSS sectors, including export crops and horticulture, financial and business services and transport had the largest absolute changes in terms of share in GDP in the same period. The IWOSS sectors with the largest absolute change in the share of wage employment were trade and repairs, ICT and tourism with 14.3%, 9.0% and 3.7% of the total absolute change in wage employment, respectively. In addition, construction and manufacturing (both non-IWOSS) had relatively strong performance with respect to absolute changes in wage employment, accounting for 8.9% and 7.2% of the total absolute changes in wage employment, respectively.

The wage employment elasticity<sup>6</sup> for manufacturing is lower at 0.54 than the aggregated elasticity for other non-IWOSS at 0.57, but higher than that of aggregate IWOSS sectors at 0.42. Trade and repairs has the higher elasticity of 1.3, followed by ICT at 1.0, which suggests that these two sectors have largest wage employment-intensive growth. In tourism and horticulture, a 1% increase in their respective output results in a 0.37% and 0.03% change in wage employment. Important to note

in these comparisons is that horticulture has relatively larger proportions of non-wage jobs in form of unpaid family labour. The financial and business services sector's negative elasticity of -0.04 that accompanies its positive output growth implies that its jobs declined with growth. The use of elasticities can, however, be subject to weaknesses including sensitivity to the output or value added growth. The elasticity results are therefore supplemented with other labour intensity measures, including employment to labour value added ratios and elasticities computed using the Social Accounting Matrix (SAM).

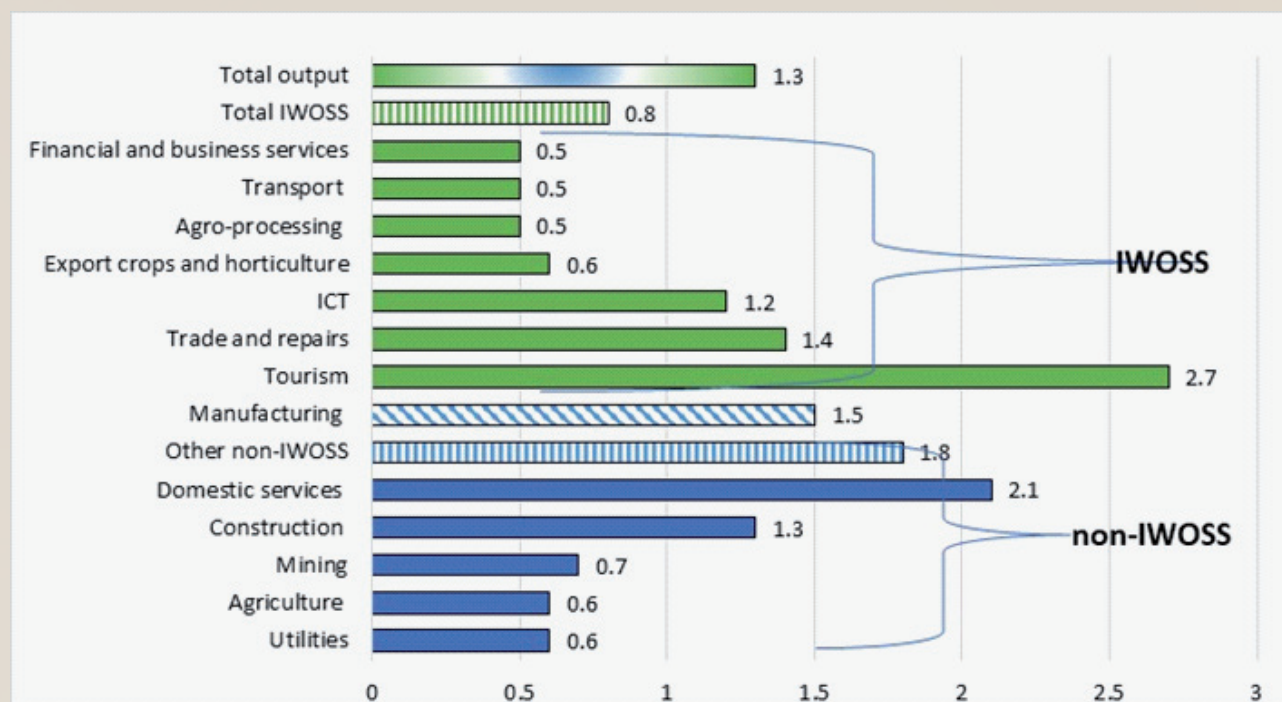
The labour-output ratios reveal that IWOSS sectors with higher ratios include tourism, trade and repairs, and ICT (see Figure 1), corroborating the elasticities above, for which the three sectors emerge at the top. This implies that while these sectors need more labour per unit of output, they are classified as labour-intensive sectors with a high potential for employment creation. Some of the lowest labour-to-output ratios were recorded for financial services and utilities—consistent with their relatively high levels of automation.

Based on the SAM, the IWOSS sectors with the highest employment multipliers were tourism (hotels and restaurants), trade, and transportation and storage. Manufacturing had the lowest elasticity value for employment following growth in output of 0.50. On aggregate, the labour intensity measures suggest that manufacturing has not performed as well as the IWOSS sectors this study focuses on. The more dynamic sectors included ICT, which had relatively high employment-growth elasticity values, suggesting that growth in wage jobs in these sectors could be more responsive to output growth.

Overall, the findings reveal that IWOSS and non-IWOSS sectors are important sources for job creation when projections are done to the year 2030 for the overall working age group. The specific sectors projected to contribute to the largest share of wage employment in 2030 are: construction (non-IWOSS), trade and repairs (IWOSS) and manufacturing, with respective shares of 10.8%, 8.3% and 7.9%, respectively. The other significant sectors are mainly IWOSS sectors, including tourism, horticulture and ICT with respective shares of 5.5%, 4.0% and 3.5%. It is thus apparent that a policy focus on a mix of both IWOSS and non-IWOSS sectors would



**Figure 1: Labour-output ratios for Kenya, 2018 (wage employment)**



Source: Computations based on data from KNBS (various) Statistical Abstract

be important for wage employment growth aspirations for Kenya in 2030.

Additional evidence points to a more rapid growth in the informal component of employment in some sectors that have implications on the quality of new jobs. Crucial examples are horticulture and financial services sectors, which experienced high output growth but low or declining wage employment growth. Much of the informal sector employment in the financial services sector is integrated with trade, with such businesses operating mainly under the businesses licenses issued by county governments. In horticulture, the low wage employment growth is partly explained by a large increase in non-wage jobs, resulting from supply of unpaid family labour and expansion in small scale producers rather than large farms. In the financial services, the government's policy on consolidation and hence mergers and acquisitions together with the sectors high and increasing levels of automation and transition into digital platforms have depressed wage employment growth in the short-run.

### Gender Dimensions of Wage Employment

Gender dimensions and participation of men and women in wage employment is a key driver for gender equality in the labour market. Previously, there have been widespread disparities on the

distribution of men and women across different sectors. For the youth aged 15 to 24 years, a larger share of females (50%) than males (32%) were in domestic services in 2018. For males, trade and repairs, manufacturing, and export crops and horticulture were the most important sectors outside of domestic services with respective wage employment shares of 15.6%, 10.3% and 10.2%. For female youth, the most important sectors were export crops and horticulture (8.6%), trade and repairs (7.9%) and construction (7.5%).

Projections from the study further reveal that there will be wider gender disparities in wage employment if the prevailing growth trends persist and no interventions are put in place. This will be the case for the overall working age group and the youth. On aggregate, male youth (15 to 24 years) are forecasted to dominate the more productive sectors, including manufacturing, construction, and trade and repairs, with their numbers projected to be 1.5, 13.8, and 1.2 times greater than females, respectively. In ICT, there will be nearly 3.0 times more males than females if present growth trends persist. The projections also indicate that there will be more females in horticulture (1.3 times more) and tourism (1.1 times more).

## Key Constraints to Growth in IWOSS Sectors

The potential for growth of IWOSS is constrained by several emerging and prevailing issues related to investment climate and exports. The overall approach to the analysis of sector-specific constraints applied a value chain mapping complemented by targeted interviews with industry key informants. The analysis of the World Bank Enterprise Survey for Kenya 2018 also provided additional insights. The findings revealed that there are both cross-cutting and sector-specific constraints affecting the three IWOSS sectors; that is tourism, ICT and horticulture. The cross-cutting (economy-wide) constraints are mainly infrastructure-related, though there are some sector-specific issues that are more pronounced.

Kenya fares better than most African countries and was ranked third in Africa in the 2020 World Bank's Ease of Doing Business Report. The country's strong performance was particularly impressive in ease of getting credit and, to some extent getting connected to electricity. However, despite the evident progressive reforms, the business environment remains complex owing to constraints related to infrastructure, regulations, skills development and exports (for horticulture).

**Infrastructure:** This relates to both soft and hard infrastructure such as electricity, transport, and information sharing platforms. Some of the issues are related to reliable supply and high cost of electricity, which pose challenges not only across firms in the IWOSS sectors but also firms across the entire economy. The relatively high cost of electricity and utilities has implications on firm level competitiveness and the level of investment in the country. There are also constraints related to cost of transport owing to poor road infrastructure, particularly the feeder roads. This, together with constraints related to accessing cold chain facilities, has been a major cause attributed to large post-harvest losses in the horticultural value chain, estimated at 42%. In ICT infrastructure, Kenya's connectivity ranks high in Africa, but this is associated with a relatively high cost of mobile broadband services and a large digital divide between urban and rural areas of Kenya. Additionally, maritime transport remains under-exploited for export trade, particularly for horticulture. In ICT infrastructure, Kenya's connectivity is among the best in Africa, but this is associated with a relatively high cost of mobile

broadband services and a large digital divide between urban and rural areas of Kenya. These constraints are related to weak competition in Kenya's ICT sector attributed to infrastructure. There is limited (but increasing) interoperability between mobile payment operators, which affects the ability of smaller players to grow, thus potentially creating monopoly tendencies.

**Regulatory environment:** The regulatory business environment remains complex and costly, thus eroding Kenya's competitiveness and job creation opportunities. The Country's average performance in the 2020 World Bank's Ease of Doing Business rankings faltered mainly on account of three areas of business regulation, including starting a business (ranked 129 out of 190 countries), cross-border trade (117) and getting construction permit (105). Starting a business and ease of cross border trade worsened while getting construction permit improved in 2020 relative to 2019. These constraints hamper the country's ability to improve its competitiveness, attract investments and create more jobs and improvements, and will require deeper and broader reforms. For instance, within the ICT sector, one of the root causes is weak regulatory quality especially with respect to integration of competition principles in the design of regulations. This has curtailed investments and imposed barriers to new entrants. Specific issues include weak regulations with regard to on net-metering and wheeling system to enhance access. Horticulture faces non-tariff barriers while the tourism sector is also weighed down by multiple taxations and levies.

**Skills development:** At the national level, educational achievement in Kenya is low relative to a typical middle-income country and is a key constraint facing not only firm growth but also access to gainful employment by the youth. A relatively large proportion of the working age population (46.2%) have primary education as their highest education level. Yet, the IWOSS sectors and the high growth sectors of the economy, such as ICT and construction, rely heavily on post-primary level skills. In addition, although education quality fares strongly relative to other African countries, Kenya performs poorly against the yardstick of a typical middle-income country. The skills among tertiary institutions graduates are also weak compared to industry demands, as indicated by employer surveys. Across the sectors, there



are inadequate specialized training institutions, especially for high level technology skills. The study implemented skills gap analyses across occupations in horticulture, ICT and tourism. Skills levels were measured using a nationally representative household level data set, complemented by feedback from key informants. Within the horticulture sector, there are skills constraints among small scale producers. ICT is faced with inadequate human resources with advanced skills, such as programming and cyber security, and access is limited to the last mile users. The tourism sector faces inadequate specialized training institutions, especially for high level and diverse skills that are crucial for the sector (e.g. film production).

**Exports:** In the decade leading to 2019, aggregate export performance has been poor, and Kenya's value of exports grew by an average of 0.9% annually. On the contrary, imports grew at a higher rate of 3.9% per annum. The key constraints for Kenya's export performance relate to inadequacies of export facilitation, non-tariff barriers and high costs of doing business faced by firms in cross-border trade, reflected in the poor ranking on the World Bank's rankings of ease of performing cross-border trade (117 out of 189 in the 2020 Doing Business Rankings). In this regard, firms were concerned about the application of government tariffs on products. Specifically, industry key informants pointed out that the staff at customs are not sufficiently trained in the application of the right tariffs to products. This has made the customs process problematic for exporters.

### Policy Implications and Recommendations

Interventions to promote employment creation for youth and women need to focus on a mix of IWOSS and non-IWOSS sectors. The three IWOSS sectors of focus in this policy brief, notably horticulture, ICT and tourism, are considered to have a high potential for job creation to supplement the contribution of the manufacturing sector.

For horticulture there are four broad implications:

(i) Ameliorate the possible effects of the dynamic non-tariff trade barriers (NTTBs) by supporting continuous skills transfer and extension services support to local producers, including the small-scale farmers.

- (ii) Enhance further investments in supportive infrastructure—the feeder roads and cold chain infrastructure such as “cold” collection centres and pack houses.
- (iii) Open more options for transport, especially maritime transport of exports, by investing in a dedicated maritime line to key export destinations.
- (iv) Mold the preference of youth towards agricultural training to attract more youth to higher productivity jobs within the sector.

For ICT, there is need for a more supportive policy and regulatory framework, more so with respect to regulations of on net-metering and wheeling systems. Best practice models can be adopted by Kenya to enhance cost of ICT services. These include:

- (i) Encourage sharing of communication infrastructure (e.g. masts) by encouraging cross-sector consultations for infrastructure development.
- (ii) Create planning databases containing detailed information of infrastructure available for sharing.
- (iii) Enhance interoperability through moral suasion.

For tourism, interventions should be geared towards addressing the challenges of inadequate specialized training institutions, and multiple taxation and levies. The skills deficits in the sector are attributed to unsatisfactory educational training, weak linkages between education and training institutions, and the industry and labour market. To address these challenges, there is need to:

- (i) Enhance linkages between training institutions and the industry through curriculum reviews, increase number of specialized training institutions, research partnerships and enhanced forum for interactions.
- (ii) Streamline licensing across various institutions at the national and county government levels.

Table 1 provides a detailed action plan matrix with actors who can play roles in implantation of interventions across the three IWOSS sectors of focus.

**Table 1: Action plan matrix**

Sector	Sector constraints	Recommendation	Responsible actors
Horticulture	Dynamic Non-tariff trade barriers (NTTBs)	Continuous skills transfer and support to local producers	Ministry of Agriculture Horticulture Development Authority
	Inadequate cold chain infrastructure resulting in high post-harvest losses (as high as 42%)	Promote investments in cold chain infrastructure e.g. “cold” collection centres and pack houses and investments in feeder roads transport infrastructure	Private sector Ministry of Education
	Declining skills pool because of declining attraction of agricultural and related courses (to students) in institutions of higher learning and middle level colleges	Make agricultural curricula more attractive to the youth, redesign of curricula	National and County Governments
ICT	Non-competitive market structures – resulting from firm entry barriers mainly due to lack of transparent regulatory framework for pro-competitive spectrum allocation – leading to higher service costs	Put in place a policy framework that enhances competitive markets to improve affordability/ access to services by the last mile users	Ministry of ICT
	Weak policy and legal framework for E-commerce and consumer protection	Put in place an all-encompassing policy for E-commerce	Ministry of ICT
	Limited access by last mile users	Enhance affordability using various interventions, including regulations that enhance competition	Ministry of ICT
	Perceived limited support especially in the Business Process Outsourcing (BPO) sub-sector	Need to set apart resources to support marketing initiatives and enhance visibility of the local BPO sub-sector	Ministry of ICT
	Inadequate human resources with advanced skills in ICT	Promote private sector investments in education for high level ICT skills and soft skills and retool skilled workforce	Ministry of Education Ministry in of ICT Private sector
	Low adoption of emerging technologies such as cloud computing and artificial intelligence	Promote adoption of emerging technologies, e.g. via public sector adoption	Ministry of ICT
	Increased cyber threats - Kenya is increasingly becoming attractive to cyber threats due to presence of high number of digital services and poor cyber security posture among institutions	Promote private sector led initiatives in capacity development/capacity building	Ministry of ICT
Tourism	Weak linkages between training institutions and the industry	Enhance linkages between training institutions and the industry through curriculum reviews and enhanced forum for interactions	Ministry of Tourism and Wildlife Ministry of Education

	Inadequate specialized training institutions	Increase number of specialized training institutions through budgetary allocations and licensing/approvals	Ministry of Tourism and Wildlife Ministry of Education National Treasury
	Congestion and hence erosion of the value of product offerings	Increase entry charges for prime locations	Ministry of Tourism and Wildlife
	Multiple taxation and levies	Streamline licensing across various institutions at the national and county government levels	All licensing institutions at the National and County Government levels
	Gradual driving out of locals in tourism value chains and limited inclusion of local Micro, Small and Medium Enterprises (MSMEs)	Promote community conservancies	County governments
	Coastal tourism – predictable product mix; i.e. lack product innovation/ diversification/ development	Enhance innovations in new products	All stakeholders involved in coastal tourism
	Limited availability of large venues for MICE subsector.	Fastrack the construction of larger venues at Nairobi and Mombasa cities.	National government and partners.
Crosscutting	Inadequate policies and regulations on net metering and wheeling system (particularly addressing issues of access from off grid solutions)	Put in place regulations that encompass guidelines on net metering	Ministry of Energy
	Absence of clear regulatory framework to promote best practices in infrastructure sharing among market players within and across sectors, which limits entry in markets and results in inefficiency	Incorporate within and across-sector infrastructure deployment in broadband policies; encourage cross-sector consultations for infrastructure developments, both urban and rural; provide sufficient financial support to ensure infrastructure sharing can take place where public works are undertaken by the government; create planning databases containing detailed information of infrastructure available for sharing	Ministry of Energy and all stakeholders involved
	The limited interoperability between mobile payment operators affects the ability of smaller players to grow thus potentially creating a monopoly	Enhance interoperability through moral suasion	Competition Authority of Kenya
<i>Source: KIPPRA study, 'Assessing the Scope of Industries Without Smokestacks to Create Jobs' (2021)</i>			

## Endnotes

1. Underemployment here encompasses individuals whose total work hours are less than 29 hours
2. In addition to adopting the ILO (2016) definition of the youth as those aged 15 to 24 years (to allow cross country comparisons), the Kenya case study also included the broader category of the 15 to 34 years to accommodate the Kenyan definition of 18 to 24 years to ensure the case study informs youth employment policy issues in Kenya.
3. Newfarmer, R., Page, J. and Tarp, F. (2018), Industries without smokestacks: Industrialization in Africa reconsidered. WIDER Studies in Development Economics. Oxford University Press.
4. <https://www.brookings.edu/research/exploring-new-sources-of-large-scale-job-creation-the-potential-role-of-industries-without-smokestacks/>.
5. World Bank Job Structure Tool, <https://datatopics.worldbank.org/JobsDiagnostics/jobs-tools.html>.
6. The elasticity can provide useful information regarding the economy's capacity to generate employment. When the elasticity is less than zero accompanied by positive output growth, we have labour destructing growth. Elasticities lying between zero and one imply we have both employment growth and productivity growth.

### About KIPPRA Policy Briefs

KIPPRA Policy Briefs are aimed at a wide dissemination of the Institute's policy research findings. The findings are expected to stimulate discussion and also build capacity in the public policy making process in Kenya.

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