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Assessing Labour Productivity for Kirinyaga County

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Overview of the County

Kirinyaga County is a member of Central Region and Economic Bloc (CEREB). The county is a non-ASAL county that experiences less than 10 per cent aridity. The county land size stands at 1,478 km² and has six Sub-Counties namely: Kirinyaga Central, Kirinyaga East, Kirinyaga West, Mwea East, Mwea West, and Mt. Kenya Forest.

Key Highlights

The productivity of Kirinyaga County is characterised by the following:

- (i) The service and agriculture sectors share dominate the gross value added. In agriculture livestock production is yet to be integrated to the value chains. Services sector is dominated by transportation and storage sub-sector. The industry sector has been declining with manufacturing dominating.
- (ii) The quality of labour requires nutritional sensitive programs to reduce stunting and child poverty and enhance transition to secondary school to enhance skills development.
- (iii) The essential infrastructure requires increased access to improved water, electricity, and internet connectivity.
- (iv) Employment is concentrated in the agriculture sector. Employment in manufacturing is in food, beverage and tobacco products and textiles and wear apparel. In the services sector, the wholesale and retail trade sub-sector has the highest share.
- (v) Labour productivity is highest in the services sector. The agriculture sector is characterised by fluctuating and decreasing maize yield which raises concerns over agriculture productivity. In the industry sector, manufacturing has the highest productivity, but a lot of the activities use low technology. In service sector, public administration, which is a non-market service dominates.

To enhance productivity

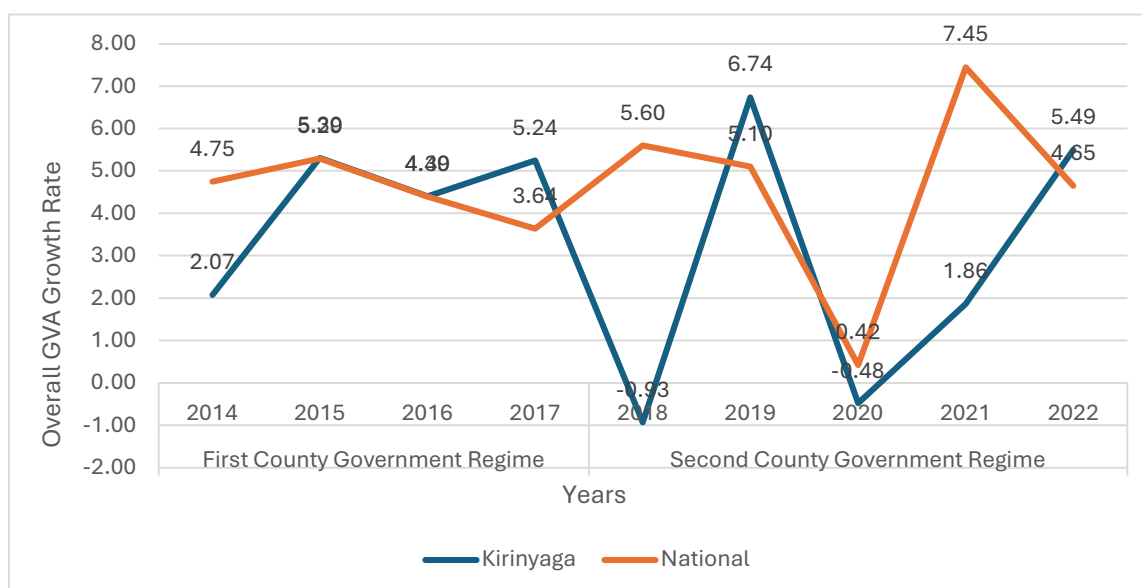
- (i) Agriculture transformation to prioritize integration of livestock production into the dairy and leather value chain and encourage emerging activities like apiculture and high value poultry farming.
- (ii) Create an enabling environment for private sector by investing in essential infrastructure including electricity and internet connectivity, and improved water.
- (iii) Enhance productivity of services sector by focusing on market-oriented activities including by attracting investment in hotel and accommodation to enhance tourism in MICE; and enhance safety in transport sub-sector by creating awareness and encouraging proper training of those involved in the sub-sector.

Kirinyaga County Economic performance

Kirinyaga County contributes on average to 1.3 per cent of the National Gross Value added with an average GVA of Ksh. 95,2411 million. The GVA per capita for Kirinyaga County is Ksh. 156,035.75 with an average population growth of 1.8 per cent and overall poverty levels at 19.3 per cent.

Kirinyaga County has shown a steady growth in GVA with an average growth rate of 3.30 per cent in 2013-2022, which is slightly lower than the national average growth of 4.37 per cent as shown in Figure 1. The highest growth rate was in 2019.

Figure 1: Kirinyaga County GVA growth rate

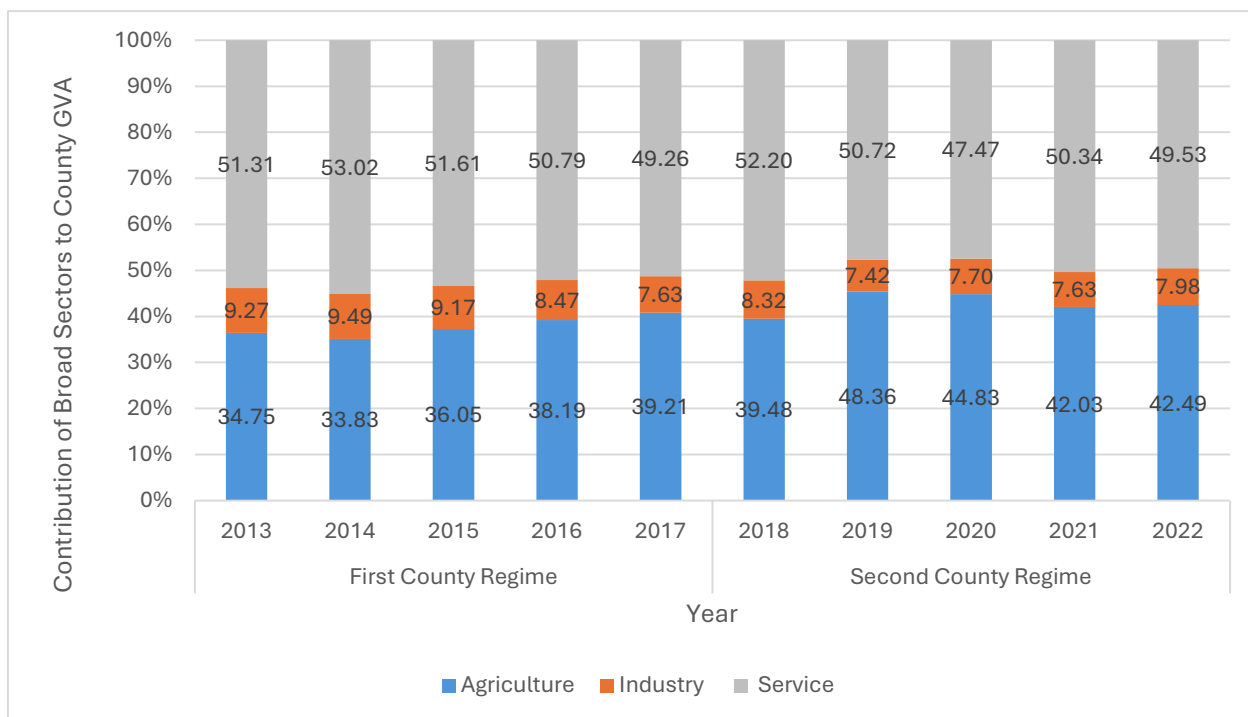


Data Source: KNBS 2023-Gross County Product

Sectoral Analysis of GVA

The services sector is dominant in Kirinyaga County with an average contribution to GVA of 50.62 per cent as shown in Figure 2. The agriculture sector is second, contributing an average of 39.92 per cent while industry contributes about 8.31 per cent.

Figure 2: Contribution of broad sectors to Kirinyaga County GVA

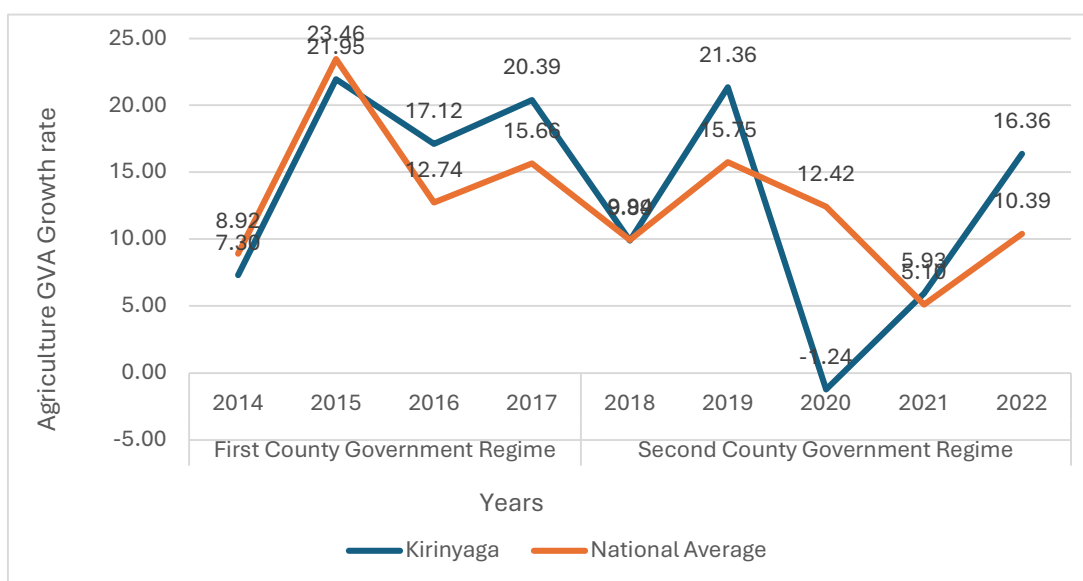


Data Source: KNBS 2023-Gross County Product

Agriculture Sector

The average growth rate of agriculture GVA in 2013-2022 is 13.23 per cent, which is above the national average of 12.71 per cent. The highest growth rate was in 2015 at 21.95 per cent while there was contraction in 2020 of -1.24 per cent as shown in Figure 3.

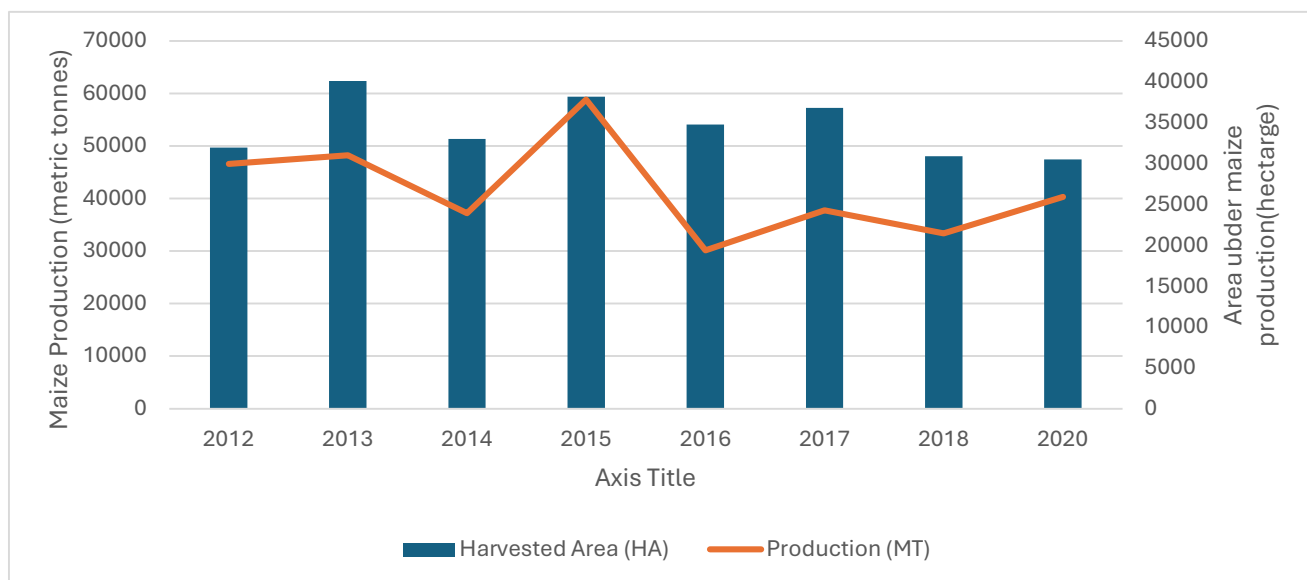
Figure 3: Kirinyaga County agriculture GVA growth rate



Data Source: KNBS 2023-Gross County Product

Crop production is the main sub-sector in Kirinyaga county, as the county is the largest producer of rice in the country. Maize, the main staple food in the country is also the main food crop produced in Kirinyaga County. Both the area of maize production and maize production (metric tonnes) have fluctuated over time. The highest area under maize production was in 2013 while the highest maize production was in 2015 (Figure 4).

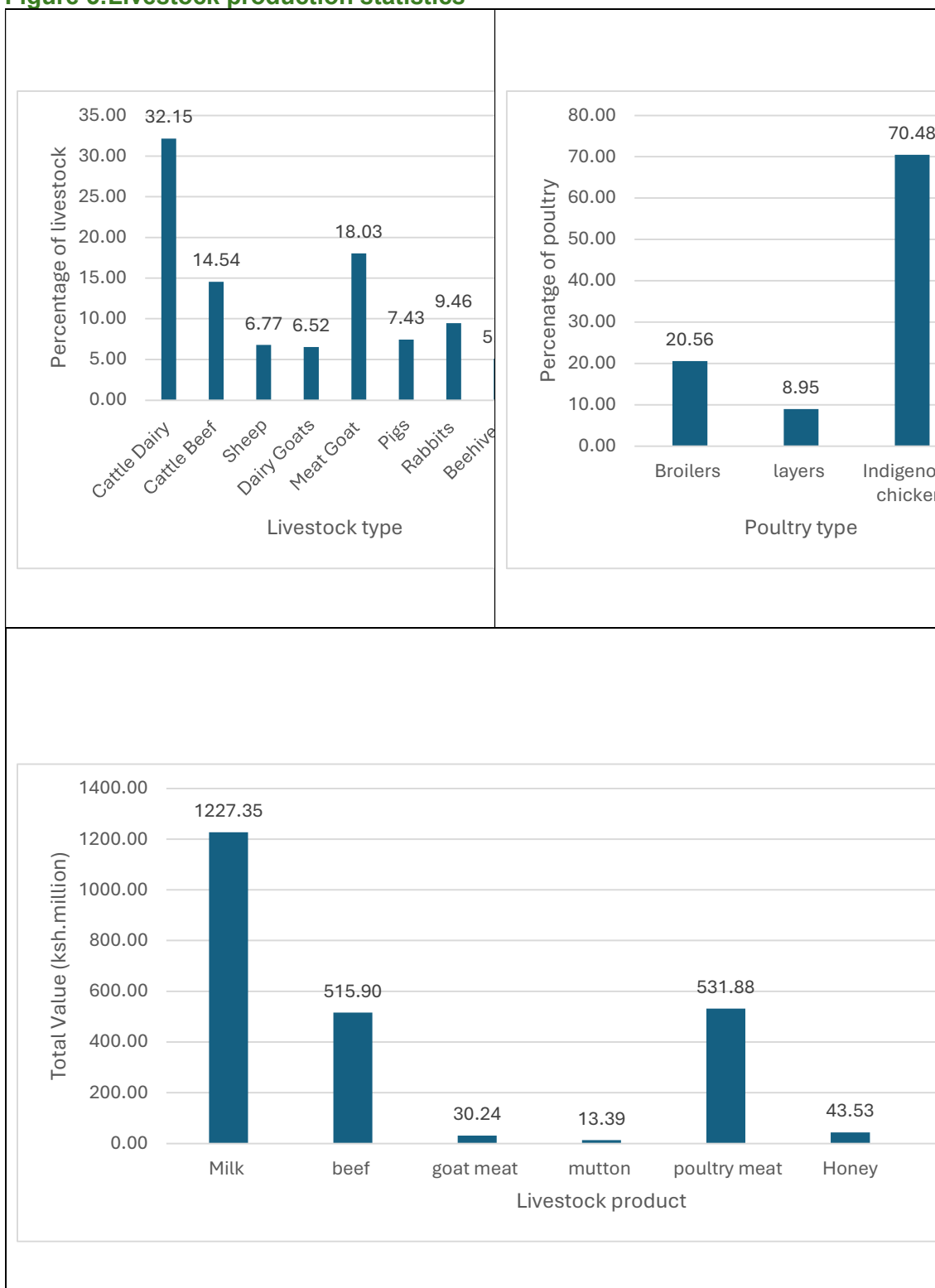
Figure 4:Maize production and average areas under maize production



Data source: National Information Platform for Food and Nutrition (NIPFN)

Although livestock production in Kirinyaga County is on a smaller scale when compared to crop production, the county has significant numbers of dairy cattle. Meat goats and beef cattle are also commonly reared in the county. Poultry production is relatively diversified although dominated by indigenous chicken. Kirinyaga County advantages in dairy farming is reflected in the high total value of milk (Figure 5).

Figure 5: Livestock production statistics

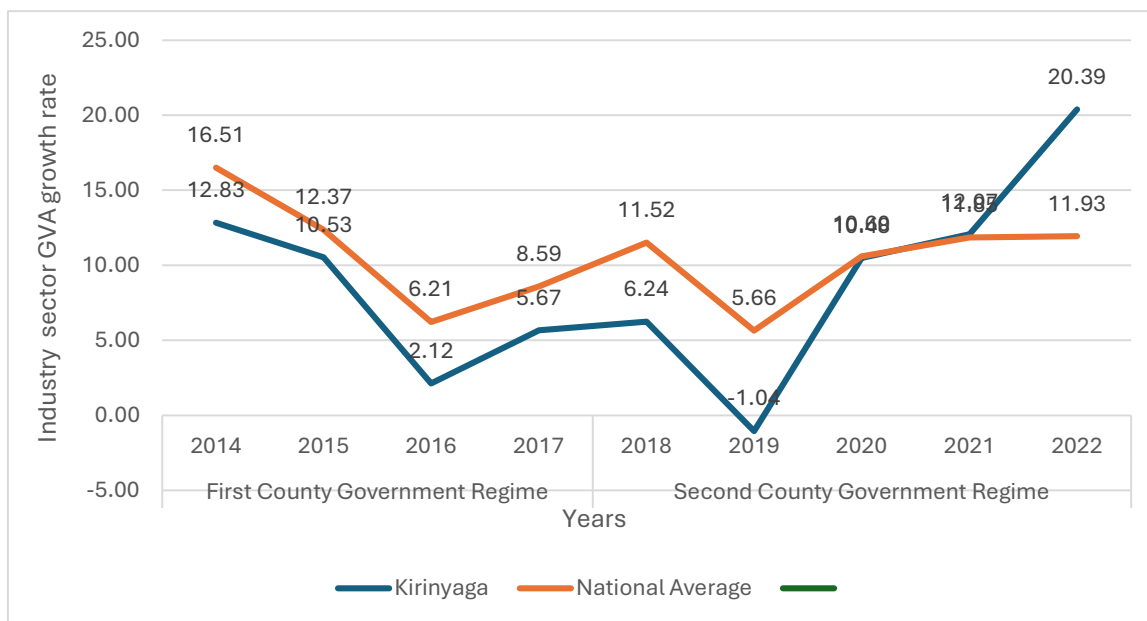


Data source: National Information Platform for Food and Nutrition (NIPFN)

Industry Sector

The average growth rate of the industry sector is 8.81 per cent, which is below the national average of 10.58 per cent as shown in Figure 6.

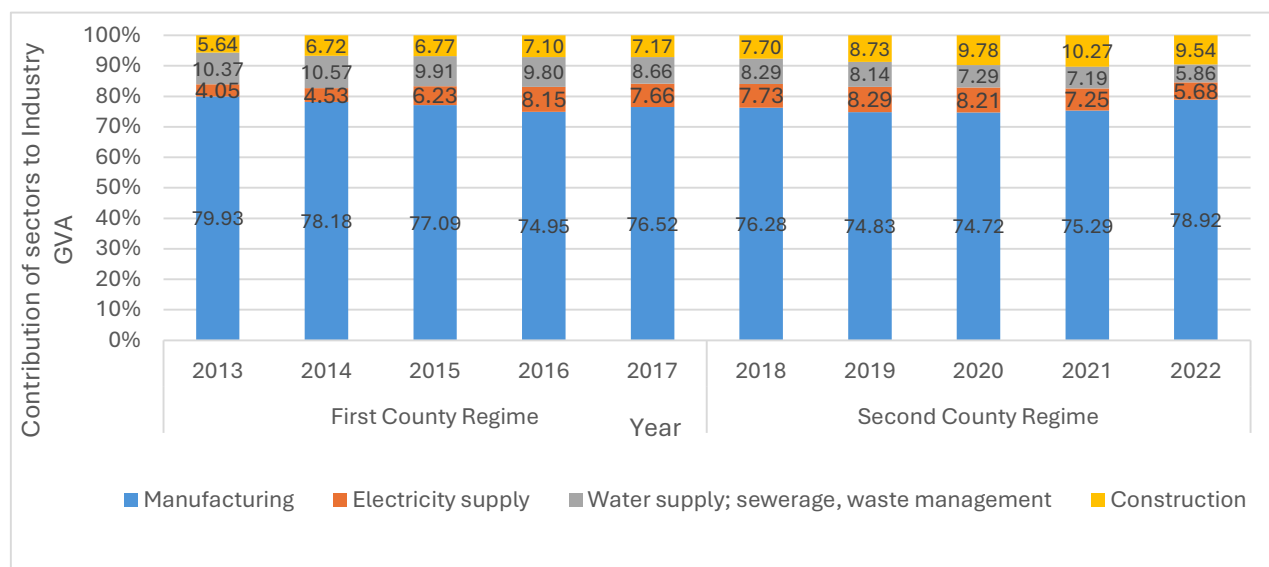
Figure 6: Kirinyaga County industry GVA growth rate



Data Source: KNBS 2023-Gross County Product

The manufacturing sub-sector dominates the industry sector as shown in Figure 7.

Figure 7: Contribution of industry sub-sectors to the industry sector GVA

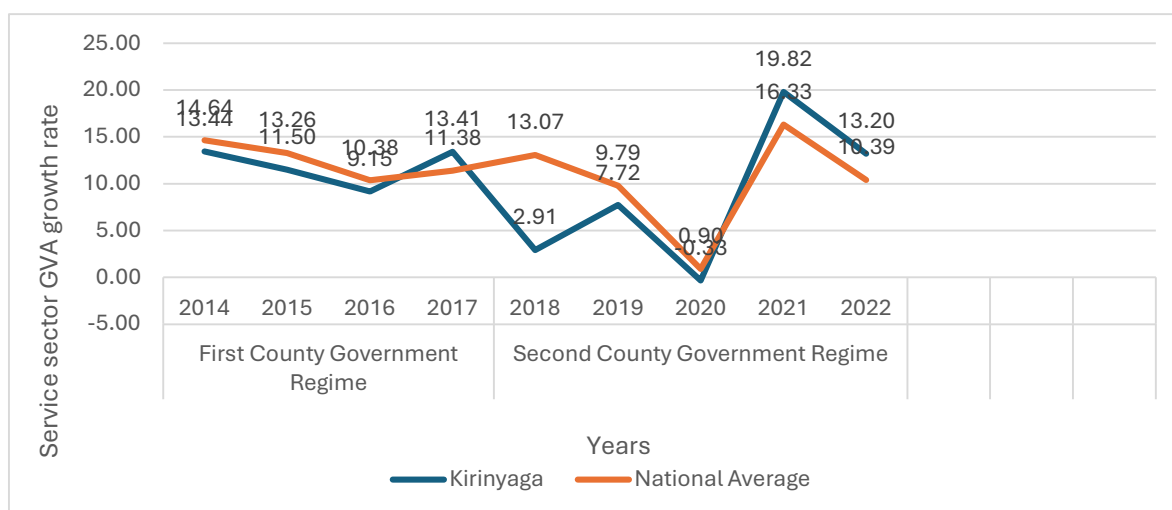


Data Source: KNBS 2023-Gross County Product

Services Sector

The average growth rate of the services sector is 9.55 per cent, which is below the national average of 11.13 per cent as shown in Figure 8.

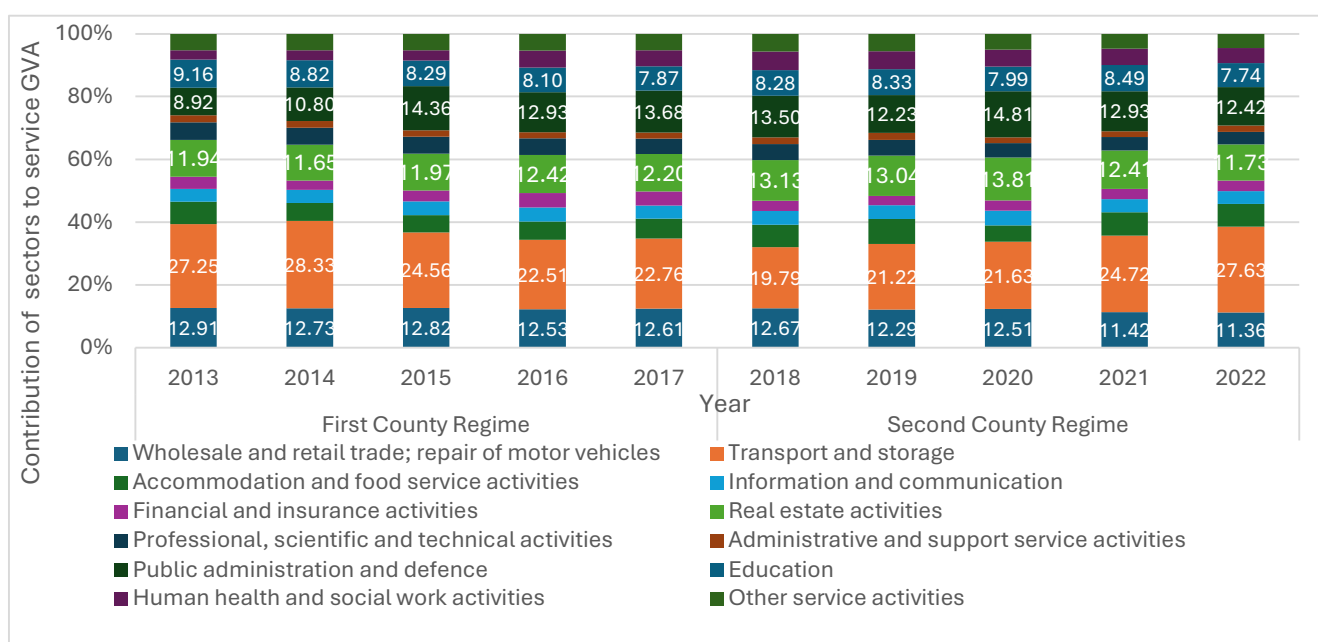
Figure 8: Kirinyaga County services sector GVA growth rate



Data Source: KNBS 2023-Gross County Product

The transportation and storage sub-sector dominates the services sector with the highest contribution to service GVA at 24.04 per cent. The public administration and defence sub-sector is the second highest contributor to services GVA at 12.66 per cent. The wholesale and retail trade sub-sector is third at an average of 12.38 per cent as shown in Figure 9.

Figure 9: Contribution of sub-sectors to service sector GVA



Data Source: KNBS 2023-Gross County Product

Quantity and Quality of Labour Force for Kirinyaga County

Kirinyaga County has a total of 394,928 working-age population, which is about 64.70 per cent of the total county population. Most of the working-age population is aged 35-64 years at 50.22 per cent as shown in Table 1.

Table 1: Distribution of the working-age population by age categories

Working age population	Male	Female	Total	Percentage of total working age population (%)
15-17	34,746	33,798	68,544	9.44
18 –24	60,469	63,754	124,223	17.07
25-34	68,414	75,061	143,475	23.27
35-64	99,749	98,580	198,329	50.22
Total	197,263	197,665	394,928	

Data Source: KNBS (2019), Kenya Population and Health Census - KPHC 2019

Most of the population in Kirinyaga sub-counties are persons in the working age categories. While Mount Kenya Forest has the lowest number of persons, most of them are of working age. Kirinyaga Central also has a higher percentage of working-age persons at 65.44 per cent as shown in Table 2.

Table 2: Sub-County distribution of working age population by age category

Sub- County	Total population	Working age population categories				Working age population (15-64) as a percentage of the total sub-county population
		15-17	18 –24	25 –34	35-64	
Kirinyaga Central	122,735	7,492 (9.33)	13,540 (16.86)	18,243 (22.71)	41,039 (51.10)	80,314 (65.44)
Kirinyaga East	135,551	8,073 (9.17)	13,621 (15.47)	18,431 (20.94)	47,896 (54.41)	88,021 (64.94)
Kirinyaga West	114,656	7,088 (9.79)	12,260 (16.93)	16,103 (22.23)	36,982 (51.06)	72,433 (63.17)
Mwea East	132,546	7,737 (8.92)	15,912 (18.35)	23,052 (26.58)	40,019 (46.15)	86,720 (65.43)
Mwea West	104,822	6,906 (10.25)	12,060 (17.90)	16,044 (23.81)	32,371 (48.04)	67,381 (64.28)
Mt. Kenya Forest	70	1 (1.69)	7 (11.86)	29 (49.15)	22 (37.29)	59 (84.29)

Data Source: KNBS (2019), Kenya Population and Health Census - KPHC 2019

Kirinyaga County performed well in socioeconomic indicators that affect the quality of labour as reported in Table 3.

Table 3: Human capital indicators

Human capital indicators	County	National Average
Literacy rate	89.10	78.41
Pre-primary net enrolment rate (2019)	86.60	67.51
Primary school net enrolment rate (2020)	89.70	77.72
Secondary school net enrolment rate (2020)	80.80	54.18
Average years of schooling (2014)	8.70	7.78
Percentage of children 12-23 months fully vaccinated (%)	92.30	74.97
Percentage of stunted children	11.20	19.75
Percentage of teenage pregnancy	7.30	15.79
Primary to secondary transition rates (2020)	92.30	86.13

Pupil-teacher ratio (primary school)	25.00	28.28
Food poverty head count (%)	18.90	33.63
Child poverty head count (%)	13.60	42.67

Source: KNBS (2022), Kenya Demographic and Health Survey - KDHS 2022; KNBS (2019), Kenya Population and Health Census - KPHC 2019; Ministry of Education (2020); 2021 Basic Education Statistical Booklet; KNBS 2021-Kenya Poverty Report

For Kirinyaga County the essential infrastructure and capital indicators that support the growth of county GVA performed higher than the national average (Table 4). However, interventions are needed to increase access to improved water and access to internet connectivity in secondary schools.

Table 4: Essential infrastructure and capital indicators

Essential infrastructure indicators	County	National average
Percentage of households with access to electricity (2019 Census)	65.30	38.52
Distribution of population using the Internet (2019 census)	24.10	18.69
Rural Access Index (2018)	97.73	63.72
Access to improved sanitation (2018)	85.00	59.04
Access to improved water (2018)	63.70	65.33
Financial inclusion level (2021)	92.20	81.01
The proportion of primary schools with internet	32.70	27.65
Proportion of secondary schools with functional internet	32.10	35.13
Percentage of households by housing material composite-finished materials(adequate) (2019)	72.92	51.71
Percentage of households using bank usage (overall)	47.10	38.18
Percentage of households using mobile money	87.90	78.58

Data Sources: KRB 2018, KPHC 2019, FinAccess 2021, KIHBS 2015/16, Basic Education Statistical Booklet, 2020

County Employment Statistics

Employment to population ratio is at 76.26 per cent. Most of those working are in the non-youth population (35-64 years) at 46.76 per cent while the youth (18- 34) are at about 28.92 per cent as shown in Table 5. The per centage of the employed by gender is 55.01 for male and 55.57 for female. The unemployment rate is at 4.45 per cent with unemployment higher for the youth (18-34 years) at 2.69 per cent and those between 35-64 years at 1.69 per cent.

The percentage of persons 5-17 years old working is 1.16 per cent indicating that the county has low levels of child labour. The inactivity rates are higher for the youth category (15-24 years) at 15.57 per cent while it is low for the persons of prime age (25-64 years) at 2.74 per cent.

Table 5: Kirinyaga County employment statistics

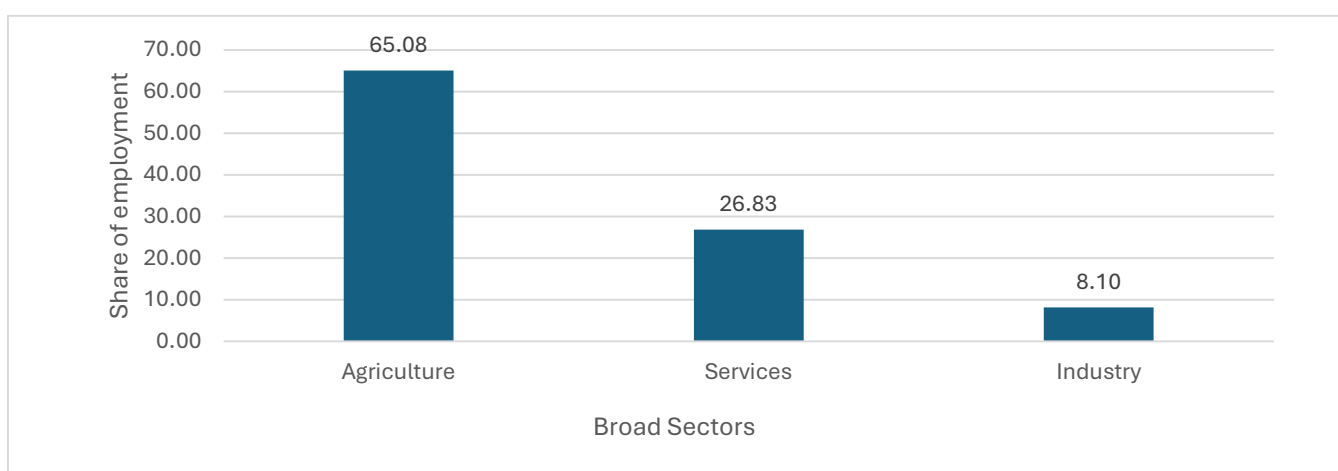
Employment statistics	Youth	Non youth
Employment to population ratio (%)	28.92	46.76
Unemployment rate	2.69	1.69
Percentage of persons 5–17 years old working	1.16	-
Inactivity rate	15.57	2.74

Data Source: Data Source: KNBS (2019), Kenya Population and Health Census - KPHC 2019

Sectoral Employment

The agriculture sector is the highest employer in Kirinyaga County at 65.08 per cent followed by the services sector at 26.83 per cent. The industry sector is third at 8.10 per cent as shown in Figure 10.

Figure 10: Percentage of persons employed in the broad sectors

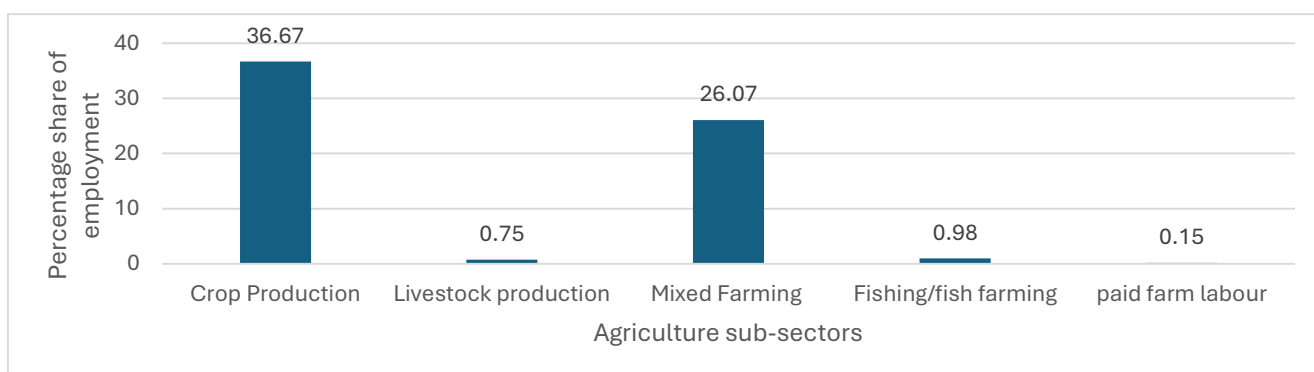


Data Source: KNBS 2021- Kenya Continuous Household Survey

Agriculture Sector Employment

In the agriculture sector, the majority are those practicing crop production (Figure 11). The crop grown is rice in the Mwea Irrigation scheme which is estimated to produce 114,000 metric tons annually. Both the National and the county government have been investing in growing the county's potential in rice production by increasing the area under irrigation and provision of hybrid seeds. Tea is also an important cash crop while maize is a key food crop in the county.

Figure 11: Percentage share of employment in agriculture sub-sectors

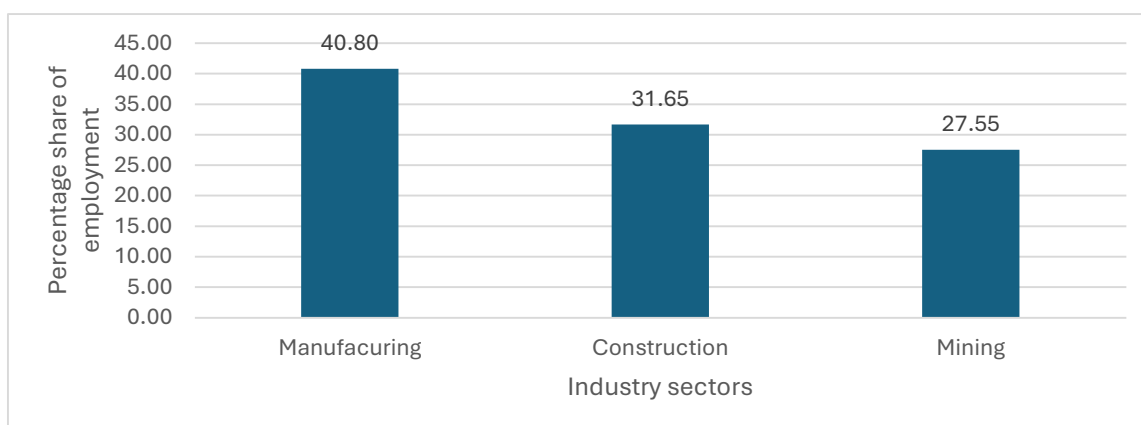


Data Source: KNBS 2021- Kenya Continuous Household Survey

Industry Sector Employment

The manufacturing sub-sector dominates the share of employment in the industry sector (Figure 12).

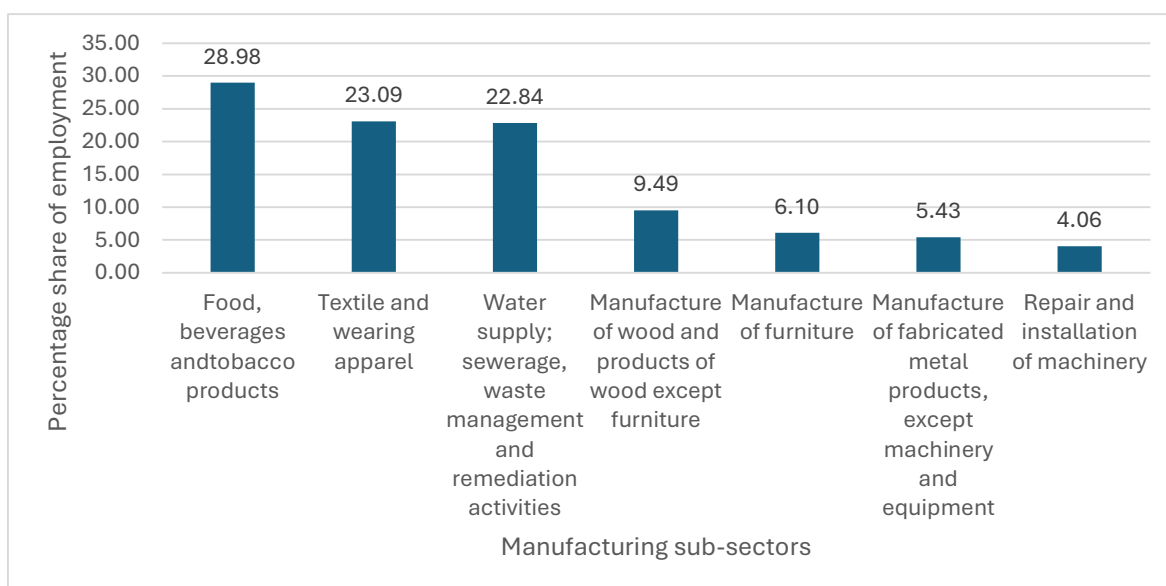
Figure 12: Percentage share of employment in the industry sectors



Data Source: KNBS 2021- Kenya Continuous Household Survey

A disaggregation of employment in manufacturing sub-sector shows that majority of those employed in the sector work in low-technology manufacturing sub-sectors such as agro-processing and textile industries as shown in Figure 13.

Figure 13: Percentage share of employment in manufacturing sub-sectors

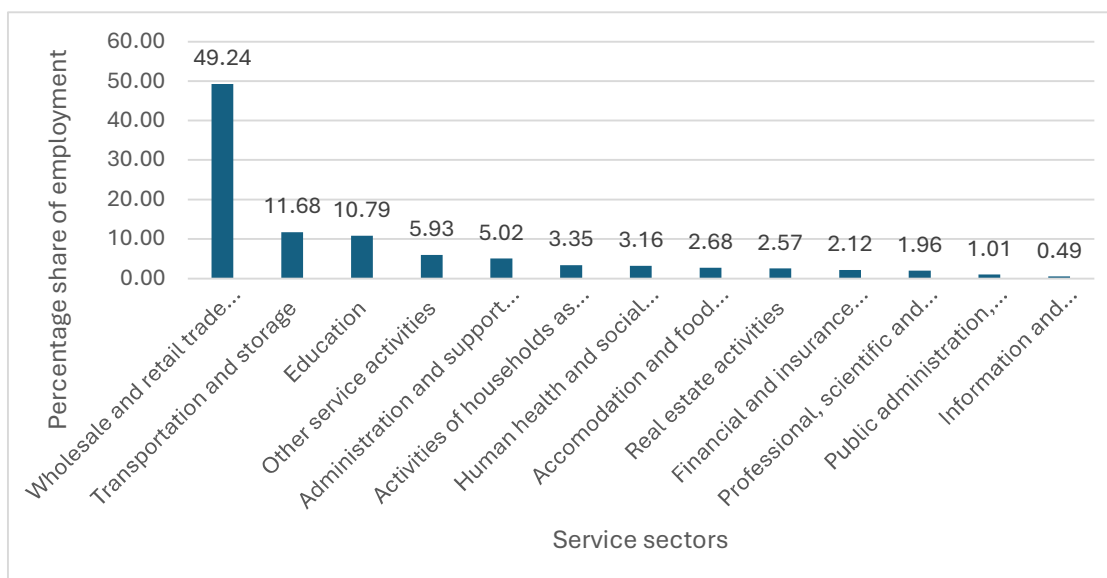


Data Source: KNBS 2021- Kenya Continuous Household Survey

Services Sector Employment

The majority of those working in the services sector work in wholesale and retail trade, followed by transportation and storage (Figure 14). Retailing and wholesaling industries represent the intermediate steps in the distribution of merchandise between producers and consumers of goods. Despite the higher share of employment in the service sector, the output of the sector remains low with the sector having high levels of informality.

Figure 14: Percentage share of employment in the service sector



Data Source: KNBS 2021- Kenya Continuous Household Survey

In the wholesale and retail trade and repair of motor vehicle and motorcycles sub-sector, the majority work in the retail of food, beverages and tobacco products as show in Figure 15.

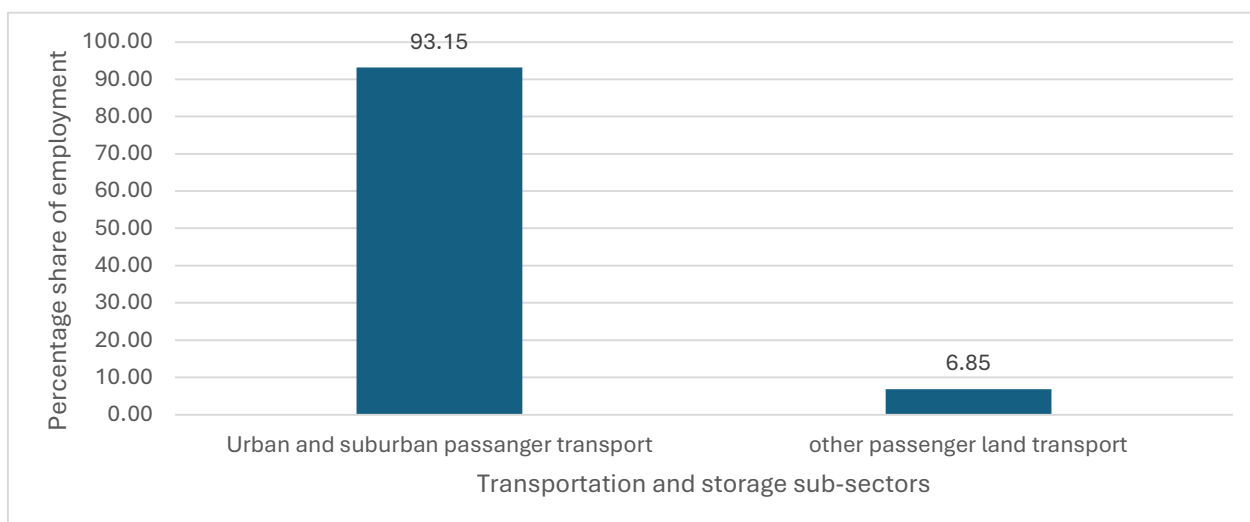
Figure 15: Percentage of persons employed in the wholesale and retail trade; repair of motor vehicle sub-sectors



Data Source: KNBS 2021- Kenya Continuous Household Survey

In the transportation and storage sub-sector, the majority of those employed are in the urban and suburban passenger land transport as shown in Figure 16.

Figure 16 : Percentage share of employment in the transportation and storage sub-sectors



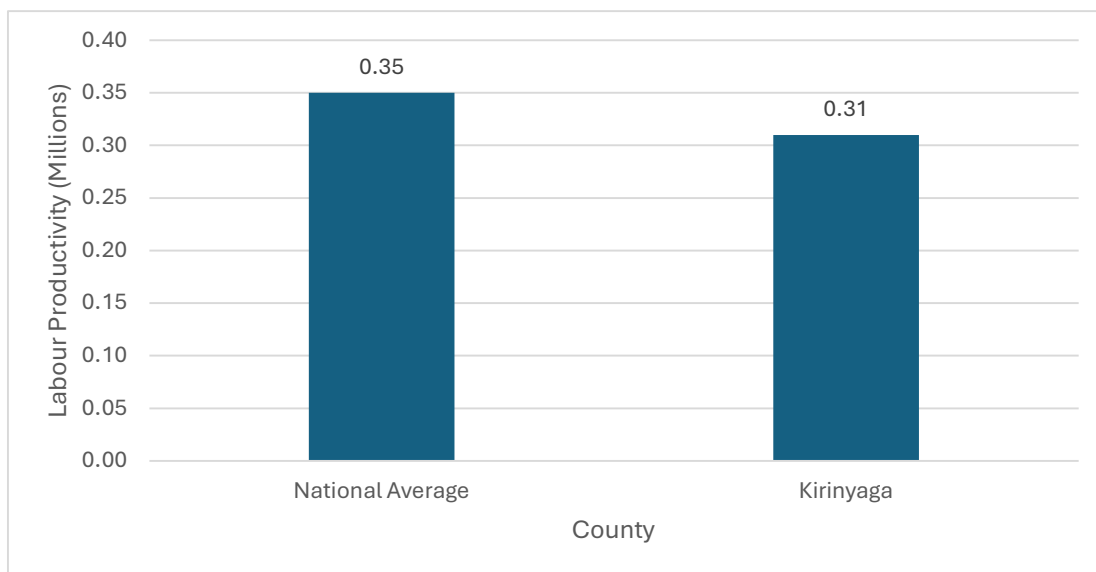
Data Source: KNBS 2021- Kenya Continuous Household Survey

Labour Productivity

Labour productivity¹ for Kirinyaga County is lower than the national average (Figure 17).

¹ The measure used is the apparent labour productivity measured as gross value added per person employed.

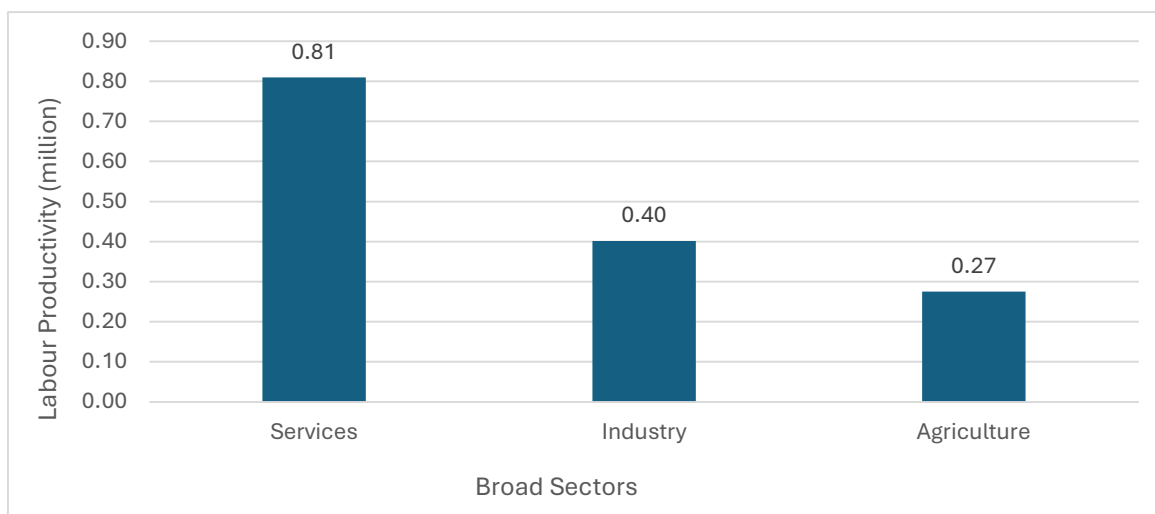
Figure 17: Labour productivity ratios (millions)



Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

The services sector had the highest productivity followed by the industry sector while the agriculture sector has the least labour productivity (Figure 18).

Figure 18: Labour productivity by sectors

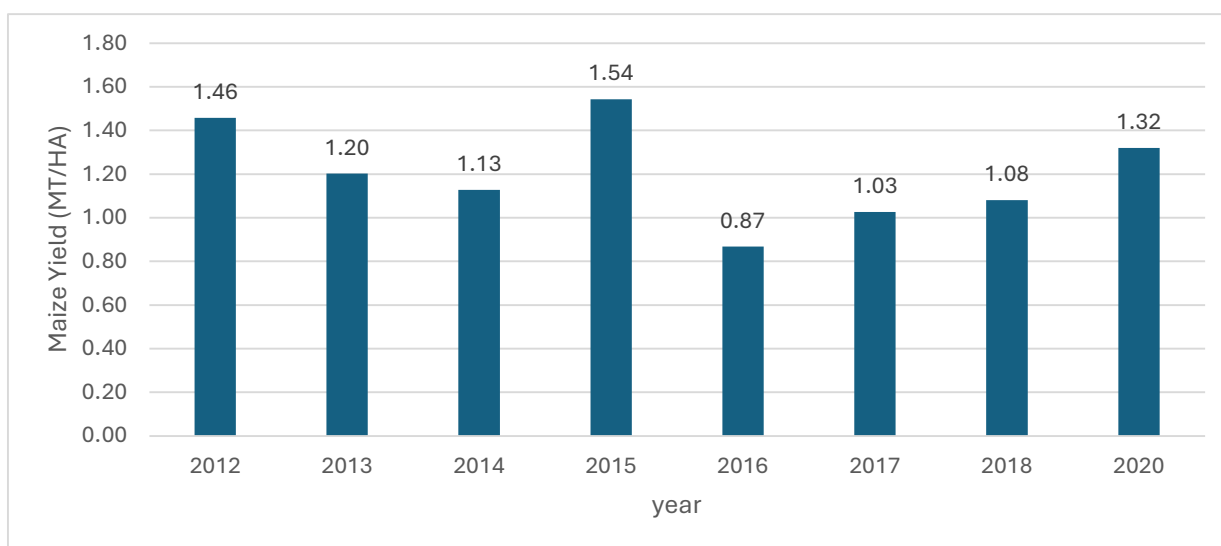


Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

Agriculture productivity

In the agriculture sector, maize productivity has remained fluctuated over the years with an average yield of 1.20 MT/HA (Figure 19). The lowest yields were in 2016 attributable to the fall armyworm invasion.

Figure 19: Maize yield (MT/HA)

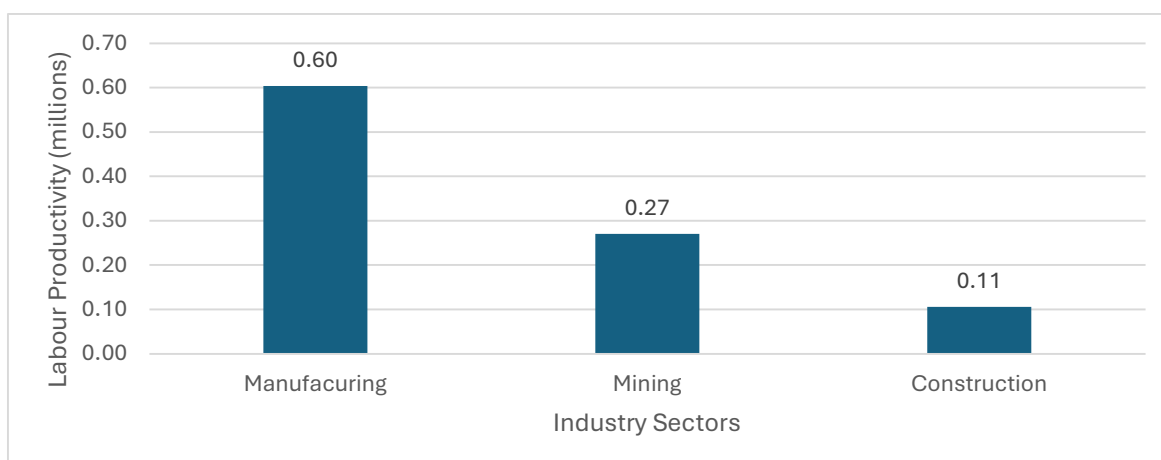


Data source: National Information Platform for Food and Nutrition (NIPFN)

Industry Sector Labour Productivity

In the industry sector, manufacturing sub-sector showed higher labour productivity (Figure 20).

Figure 20: Labour productivity by industry sectors

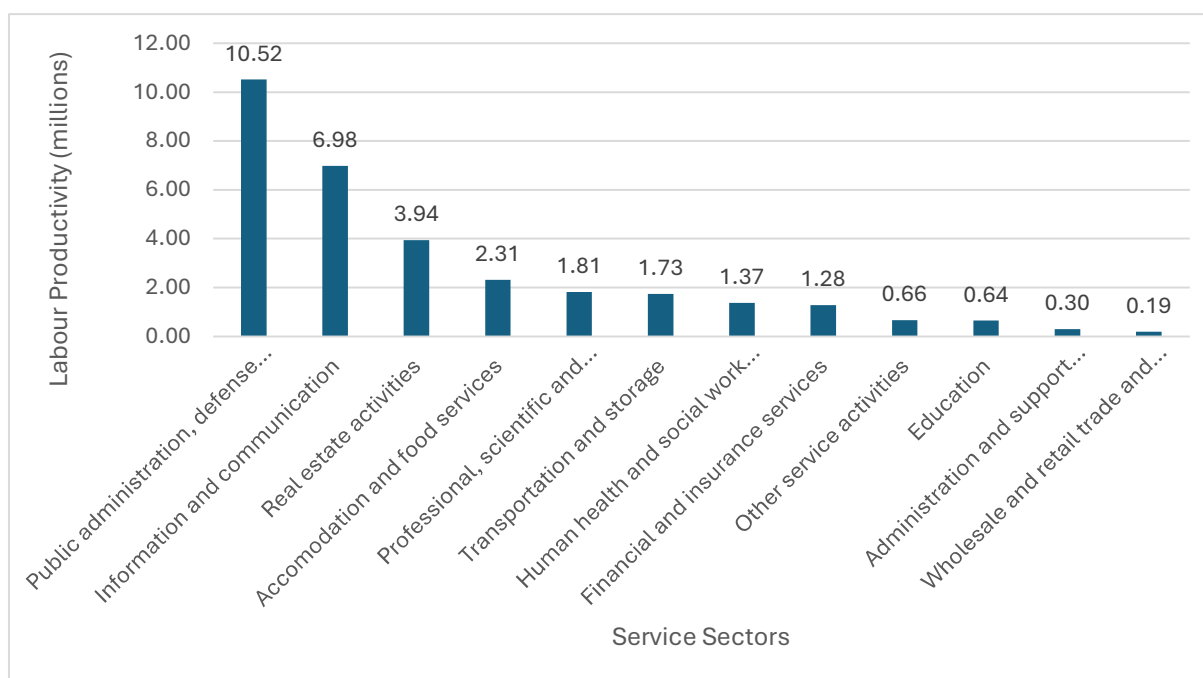


Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

Services Sector Labour Productivity

The public administration and defence sub-sector which is a non-market service has the highest labour productivity while among the market services, transportation and storage has the highest labour productivity. The wholesale and retail trade sector which had the highest employment in the services sector had the lowest labour productivity as shown in Figure 21.

Figure 21: Labour productivity in services sectors



Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

Key Messages

- (i) The service and agriculture sectors have highest share of county GVA. The agriculture sector is dominated by crop production while livestock is mainly in dairy cattle with little integration to the value chains. Poultry farming is diversifying, and apiculture is an emerging sector. Services sector is dominated by transportation and storage. The industry sector has been declining with manufacturing dominating.
- (ii) The indicators of quality of labour are higher than the national average. However, attention is needed on nutritional sensitive programs to reduce stunting and child poverty. Further, it is important to achieve 100 per cent transition to secondary school to enhance skills development.
- (iii) The essential infrastructure and capital indicators that support the growth of county GVA performed higher than the national average. However, interventions are needed to increase access to improved water, electricity and internet connectivity.
- (iv) Employment is concentrated in agriculture sector with the industry sector having the least share of employment. In the industry sector, employment is mostly in manufacturing of food, beverage and tobacco products and textiles and wear apparel. In the services sector, the wholesale and retail trade have the highest share of employment with the retail sale of food beverages and tobacco product being the dominant subsector.
- (v) Labour productivity is lower than the national average. The services sector has the highest labour productivity while agriculture has the lowest labour productivity. Agriculture is characterized by fluctuating and decreasing maize yield which

raises concerns over agriculture productivity. In industry, manufacturing has the highest productivity, but a lot of the activities use low technology. In service sector, public administration, which is a non-market service dominates.

Policy Recommendations

- (i) Agriculture transformation is a priority. This including integrating livestock production into the dairy and leather value chain; improving maize and rice yields with provision of necessary irrigation infrastructure and subsidized farm inputs; encouraging emerging activities in apiculture and high value poultry farming.
- (ii) Create an enabling environment for private sector growth by investing in essential infrastructure including electricity and internet connectivity, and improved water.
- (iii) Enhance productivity of services sector with a focus on market-oriented activities by skilling on food safety, preservation, and processing with the majority of those in wholesale and retail trade sector are engaged in retail sale of food and beverages services sub-sector; attracting investment in hotel and accommodation to enhance tourism in MICE; and enhance safety in transport sub-sector by creating awareness and encouraging proper training of those involved in the sub-sector.

Acknowledgement

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