



# Policy Brief

*Thinking Policy Together*

**No. 53/2023-2024**

## **Assessing Labour Productivity for Siaya County**

*By Cecilia Naeku and Esther Irungu*

### **Overview of the County**

Siaya County is a member of the Lake Region Economic Bloc (LREB). The county is a non-ASAL county that experiences less than 10 per cent aridity. The county land size stands at 2,496 km<sup>2</sup>. The county has six Sub-Counties namely: Siaya, Gem, Ugenya, Ugunja, Bondo, and Rarieda.

### **Key Highlights**

The productivity of Siaya County is characterised by the following:

- (i) The share of the services sector in the gross value added is the highest. In agriculture, fishing is an important activity and the potential for maize should be fully exploited. Goats dominate livestock production for meat while milk has a larger share of the livestock products. Poultry is diversifying and apiculture has the potential to transform agriculture.
- (ii) The quality of labour requires efforts to address the elevated level of teenage pregnancies, child poverty, and stunting to improve the quality of labour and promote decent work.
- (iii) The essential infrastructure requires investments in internet connectivity, access to electricity, improved sanitation and water, and housing.
- (iv) The agriculture sector has the highest share of employment which is engaged in mixed farming while fishing has the potential to create jobs. Manufacturing is a significant employer in the textile sector. In the services sector, transportation and storage have the highest employment rates.
- (v) Labour productivity is highest in the service sector has the highest productivity while agriculture has the lowest. In the agriculture sector, maize yield has been declining. In industry, the construction has the highest I productivity. In the services sector real estate activities have the highest productivity.

To enhance productivity:

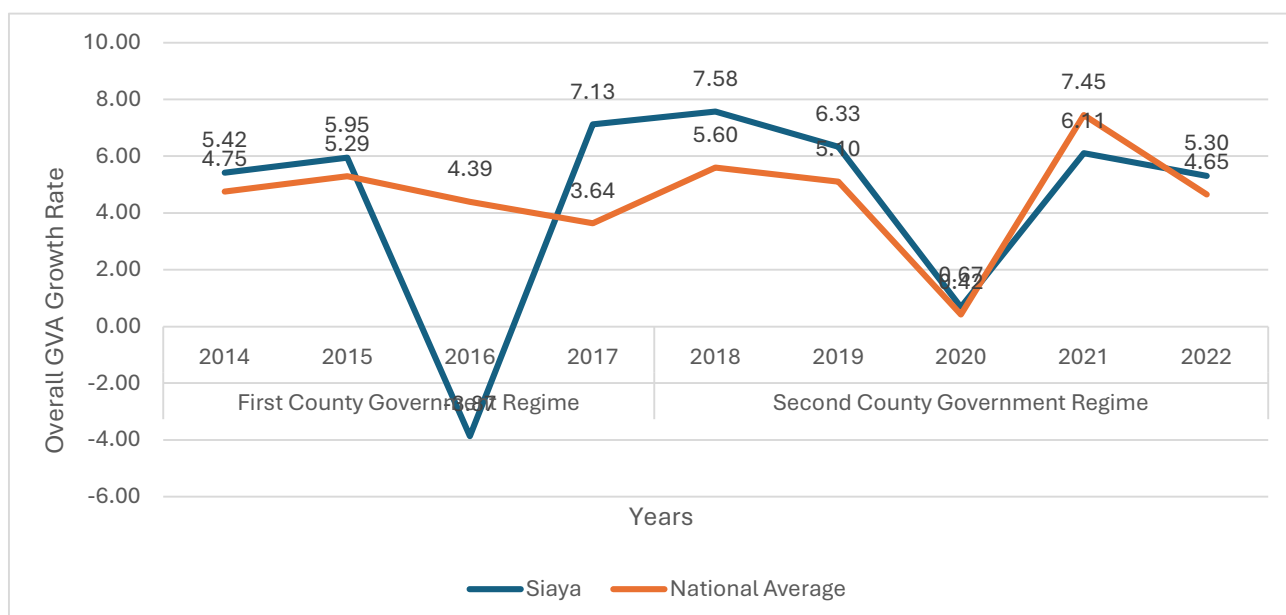
- (i) Improve the investment climate to attract private investments by providing internet connectivity, access to electricity, and improved sanitation and water. Further, invest in housing to increase the potential to multiply employment opportunities.
- (ii) Enhance agriculture productivity by enhancing integration to relevant value chains including leather, dairy, poultry, and apiculture. Increase agro processing including fish processing to enhance agriculture productivity and promote manufacturing. Further, unlock potential for crop production including in maize.
- (iii) Improve the quality of labour by supporting the teenage mother to go back to school and implementing nutritional programmes that work to reduce stunting. Also, improve on secondary school transition to enhance formal skills development.

### Siaya County Economic Performance

Siaya County contributes on average to 1.0 per cent of the National Gross Value added with an average GVA of Ksh 75,7006 million. The GVA per capita for Siaya County is Ksh 76,221.5745 with an average population growth of 1.7 per cent and overall poverty levels at 34.2 per cent.

Siaya County has shown a steady growth in GVA with an average growth rate of 4.51 per cent from 2013-2022 which is higher than the national average growth of 4.37 per cent as shown in Figure 1. The highest growth rate was in 2018 and the lowest growth rate in 2016.

**Figure 1: Siaya County GVA growth rate**

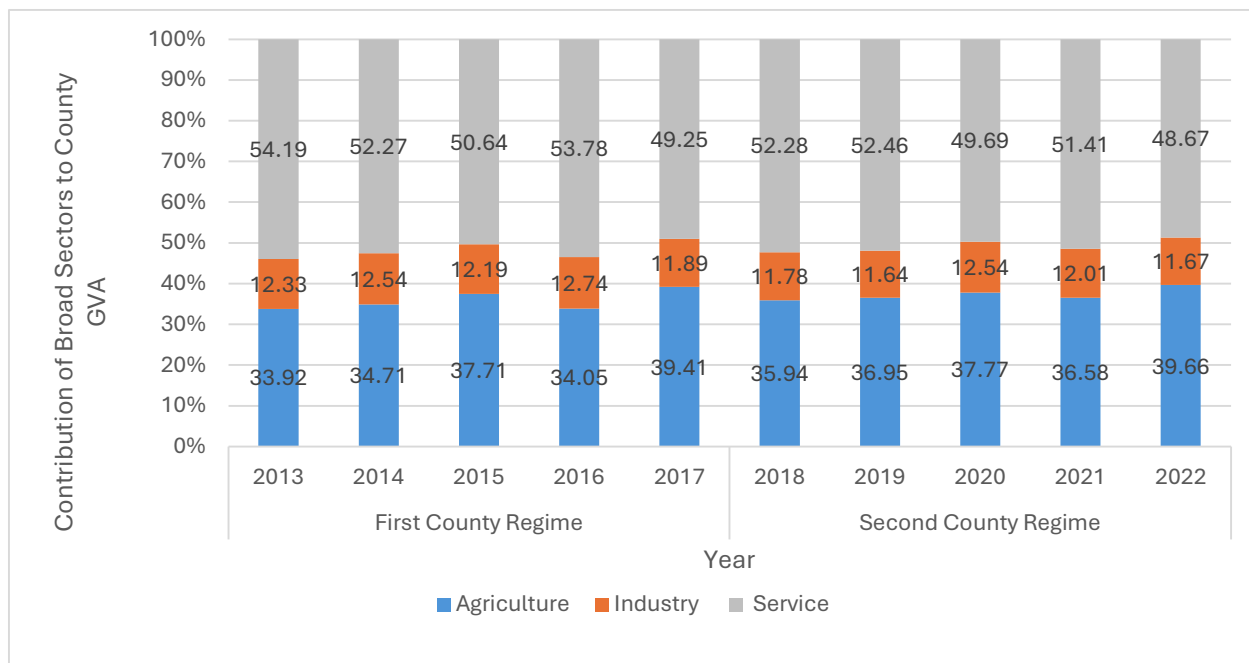


Data Source: KNBS 2023-Gross County Product

## Sectoral Analysis of GVA

The services sector is dominant in Siaya County with an average contribution to GVA of 51.46 per cent. The agriculture sector is second, contributing an average of 36.67 per cent to the GVA while industry contributes about 12.13 per cent as shown in Figure 2.

**Figure 2: Contribution of broad sectors to Siaya County GVA**

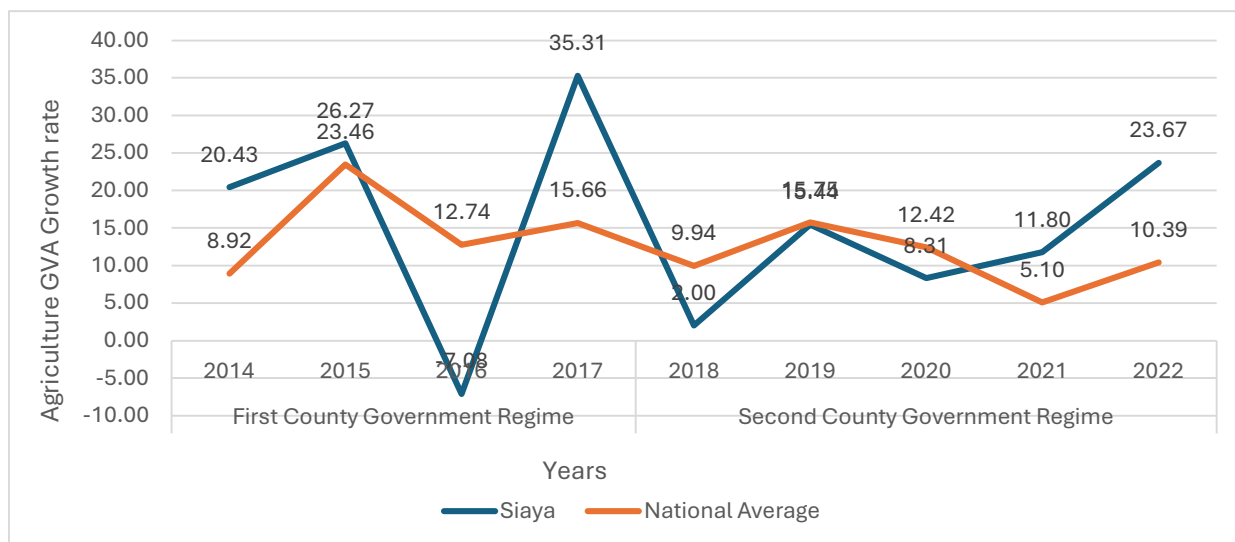


Data Source: KNBS 2023-Gross County Product

## Agriculture Sector

The average growth rate of agriculture sector GVA in 2013-2022 is 15.13 per cent, above the national average of 12.71 per cent as shown in Figure 3.

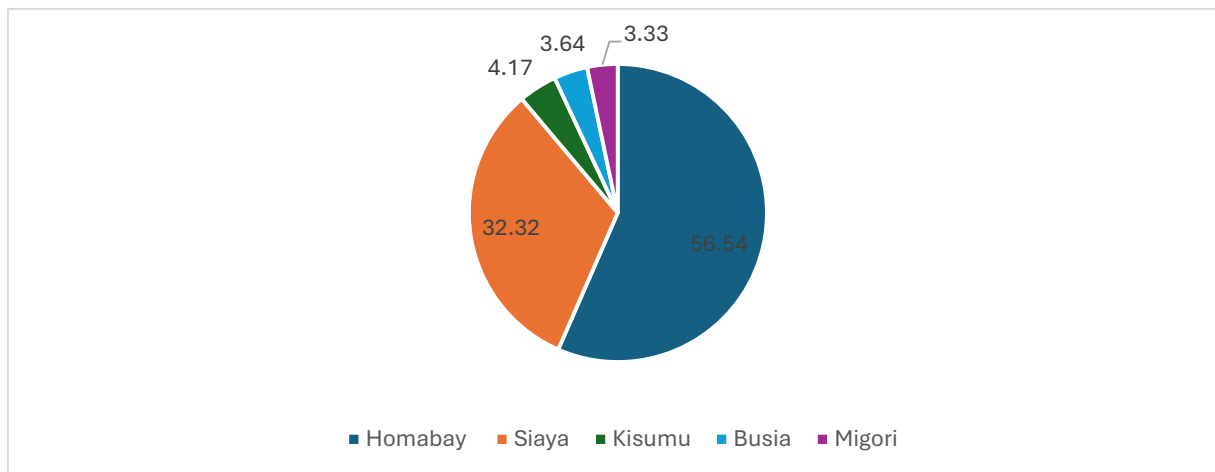
**Figure 3: Siaya County agriculture GVA growth rate**



Data Source: KNBS 2023-Gross County Product

Fishing is an important source of livelihood as the county is among those along the Lake Victoria riparian. Available statistics on fisheries showed that Siaya County accounted for the second highest total weight of fish caught in Lake Victoria at 32.32 per cent as shown in Figure 4.

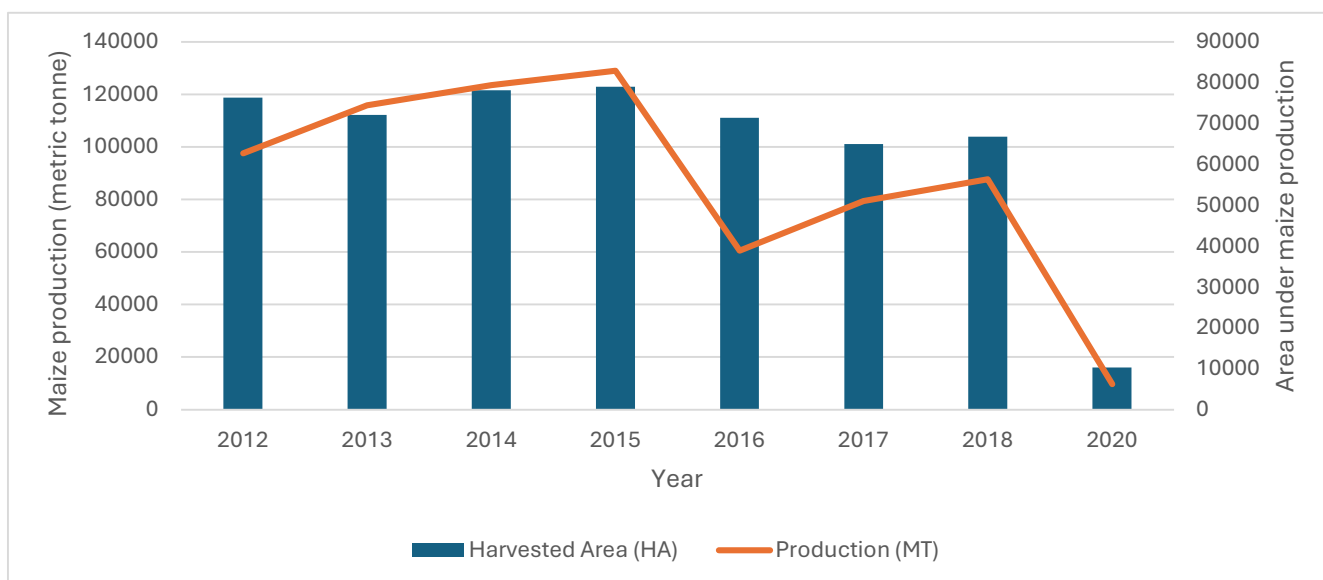
**Figure 4: Fish weight caught per riparian county in 2021**



Data source: State Department for Fisheries (2021)

Maize, the main staple food in the country is also the main food crop produced in Siaya County. Both the area under maize production and maize production (metric tonnes) have been increasing over the years, maize production has been decreasing over the years, the lowest declines being in 2020 (Figure 5).

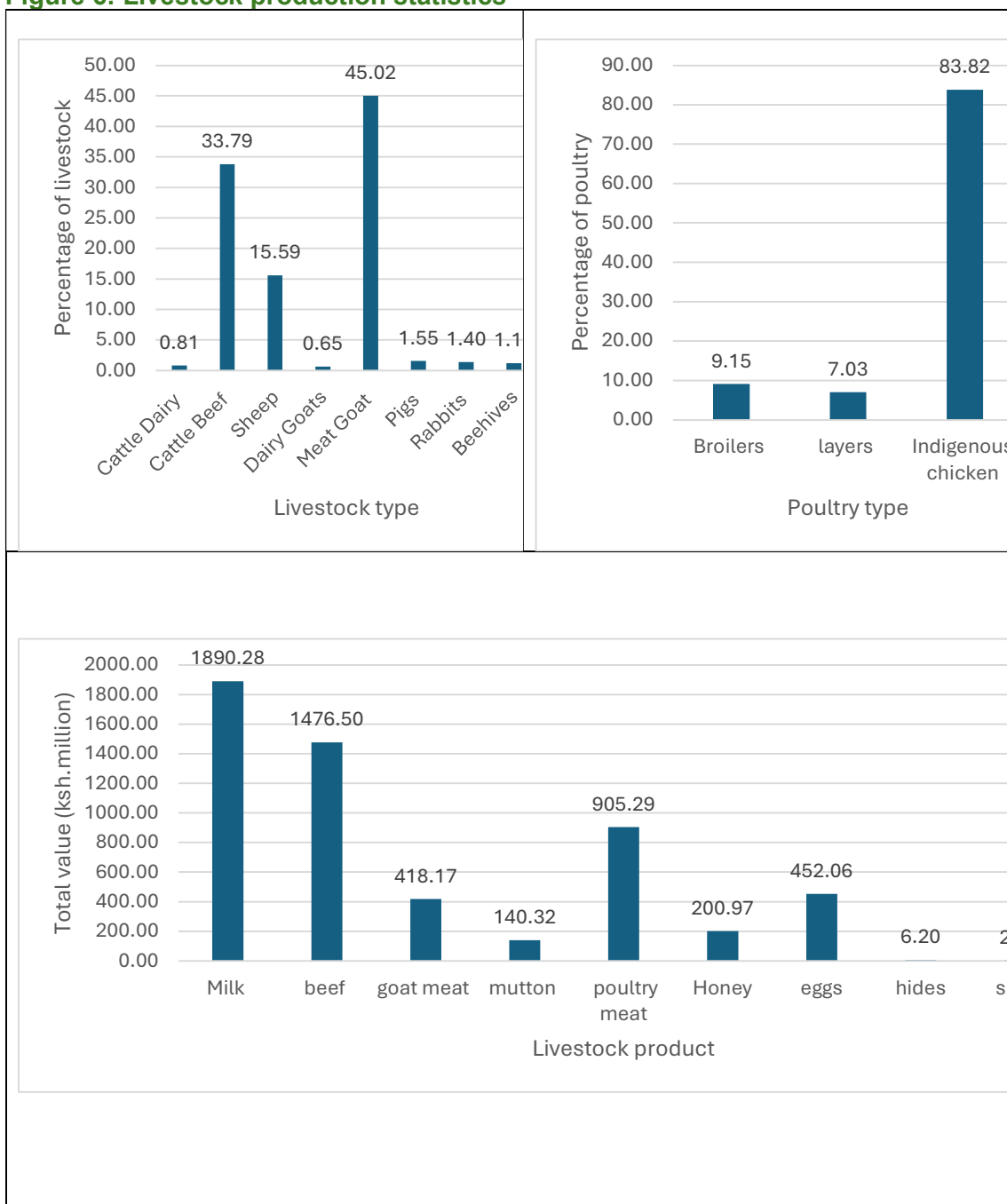
**Figure 5: Maize production and area under maize production**



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

Livestock production in Siaya County is on a smaller scale when compared to crop production. The most common type of livestock kept are beef cattle and meat goats. Indigenous chicken dominates poultry production. Milk and beef have the highest total value in the county (Figure 6).

**Figure 6: Livestock production statistics**

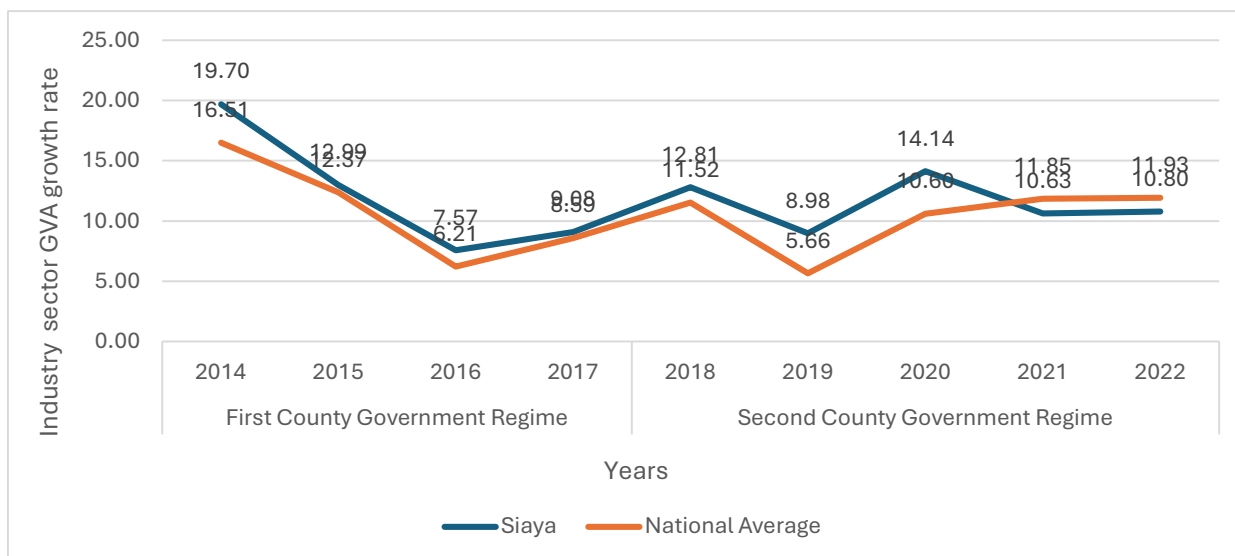


Data source: National Information Platform for Food and Nutrition (NIPFN)

**Industry Sector**

The average growth rate of industry sector is 11.86 per cent which is above the national average of 10.58 per cent as shown in Figure 7.

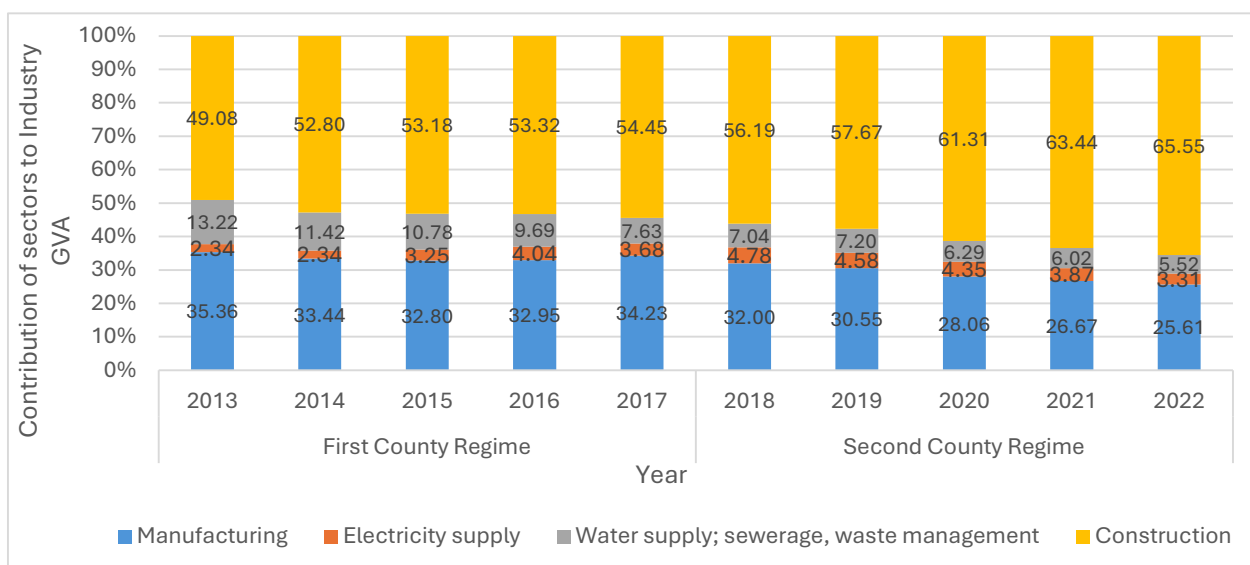
**Figure 7: Siaya County industry GVA growth rate**



Data Source: KNBS 2023-Gross County Product

Construction sub-sector dominates the industry sector as the contribution from manufacturing declines as shown in Figure 8.

**Figure 8: Contribution of industry sub-sectors to Industry GVA**

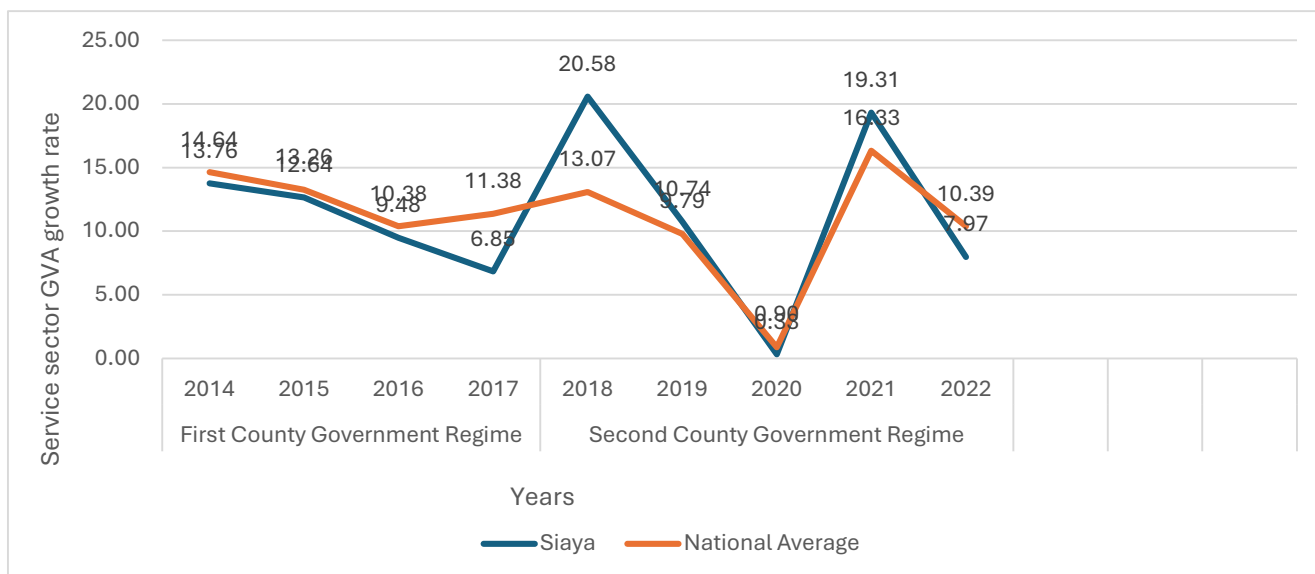


Data Source: KNBS 2023-Gross County Product

### Services Sector

The average services sector growth rate is 8.22 per cent which is below the national average of 11.13 per cent as shown in Figure 9.

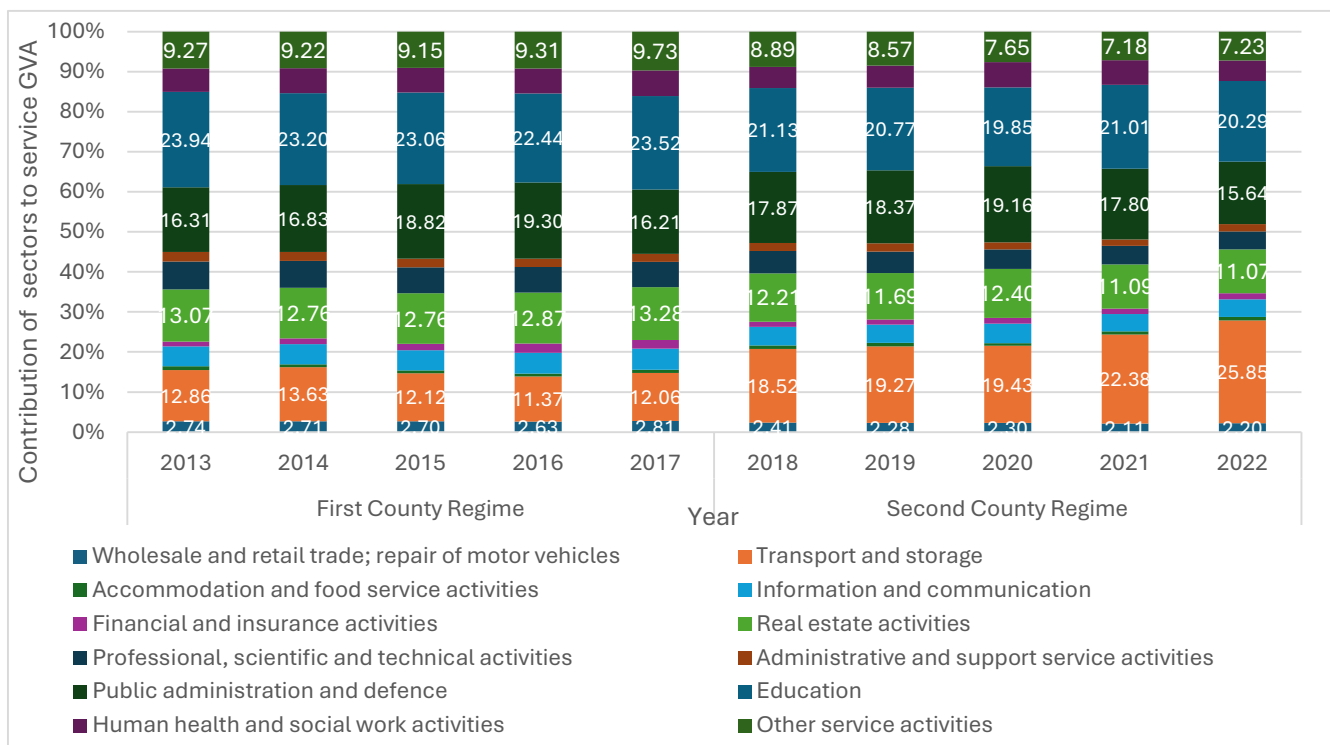
**Figure 9: Siaya County services sector GVA growth rate**



Data Source: KNBS 2023-Gross County Product

The education sub-sector dominates the services sector with the highest contribution to service GVA at 21.92 per cent. The public administration and defence sub-sector is the second highest contributor to services sector GVA at 17.63 per cent. The transportation and storage sub-sector is third at an average of 16.75 per cent as shown in Figure 10.

**Figure 10: Contribution of sub-sectors to services sector GVA**



Data Source: KNBS 2023-Gross County Product

## Quantity and Quality of Labour Force for Siaya County

Siaya County has a total working-age population of 523,060, about 52.67 per cent of the county population. Most of the working-age population is youthful (18-34 years) at 47.95 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	38,976	37,887	76,863	14.69
18 –24	56,742	63,426	120,168	22.97
25-34	58,042	72,585	130,627	24.97
35-64	89,398	106,004	195,402	37.36
<b>Total</b>	<b>243,158</b>	<b>279,902</b>	<b>523,060</b>	

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

Most of the population in Siaya sub-counties are persons in the working age categories. Bondo has the highest percentage of working-age persons at 54.83 per cent as observed below 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	
Siaya	224,339	16,936 (14.43)	26,576 (22.64)	29,142 (24.82)	44,744 (38.11)	117,398 (52.33)
Gem	179,788	14,062 (15.05)	20,806 (22.26)	21,537 (23.05)	37,046 (39.64)	93,451 (51.98)
Ugenya	134,350	11,192 (16.21)	15,348 (22.23)	15,373 (22.26)	27,143 (39.31)	69,056 (51.40)
Ugunja	104,241	8,395 (15.39)	12,082 (22.15)	13,037 (23.90)	21,024 (38.55)	54,538 (52.32)
Bondo	197,879	14,245 (13.13)	27,004 (24.89)	31,422 (28.96)	35,830 (33.02)	108,501 (54.83)
Rarieda	152,568	12,033 (15.02)	18,352 (22.91)	20,116 (25.11)	29,615 (36.97)	80,116 (52.51)

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

Siaya County performed high in the socioeconomic indicators that affect the quality of labour, however, more interventions can reduce the percentage of teenage pregnancy as shown (Table 3).



**Table 3: Human capital indicators**

Human capital indicators	County	National average
Literacy rate	88.70	78.41
Pre-primary net enrolment rate (2019)	79.84	67.51
Primary school net enrolment rate (2020)	82.20	77.72
Secondary school net enrolment rate (2020)	71.40	54.18
Average years of schooling (2014)	7.60	7.78
Percentage of children 12-23 months fully vaccinated (%)	78.00	74.97
Percentage of stunted children	19.00	19.75
Percentage of teenage pregnancy	20.90	15.79
Primary to secondary transition rates (2020)	86.70	86.13
Pupil-teacher ratio (Primary school)	36.00	28.28
Food poverty head count (%)	23.10	33.63
Child poverty head count (%)	33.60	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

Some of the essential infrastructure and capital indicators in Siaya County performed above the national average. Interventions are, however, needed to increase access to electricity, internet at the household level and at schools, access to improved water and sanitation and quality housing as shown in Table 4.

**Table 4: Essential infrastructure and capital indicators**

Essential infrastructure indicators	County	National average
Percentage of households with access to electricity (2019 Census)	19.70	38.52
Distribution of Population using the Internet (2019 census)	14.90	18.69
Rural Access Index (2018)	78.50	63.72
Access to improved sanitation (2018)	44.00	59.04
Access to improved water (2018)	57.10	65.33
Financial inclusion level (2021)	83.80	81.01
The proportion of Primary Schools with Internet	16.65	27.65
Proportion of secondary schools with functional internet	23.00	35.13
Percentage of households by housing material composite-finished materials(adequate) (2019)	45.24	51.71
Percentage of Households using bank usage (overall)	51.40	38.18
Percentage of Households using mobile money	81.80	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 high at 67.75 per cent. Most of those working is the non-youth working population (35-64 years) at 34.37 per cent while for the youth (18-34 years) is at 32.24 per cent as shown in Table 5. The percentage of the employed by gender is 39.04 for males and 43.87 for females. The unemployment rate is at 4.13 per cent with unemployment being slightly higher for the youth (18-34 years) at 2.78 per cent and those between 35-64 years at 1.27 per cent. The percentage of persons 5–17 years old working is 3.27 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 24.09 per cent, as they

are pursuing schooling while low for the persons of prime age (25-64 years) at 3.50 per cent.

**Table 5: Siaya County employment statistics**

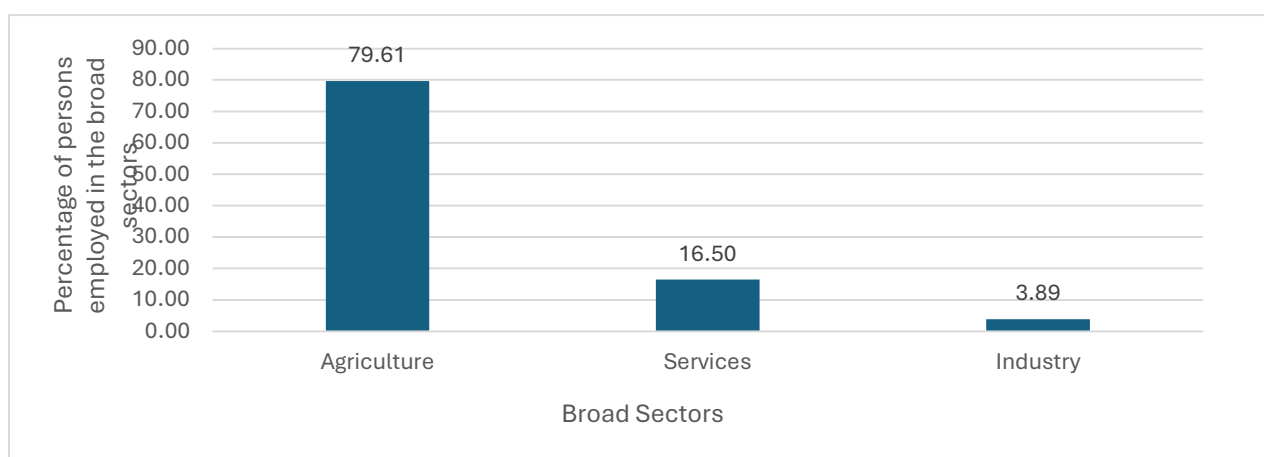
Employment statistics	Youth	Non youth
Employment to population ratio (%)	32.24	34.37
Unemployment rate	2.78	1.27
Percentage of persons 5-17 years old working	3.27	-
Inactivity rate	24.09	3.50

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

### Sectoral Employment

The agriculture sector is the highest employer in Siaya County at 79.61 per cent followed by the services sector at 16.50 per cent. The industry sector is third at 3.89 per cent as shown in Figure 11.

**Figure 11: Percentage of persons employed in the broad sectors**

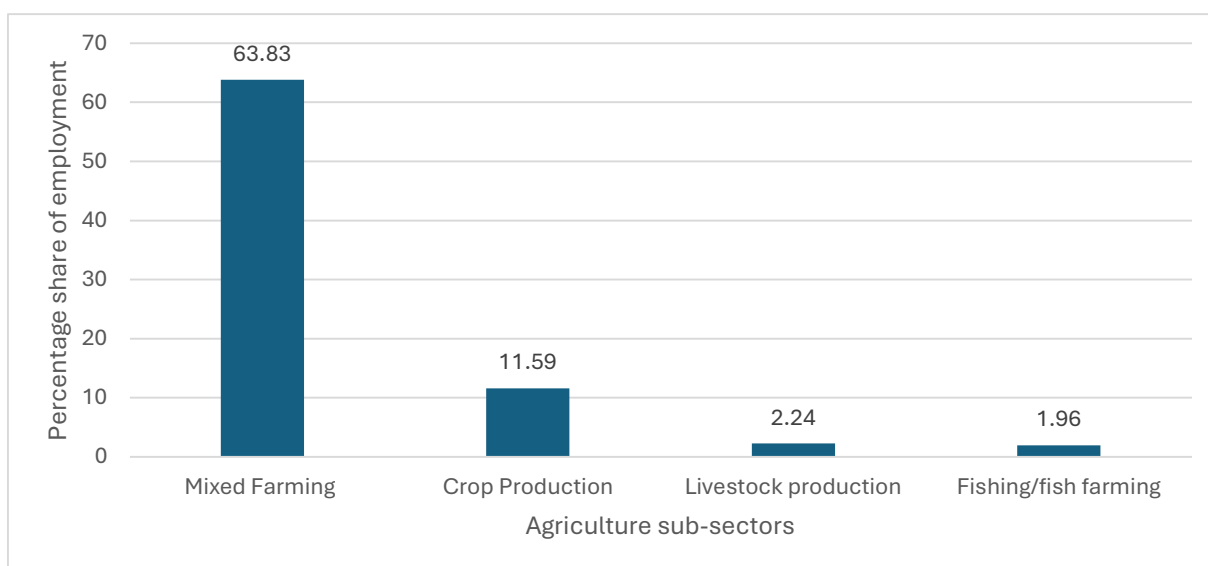


Data Source: KNBS 2021- Kenya Continuous Household Survey

### Agriculture Sector Employment

In agriculture sector, the majority are those practicing mixed farming as shown below in Figure 12. Despite the fisheries potential, fishing has the least share of employment.

**Figure 12: Percentage share of employment in agriculture sub-sectors**

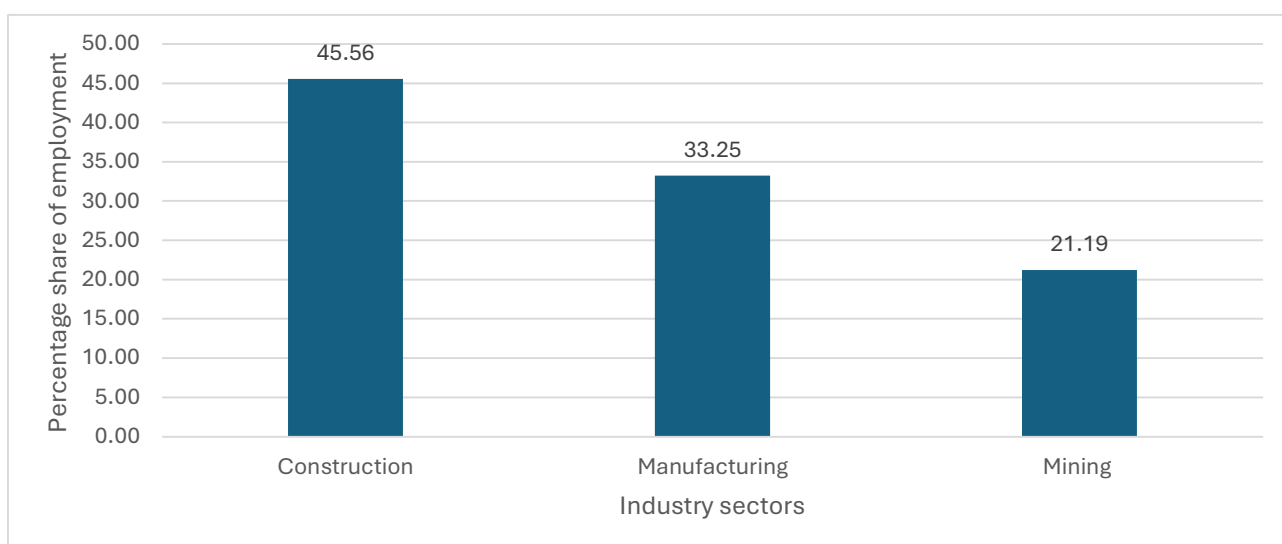


*Data Source: KNBS 2021- Kenya Continuous Household Survey*

### Industry Sector Employment

The majority of those working in the industry sector are in the construction of buildings. Mining includes mining of iron ores and other non-ferrous metals and quarrying of stones as shown in Figure 13.

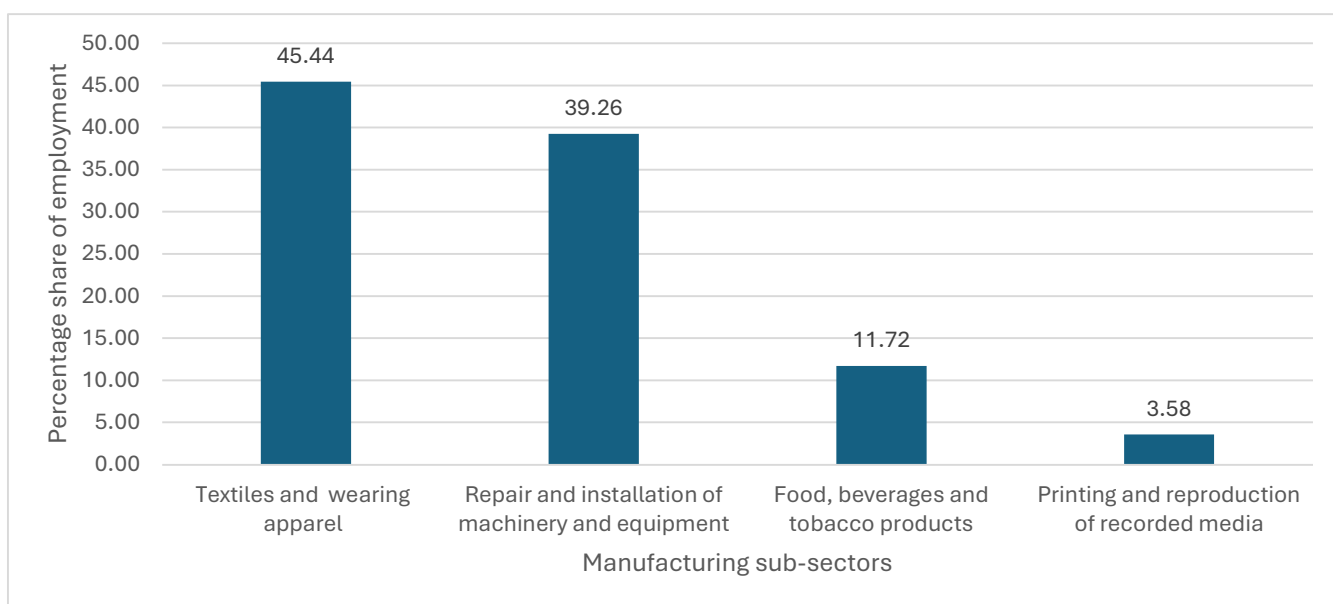
**Figure 13: Percentage share of employment in the industry sectors**



*Data Source: KNBS 2021- Kenya Continuous Household Survey*

A disaggregation of employment in manufacturing shows that the majority of those employed in the sector work in low-technology manufacturing sub-sectors such as textile and repairs and installation industries as shown in Figure 14.

**Figure 14: Percentage share of employment in manufacturing sub-sectors**

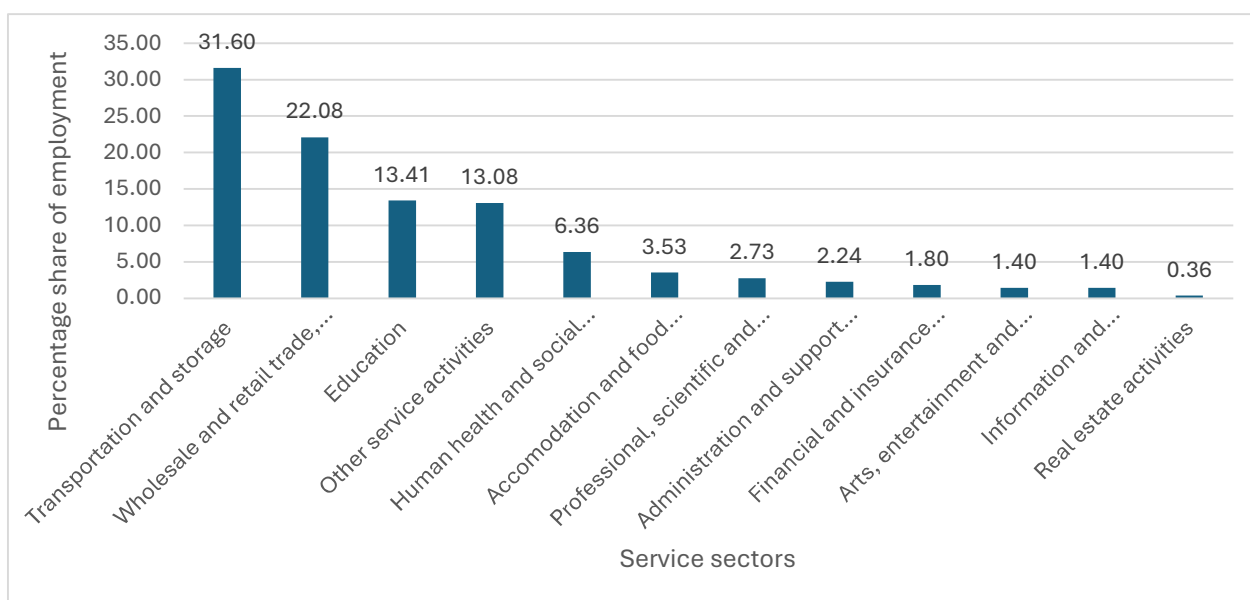


Data Source: KNBS 2021- Kenya Continuous Household Survey

### Services Sector Employment

The majority of those working in the services sector are in transportation and storage sub-sector as indicated in Figure 15.

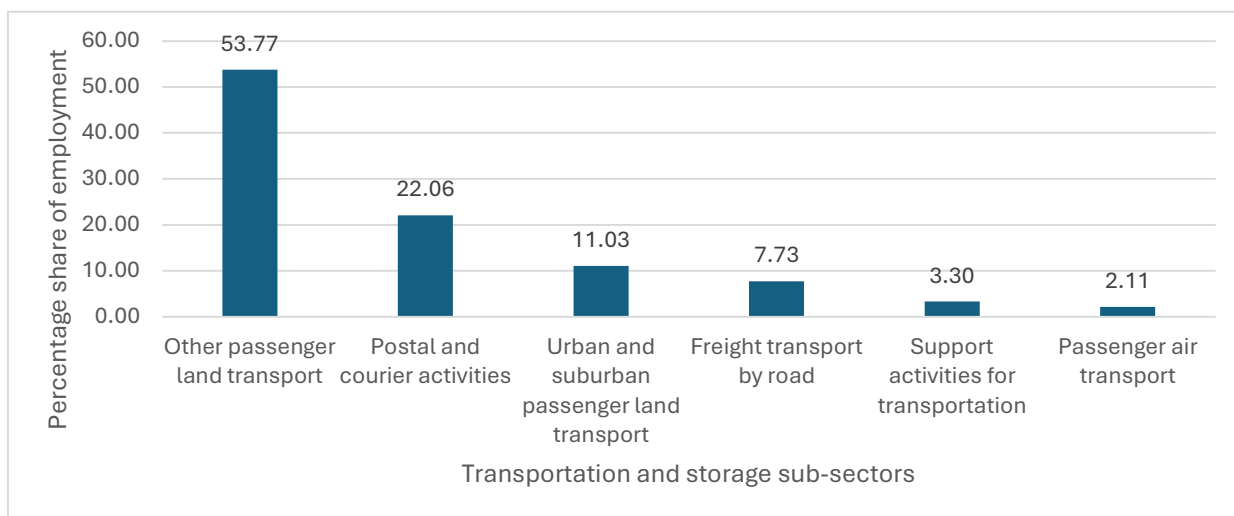
**Figure 15: Percentage share of employment in the services sector**



Data Source: KNBS 2021- Kenya Continuous Household Survey

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

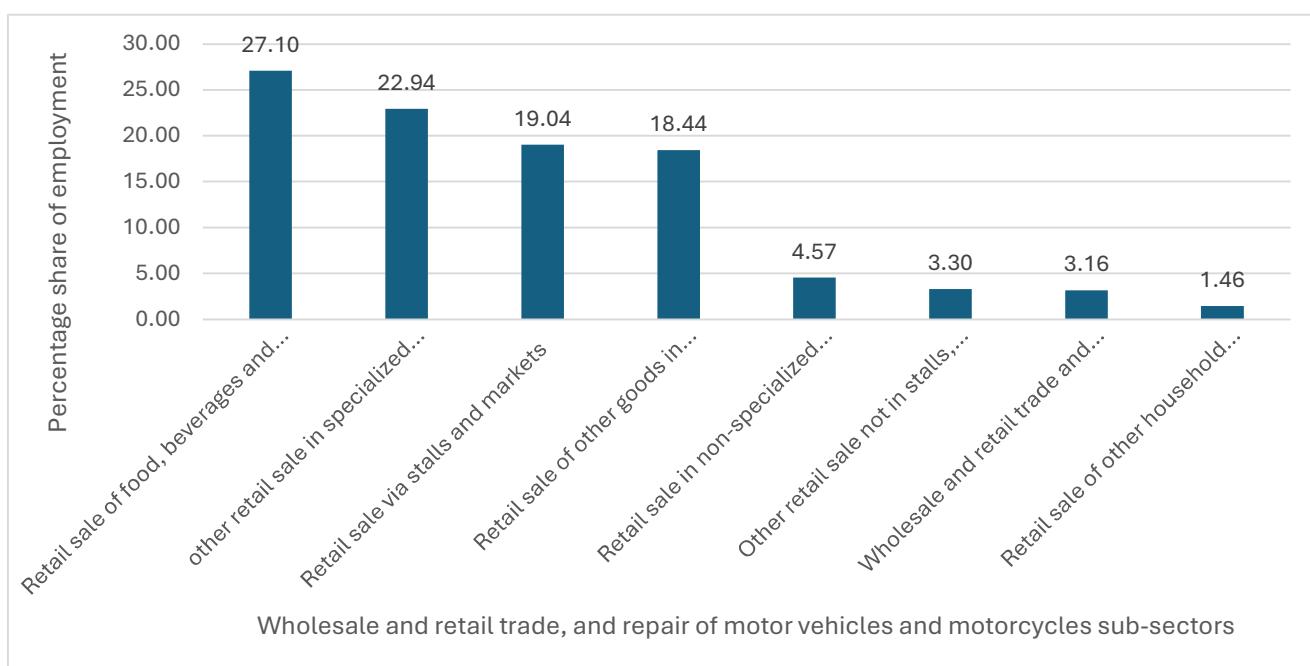
**Figure 16: Percentage share of employment in the transportation and storage sub-sectors**



*Data Source: KNBS 2021- Kenya Continuous Household Survey*

In the wholesale and retail trade sub-sector, the majority work in retail of food, beverages and tobacco products as shown in Figure 17.

**Figure 17: Percentage of persons employed in the wholesale and retail trade; repair of motor vehicle sub-sectors**

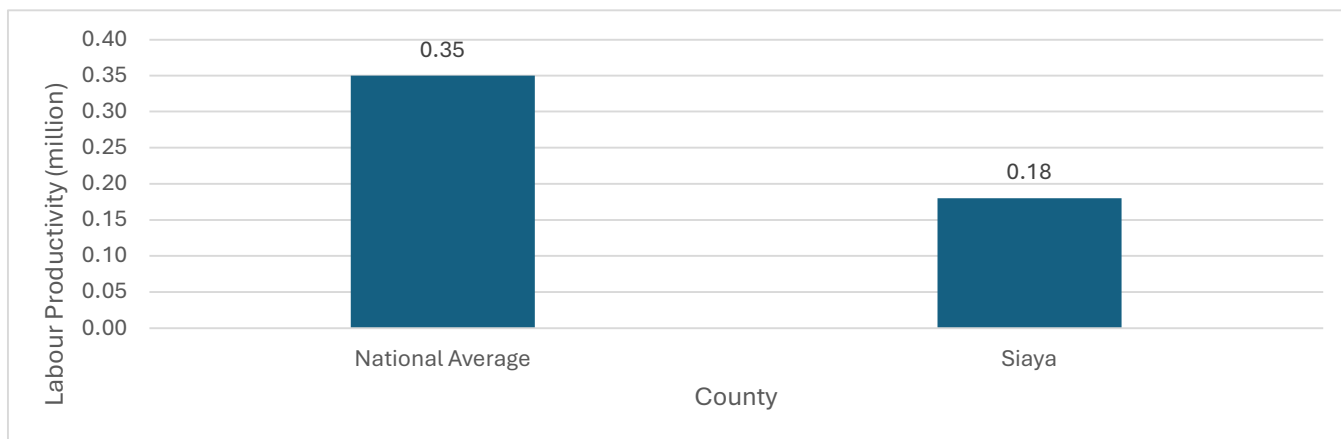


*Data Source: KNBS 2021- Kenya Continuous Household Survey*

## Labour Productivity

Labour productivity<sup>1</sup> for Siaya County is below the national average as shown in Figure 18.

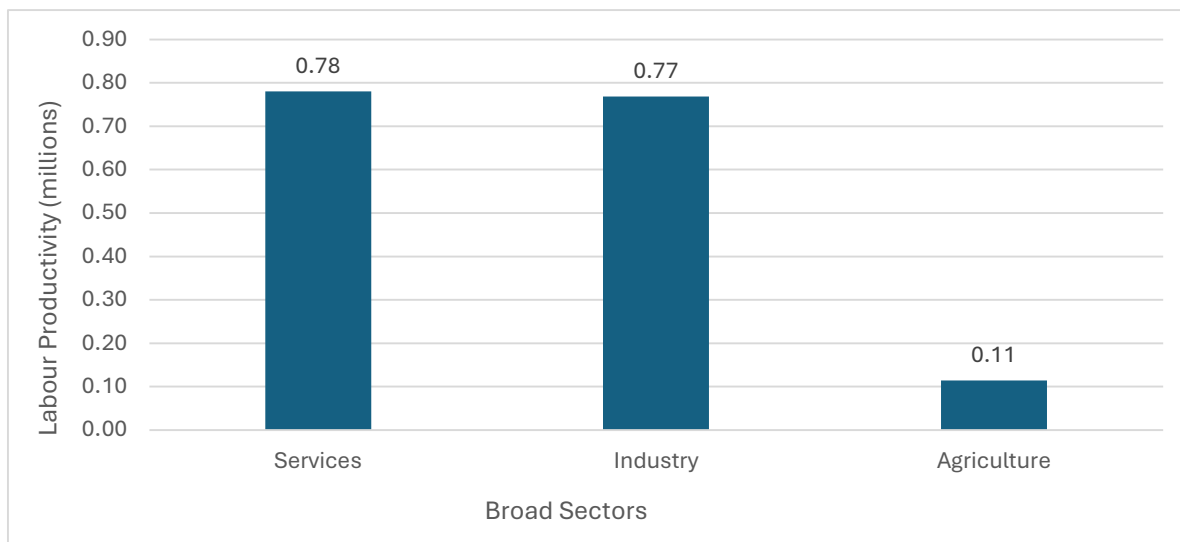
**Figure 18: Labour productivity ratios (million)**



*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 and the agriculture sector has the least as observed in Figure 19.

**Figure 19: Labour productivity by sectors**



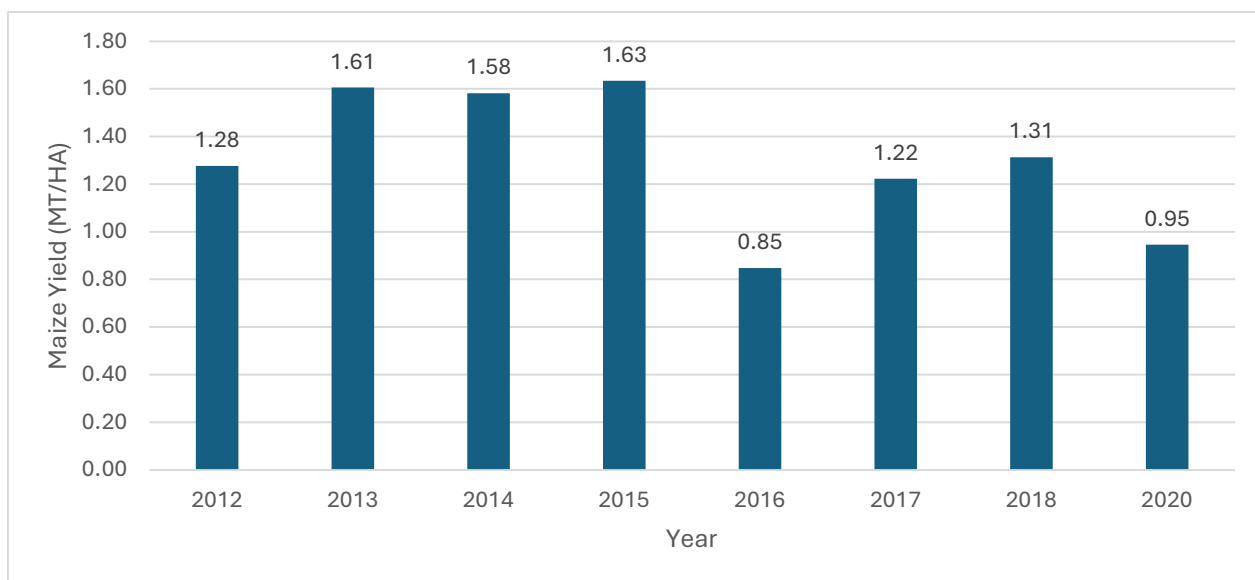
*Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey*

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

## Agriculture Productivity

In agriculture sector, maize productivity is low at an average of 1.30 MT/HA (Figure 20). It has been declining over the years, with the highest decline being in 2016, due to the fall army worm invasion.

**Figure 20: Maize yield (MT/HA)**

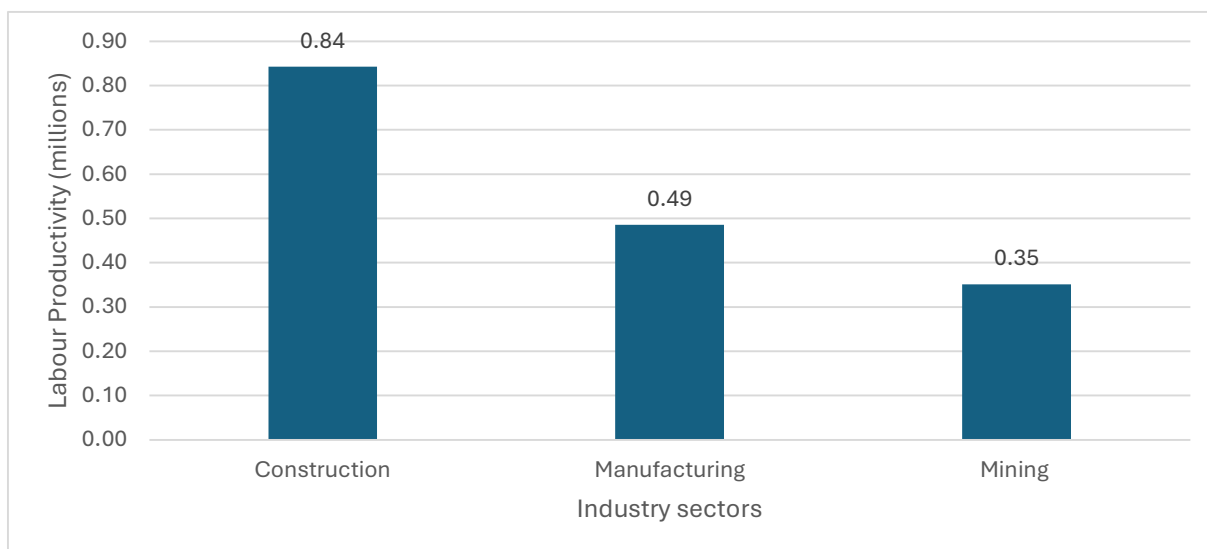


Data source: National Information Platform for Food and Nutrition (NIPFN)

## Industry Sector Labour Productivity

The construction and manufacturing sectors had the highest labour productivity in the industry broad sector as shown in Figure 21.

**Figure 21: Labour productivity by industry sectors**

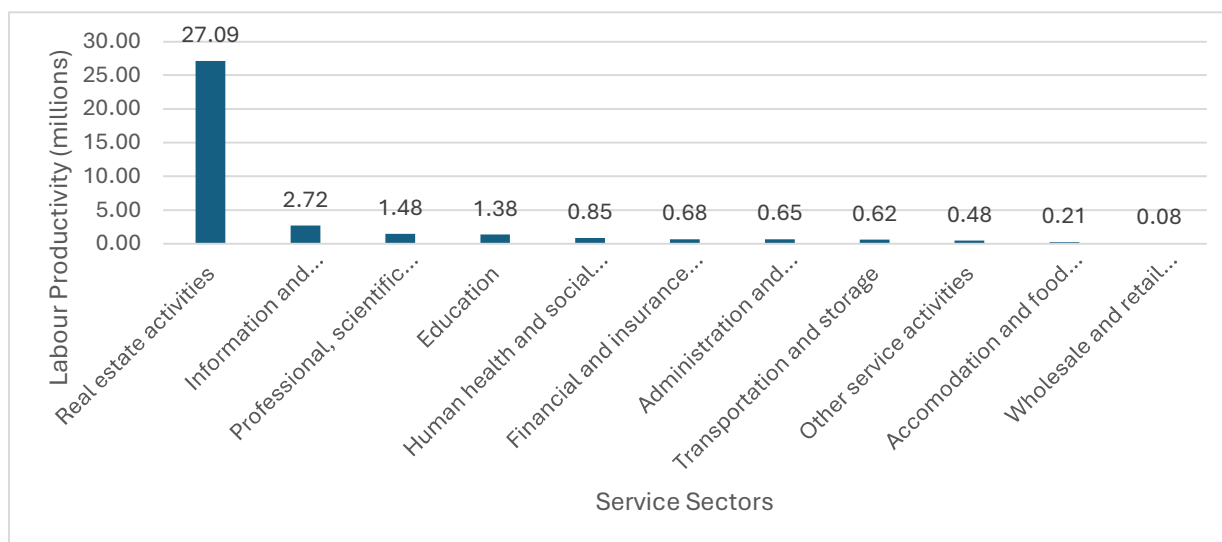


Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

## Services Sector Labour Productivity

The real estate sub-sector had higher labour productivity compared with other sub-sectors within the services sector as shown in Figure 22.

**Figure 22: 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 share of services sector in gross value added is the highest while that of industry is the lowest. Fishing is an important activity and the potential for maize should be exploited. Goats dominate livestock production for meat while milk has a larger share of the livestock products. Poultry is diversifying and apiculture has potential of transforming agriculture. Construction dominates industry while transportation and storage had the largest share in services.
- (ii) The indicators of quality of labour are within the national average level. However, there is need to address the high percentage of teenage pregnancies, child poverty and stunting to improve the quality of labour and promote decent work.
- (iii) Essential infrastructure indicators are within the national average, but with additional investments in internet connectivity, access to electricity, improved sanitation and water, and housing is a priority.
- (iv) Agriculture has the highest share of employment which is engaged in mixed farming while fishing has potential to create jobs. Construction dominates industry employment while in manufacturing a considerable proportion is in textile sector. In services, transportation and storage have the highest employment.
- (v) Labour productivity is below the national average. Services has the highest productivity while agriculture has the lowest. In the agriculture sector, maize yield has been declining. In industry, construction has the highest productivity. In services real estate activities have highest productivity.



## Policy Recommendations

- (i) Improve investment climate to attract private investments in the various sectors by providing for internet connectivity, access to electricity, and improved sanitation and water. Further invest in housing to increase the potential to multiply employment opportunities.
- (ii) Enhance agriculture productivity by improving integrating into relevant value chains including leather, dairy, poultry, and apiculture. Exploit agro processing including fish processing to enhance agriculture productivity and promote manufacturing. Further, unlock potential for crop production including maize.
- (iii) Improve the quality of labour by supporting the teenage mother to go back to school, and implementing nutritional programmes that work to reduce stunting. Also improve on secondary school transition to enhance formal skills development.

## Acknowledgement

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