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## **Assessing Labour Productivity for Nyandarua County**

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### **Overview of the County**

Nyandarua is a member of the 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 3,108 km<sup>2</sup> and has eight Sub-Counties namely: Kinangop, Nyandarua South, Mirangine, Kipipiri, Nyandarua Central, Nyandarua West, Nyandarua North, and Aberdare National.

### **Key Highlights**

The productivity of Nyandarua County is characterized by the following:

- (i) The agriculture sector has the highest share of gross value added, dominated by crop production. The share of the industry sector has declined over time, with manufacturing having the largest share. The services sector is dominated by transportation and storage services.
- (ii) The quality of labour requires significant efforts to reduce food and child poverty, increase secondary school enrolment, and reduce stunting.
- (iii) The essential infrastructure investments are required to enhance internet connectivity and access to electricity.
- (iv) The agriculture sector dominates employment mainly in mixed farming, but livestock and fish farming have the potential to generate jobs. The industry sector has the lowest employment, with manufacturing of food, beverage, and tobacco products dominating but textile and wearing apparel are a potential source of employment. With the sheep for wool, there is potential for the wool industry. The wholesale and retail trade sub-sector which is informal dominates employment in the services sector.
- (v) Labour productivity is highest in the services sector where public administration and human health and social work dominate. In industry sector, manufacturing has the highest productivity. In agriculture sector, the potential for maize can be exploited to enhance productivity in addition to unlocking the potential for livestock production.

To enhance productivity:

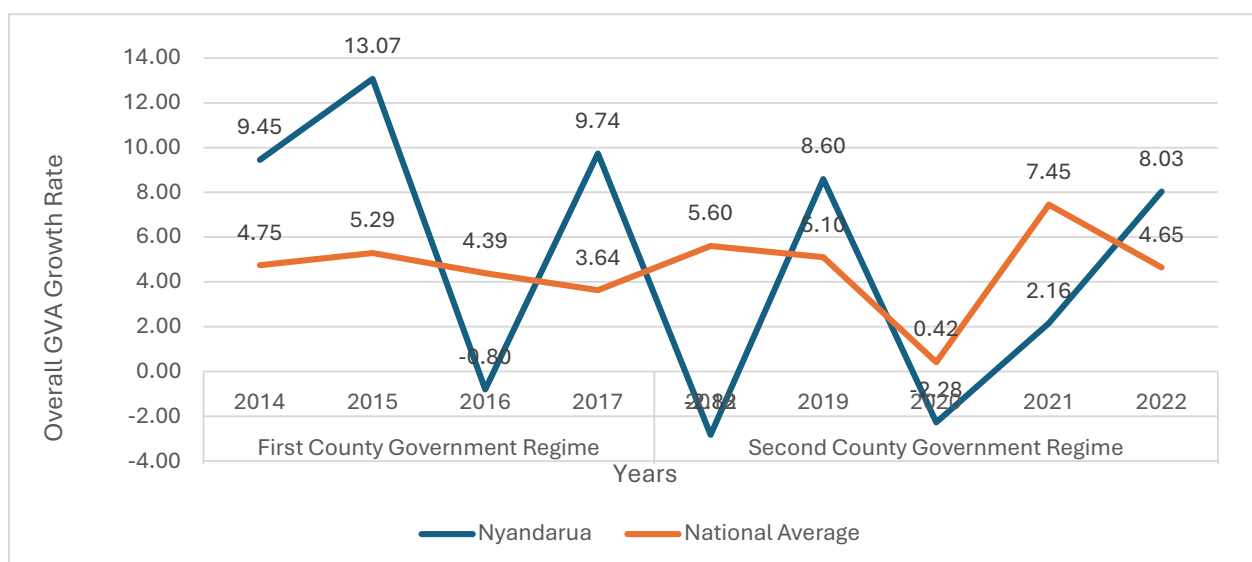
- (i) Transform agriculture to increase agriculture productivity. This includes developing the livestock value chain to integrate the small farmers into the dairy, leather, and wool value chains; promoting value addition to reduce post-harvest losses and increase manufacturing; and building skills for farmers to uptake technologies that improve productivity.
- (ii) Encourage investments in manufacturing to support agriculture sector transformation by engaging in agro processing; exploiting the sheep for wool in developing a wool value chain to enhance the textile industry; and supporting the County Aggregation Industry Park to increase the productivity of the MSMEs.
- (iii) Secure quality of labour with nutritional programmes to reduce child poverty and stunting as well as increase secondary school enrolment to facilitate skills development.
- (iv) Create an enabling environment for private sector growth by investing in essential infrastructure, of priority being improved access to electricity and internet.

### Nyandarua County Economic Performance

Nyandarua County contributes on average to 1.4 per cent of the National Gross Value added with an average GVA of Ksh 100,3304 million. The GVA per capita for Nyandarua County is Ksh 157,191 with an average population growth of 2.3 per cent and overall poverty levels at 32 per cent.

Nyandarua County has shown a steady growth in GVA with an average growth rate of 5.02 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 2015 and lowest in 2018.

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

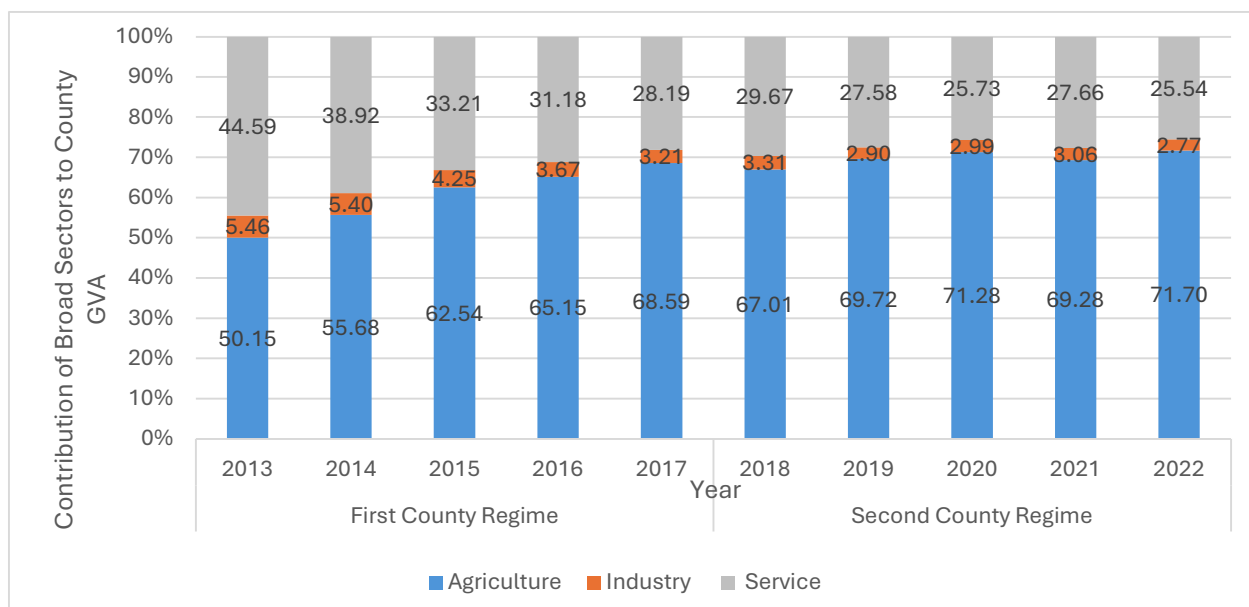


Data Source: KNBS 2023-Gross County Product

## Sectoral Analysis of GVA

The agriculture sector is dominant in Nyandarua County with an average contribution to GVA of 65.11 per cent. The services sector is second, contributing an average of 31.23 per cent to the GVA while industry contributes about 3.70 per cent (Figure 2).

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

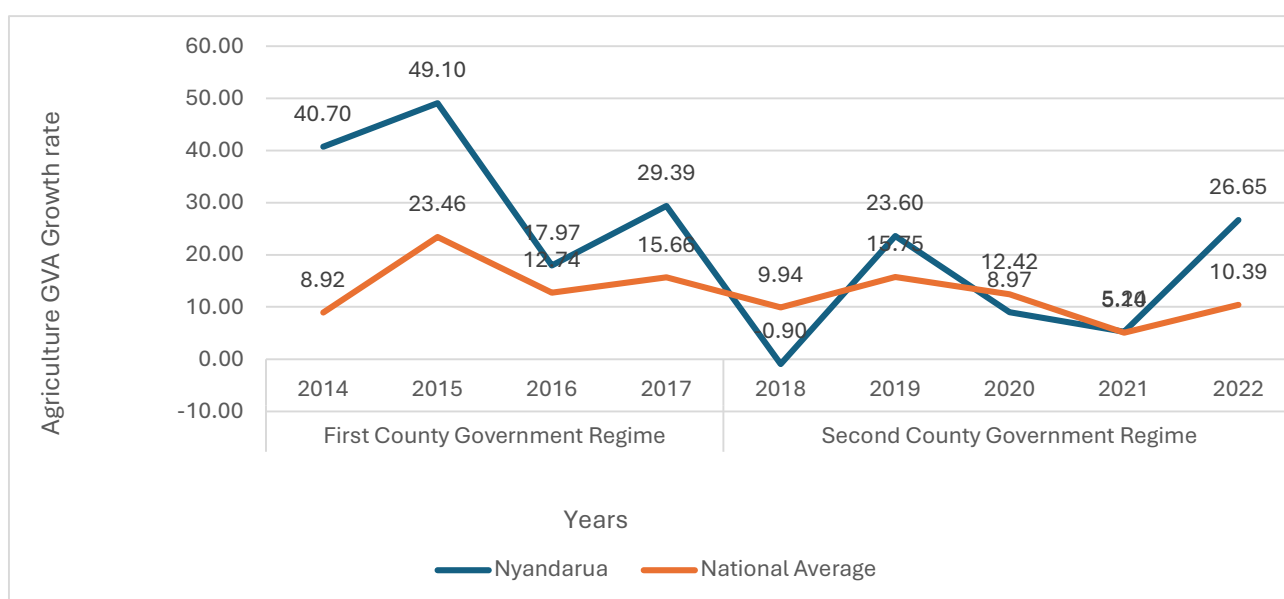


Data Source: KNBS 2023-Gross County Product

## Agriculture Sector

The average growth rate for agriculture GVA in 2013-2022 is 22.30 per cent which is above the national average of 12.71 per cent as shown in Figure 3.

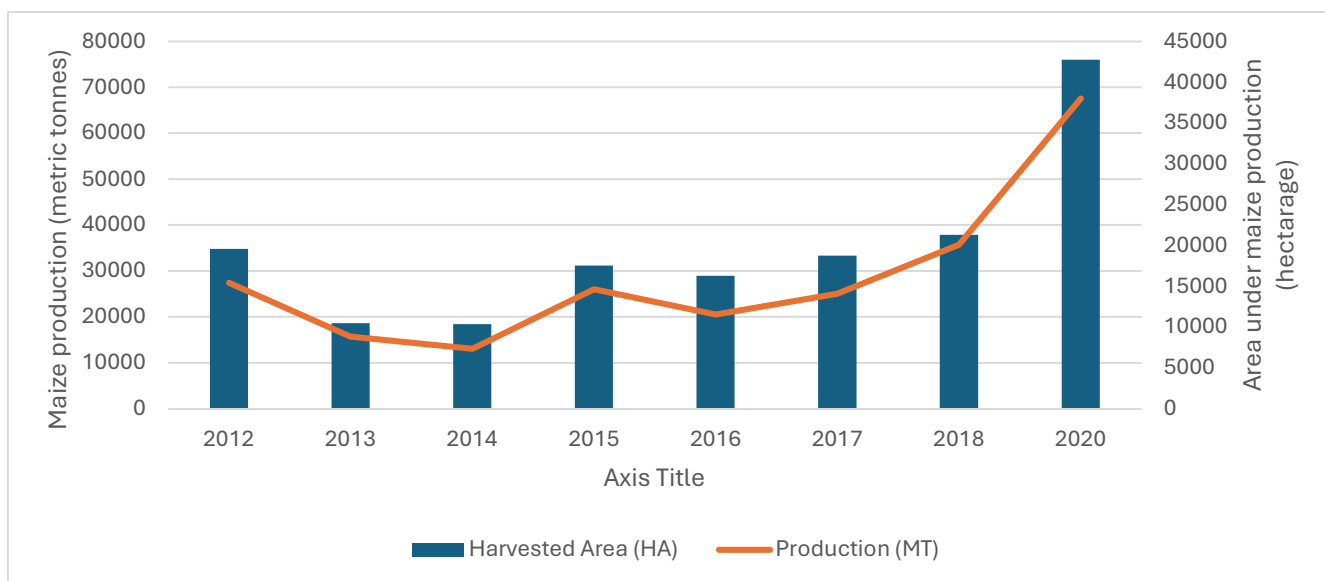
**Figure 3: Nyandarua County agriculture GVA growth rate**



Data Source: KNBS 2023-Gross County Product

Crop production is the main sub-sector in Nyandarua County’s agriculture sector. Common crops grown are potatoes, maize, garden peas, carrots, cabbage, and pyrethrum. Maize, the main staple food in the country is also commonly produced in Nyandarua County for the dried maize grains, green maize, and fodder. The area under maize production decreased in 2013 and 2014 then steadily increased with the highest area under maize production being in 2020. The maize production (metric tonnes) showed a similar trend, declining from 2012 to 2014 and then steadily increasing over the rest of the years (Figure 4).

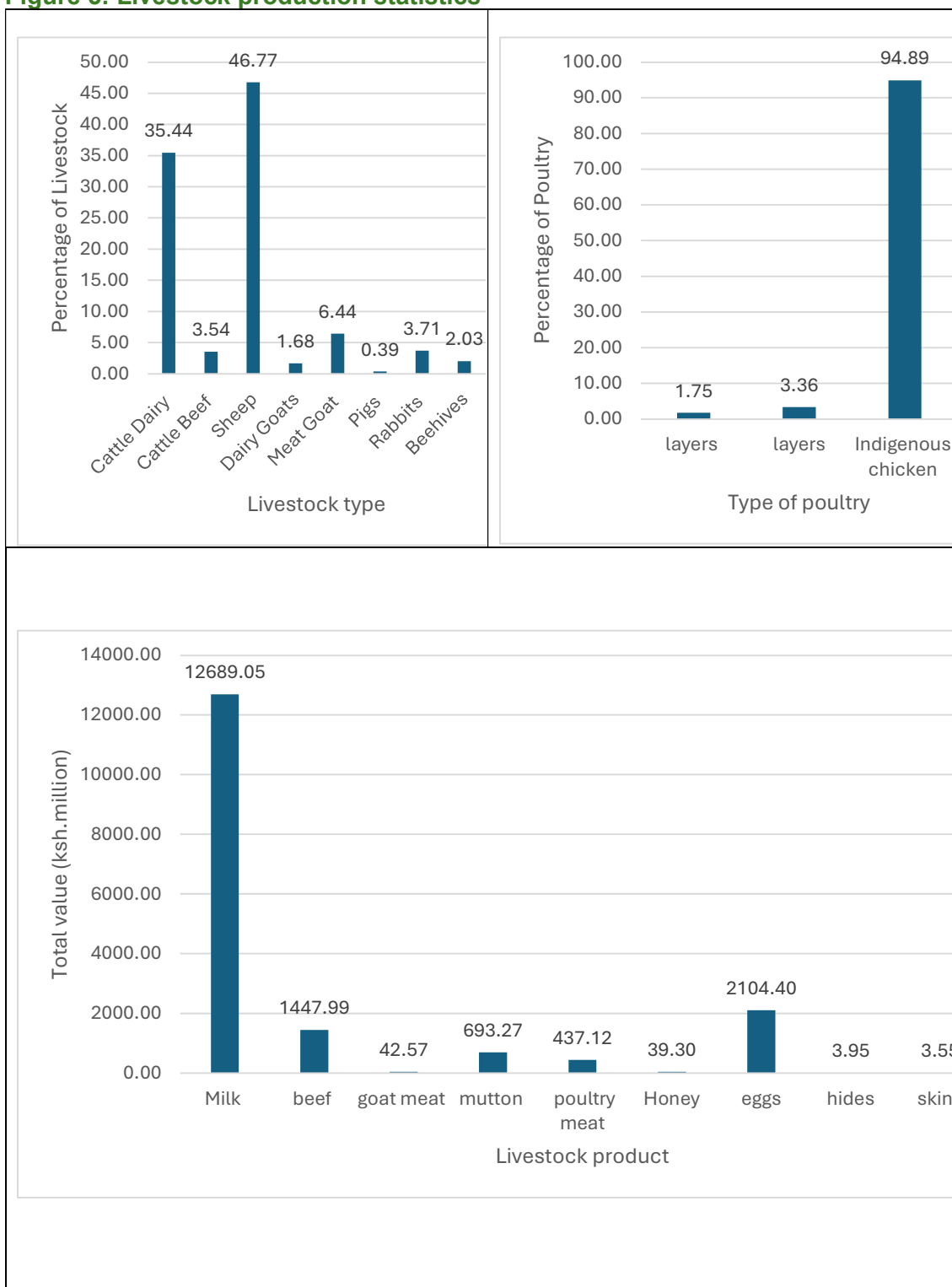
**Figure 4: Maize production and area of maize harvested**



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

Although livestock production in Nyandarua County is on a smaller scale compared to crop production, the county has one of the highest numbers of dairy cattle in the country. The county is also known for wool sheep rearing. Poultry production is high with the most common type being indigenous chicken. Nyandarua County has a comparative advantage in dairy farming (Figure 5).

**Figure 5: Livestock production statistics**

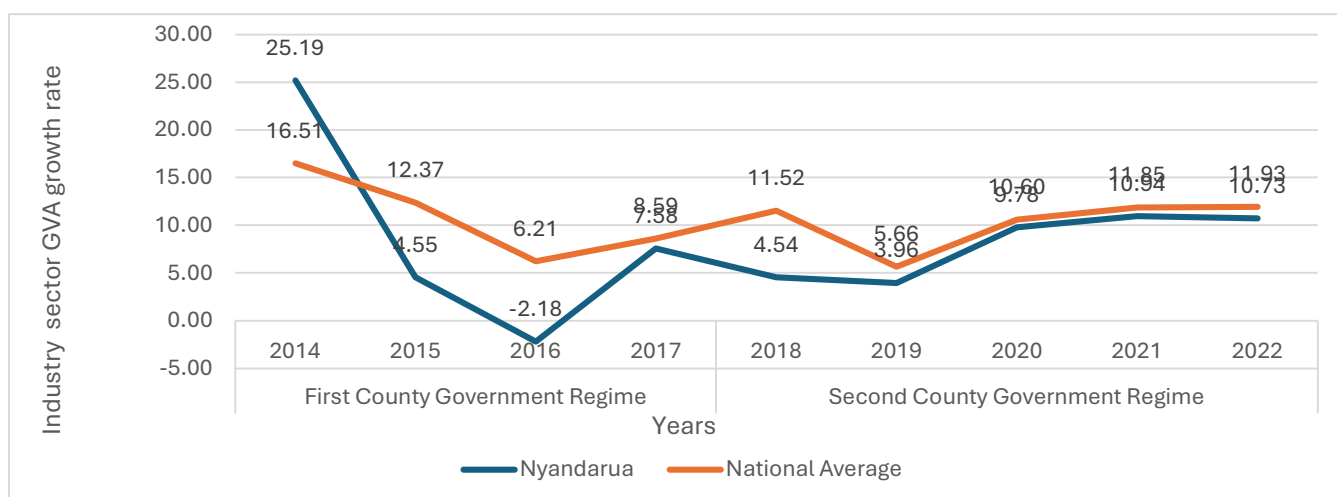


Data Source: KNBS (2019), Kenya Population and Health Census - KPHC 2019

### Industry Sector

The average growth rate for industry sector is 8.34 per cent, which is below the national average of 10.58 per cent as shown in Figure 6.

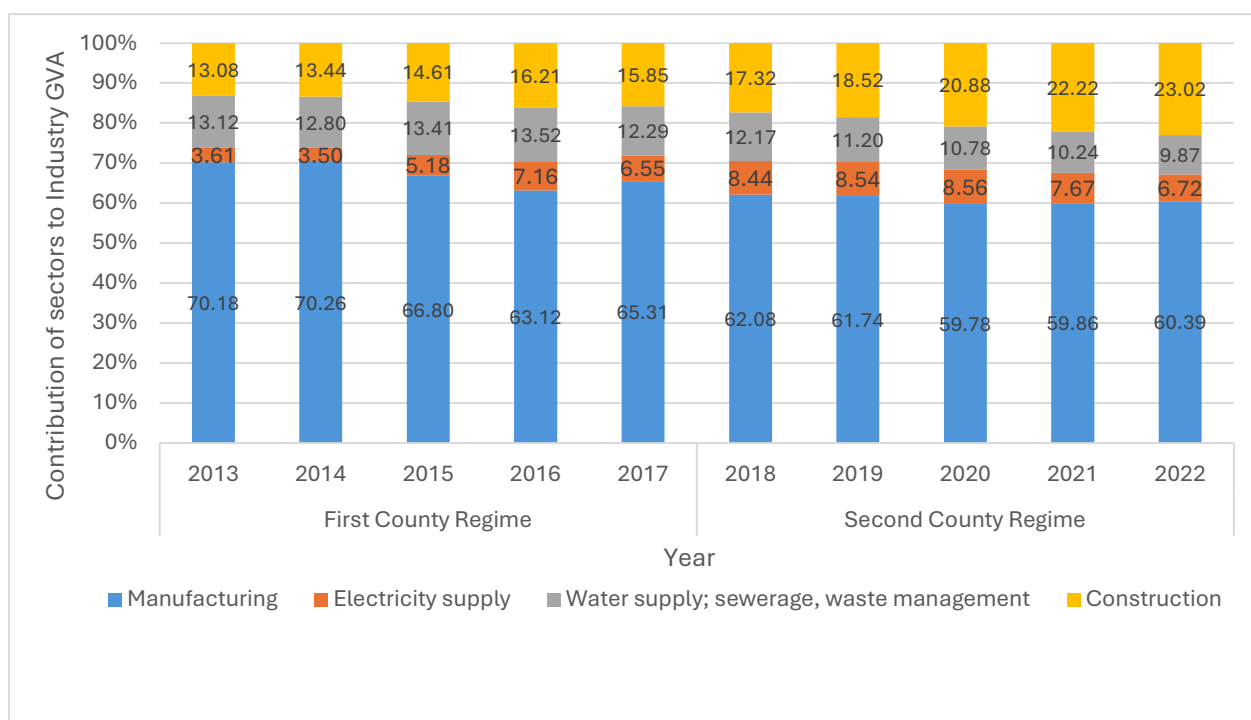
**Figure 6: Nyandarua County industry GVA growth rate**



Data Source: KNBS 2023-Gross County Product

Manufacturing dominates the industry sector as shown in Figure 7. Despite the dominance, the share of manufacturing has been decreasing while the share of the construction sector expanded.

**Figure 7: Contribution of industry sub-sectors to Industry GVA**

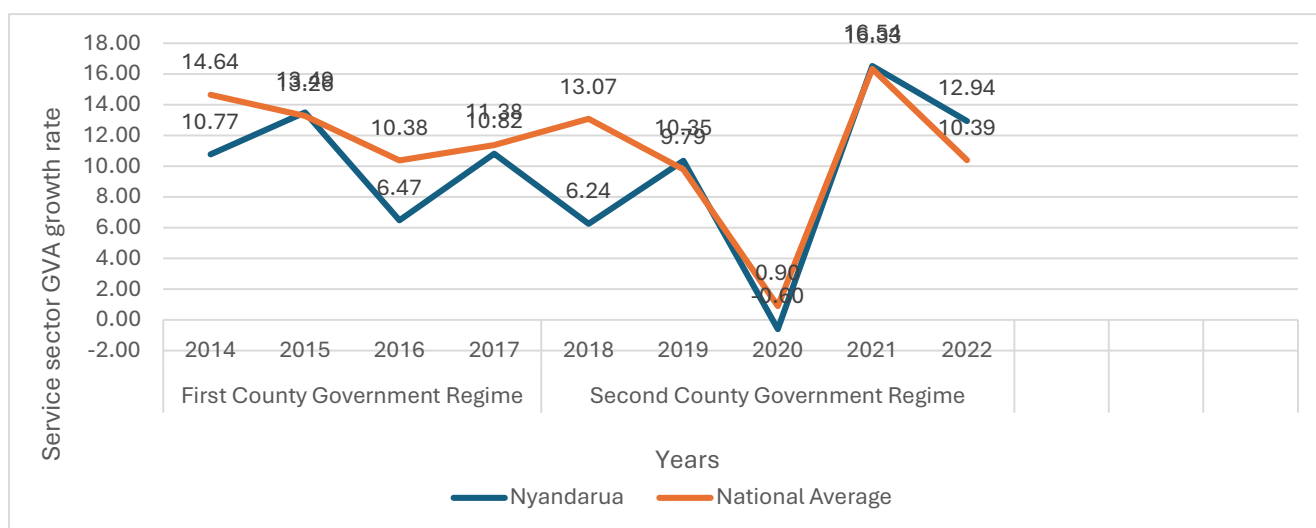


Data Source: KNBS 2023-Gross County Product

### Services Sector

The average growth rate for service sector is 8.81 per cent which is below the national average of 11.13 per cent as shown in Figure 8.

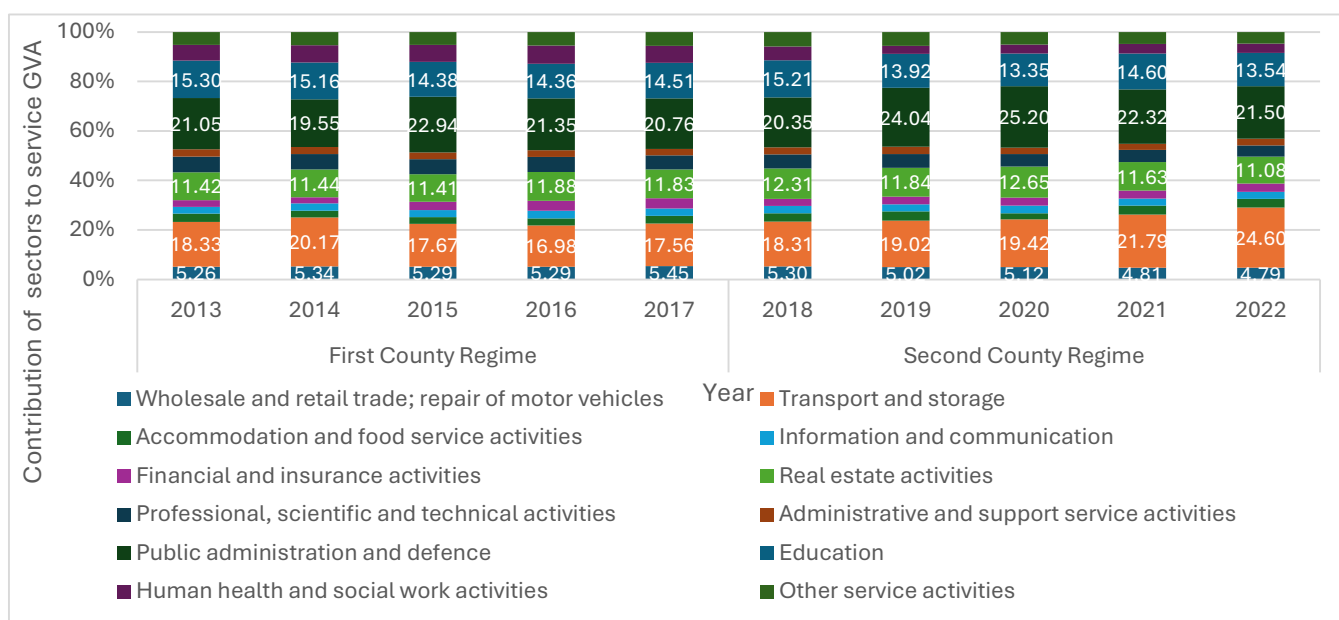
**Figure 8: Nyandarua County services sector GVA growth rate**



Data Source: KNBS 2023-Gross County Product

The public administration and defence sub-sector, a non-market service dominates the services sector with the highest contribution to service GVA at 21.90 per cent. The transportation and storage sub-sector is the second highest contributor to services GVA at 19.39 per cent. The education sector is third at an average of 14.43 per cent as shown in Figure 9.

**Figure 9: Contribution of sub-sectors to services sector GVA**



Data Source: KNBS 2023-Gross County Product

### Quantity and Quality of Labour Force for Nyandarua County

Nyandarua County has a total of 374,577 working-age population, which is about 58.69 per cent of the county population. Most of the working-age population is 35-64 years at 45.27 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	25,897	24,016	49,913	13.33
18 –24	37,755	36,363	74,118	19.79
25-34	38,459	42,498	80,957	21.61
35-64	81,533	88,056	169,589	45.27
<b>Total</b>	<b>183,644</b>	<b>190,933</b>	<b>374,577</b>	

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

Most of the population in Nyandarua sub-counties are persons in the working age categories. Nyandarua West has the highest percentage of persons of working age at 60.37 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	
Kinangop	111,406	8,741 (13.29)	12,770 (19.41)	14,707 (22.36)	29,565 (44.94)	65,783 (59.05)
Nyandarua South	93,865	7,502 (13.44)	11,406 (20.43)	12,391 (22.19)	24,540 (43.95)	55,839 (59.49)
Mirangine	67,213	5,369 (13.85)	8,449 (21.79)	8,297 (21.40)	16,652 (42.95)	38,767 (57.68)
Kipipiri	93,853	8,135 (15.17)	10,666 (19.88)	10,501 (19.58)	24,339 (45.37)	53,641 (57.15)
Nyandarua Central	75,260	5,580 (12.58)	8,999 (20.28)	10,336 (23.30)	19,448 (43.84)	44,363 (58.95)
Nyandarua West	97,961	7,054 (11.93)	11,673 (19.74)	13,407 (22.67)	27,001 (45.66)	59,135 (60.37)
Nyandarua North	98,696	7,532 (13.21)	10,153 (17.80)	11,310 (19.83)	28,040 (49.16)	57,035 (57.79)

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

Nyandarua County has high performance for most of the socio-economic indicators that affect the quality of labour. However, interventions are needed to increase the pupil-teacher ratio as shown in Table 3.



**Table 3: Human capital indicators**

Human capital indicators	County	National average
Literacy rate	90.70	78.41
Pre-primary net enrolment rate (2019)	84.99	67.51
Primary school net enrolment rate (2020)	88.00	77.72
Secondary school net enrolment rate (2020)	75.10	54.18
Average years of schooling (2014)	8.40	7.78
Percentage of children 12-23 months fully vaccinated (%)	81.40	74.97
Percentage of stunted children	17.80	19.75
Percentage of teenage pregnancy	5.20	15.79
Primary to secondary transition rates (2020)	91.60	86.13
Pupil-teacher ratio (primary school)	27.00	28.28
Food poverty head count (%)	29.50	33.63
Child poverty head count (%)	29.80	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

Most of the essential infrastructure and capital indicators that support the production of county output have performed above the national average. However, interventions are required to increase financial inclusion using banks and mobile money (Table 4).

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

Essential infrastructure indicators	County	National average
Percentage of households with access to electricity (2019 Census)	41.30	38.52
Distribution of population using the internet (2019 census)	20.60	18.69
Rural Access Index (2018)	87.75	63.72
Access to improved sanitation (2018)	81.00	59.04
Access to improved water (2018)	81.90	65.33
Financial inclusion level (2021)	81.10	81.01
The proportion of primary schools with internet	30.45	27.65
Proportion of secondary schools with functional internet	34.30	35.13
Percentage of households by housing material composite-finished materials(adequate) (2019)	74.31	51.71
Percentage of households using bank usage (overall)	31.00	38.18
Percentage of Households using mobile money	74.50	78.58

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

### County Employment Status

The employment to population ratio is high at 75.27 per cent. Most of those working are in the non-youth working population (35-64 years) at 43.56 per cent while the youth (18-34 years) are at about 30.53 per cent as shown in Table 5. The per centage of the employed by gender is 48.74 for male and 51.12 for female. The unemployment rate is low at 2.60 per cent with unemployment being slightly higher for the youth (18-34 years) at 1.75 per cent and those between 35-64 years at 0.80 per cent. The percentage of persons 5–17 years old working is 2.48 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 19.91 per cent as they are pursuing schooling while it is low for the persons of prime age (25-64 years) at 1.76 per cent.

**Table 5: Nyandarua County employment statistics**

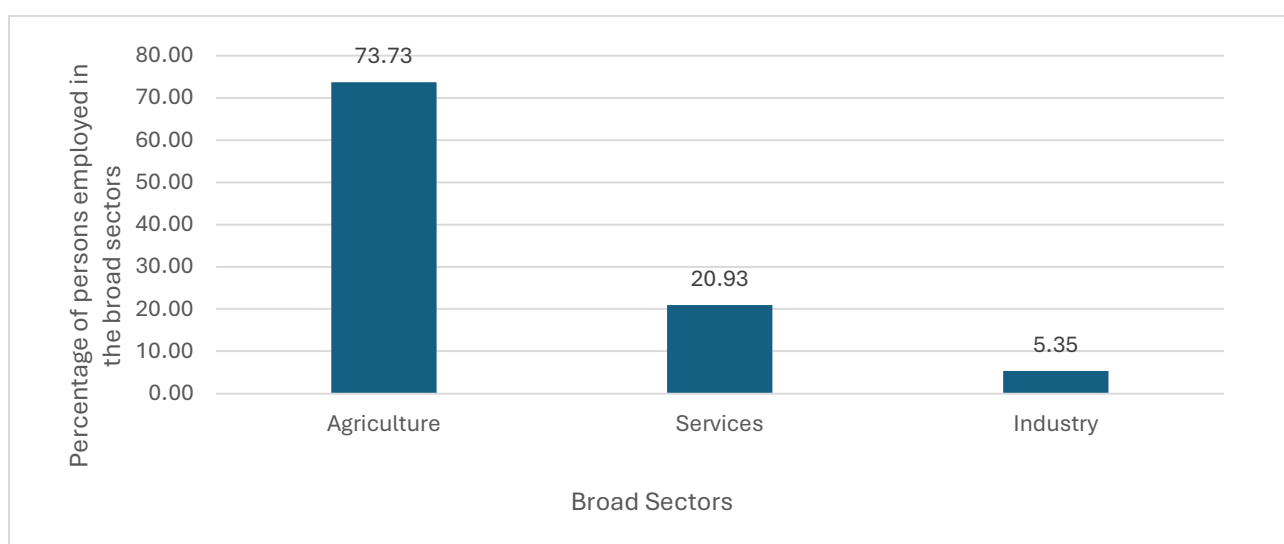
Employment statistics	Youth	Non youth
Employment to population ratio (%)	30.53	43.56
Unemployment rate	1.75	0.80
Percentage of persons 5–17 years old working	2.48	-
Inactivity rate	19.91	1.76

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

### Sectoral Employment

The agriculture sector is the highest employer in Nyandarua County at 73.73 per cent followed by the services sector at 20.93 per cent. The industry sector is third at 5.35 per cent as shown in Figure 10.

**Figure 10: Percentage of persons employed in the broad sectors**

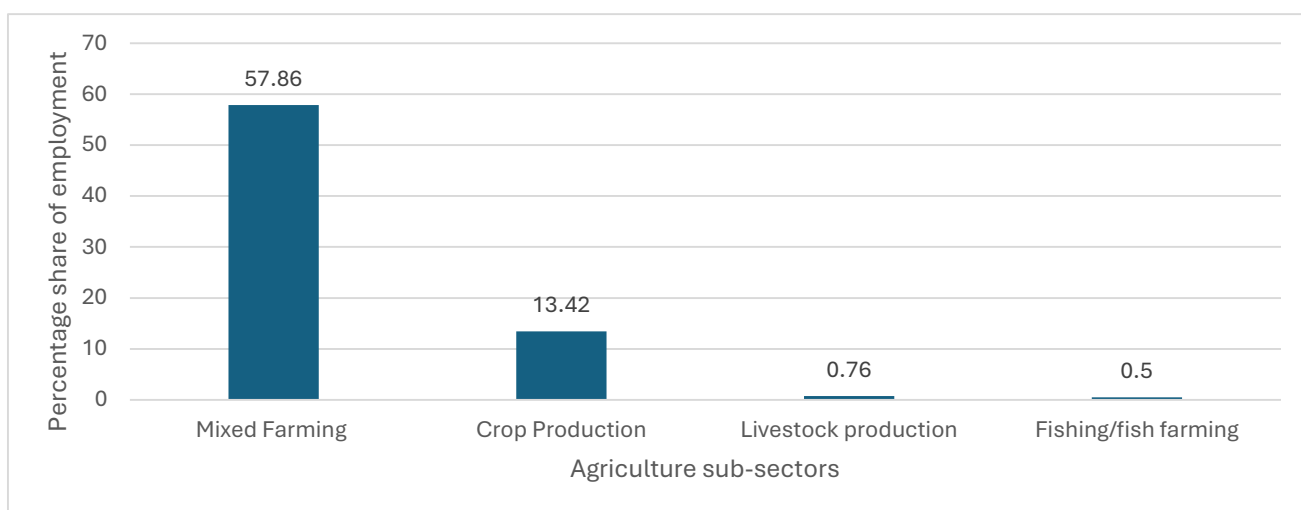


Data Source: KNBS 2021- Kenya Continuous Household Survey

### Agriculture Sector Employment

In agriculture sector, the majority are those practicing mixed farming which reflects the advantages the county has in crop production and dairy farming as shown in Figure 11.

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

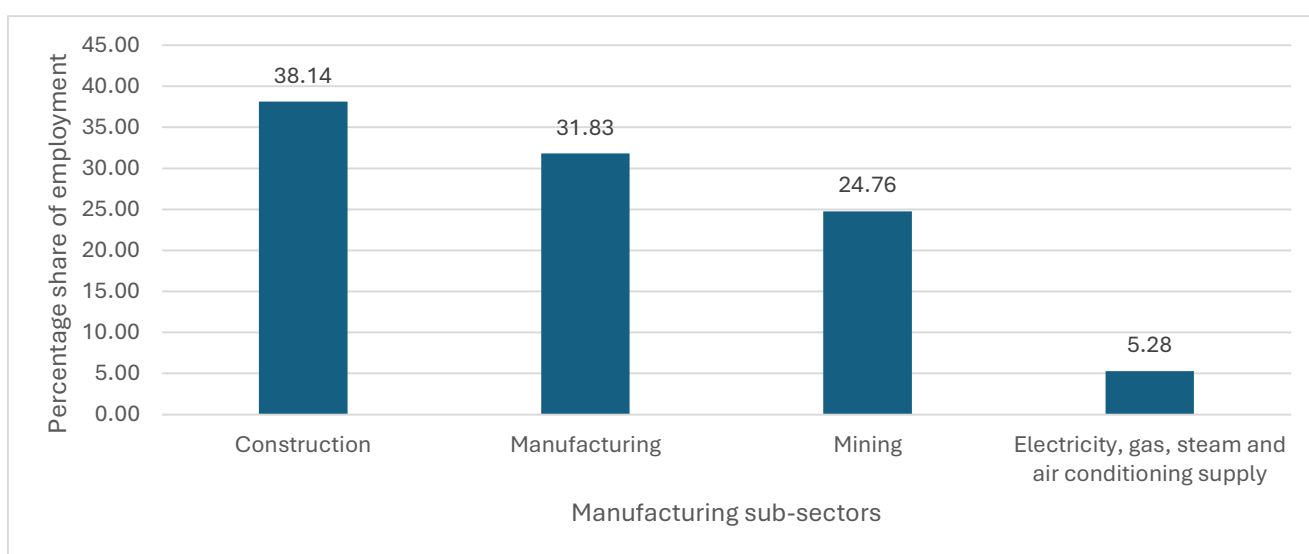


*Data Source: KNBS 2021- Kenya Continuous Household Survey*

### Industry Sector Employment

The majority of those working in the industry sector are in construction followed by the manufacturing sub-sector as shown in Figure 12.

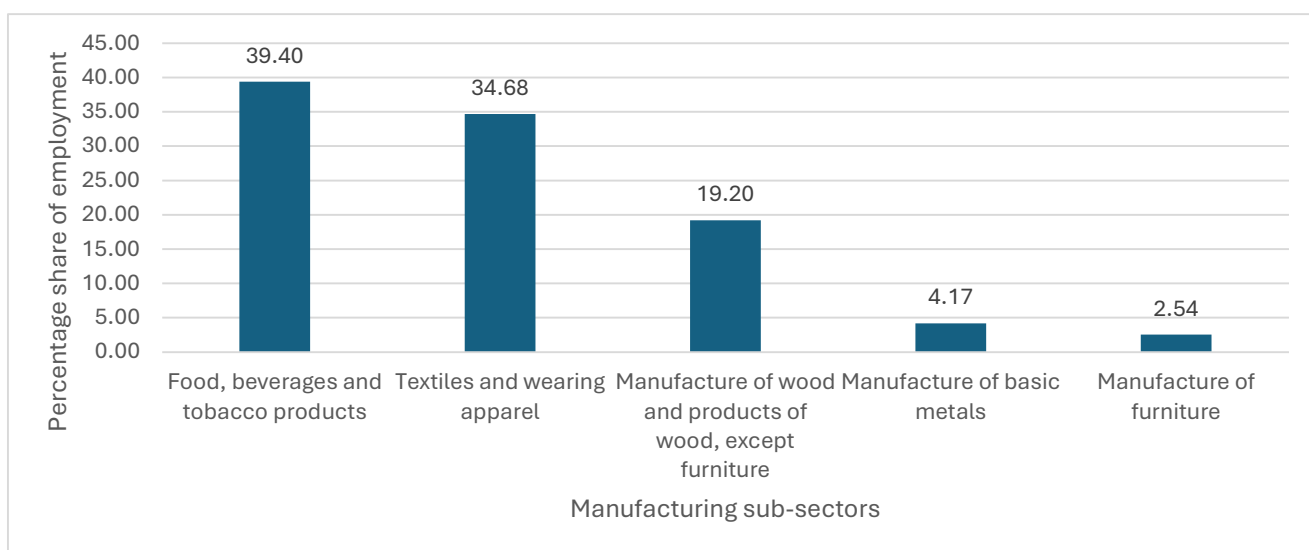
**Figure 12: Percentage share of employment in the industry sectors**



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

A disaggregation of employment in manufacturing shows that the majority of those employed in the sector, work in low-technology manufacturing sub-sectors such as the manufacture of food products and textile and wearing apparels as shown in Figure 13.

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

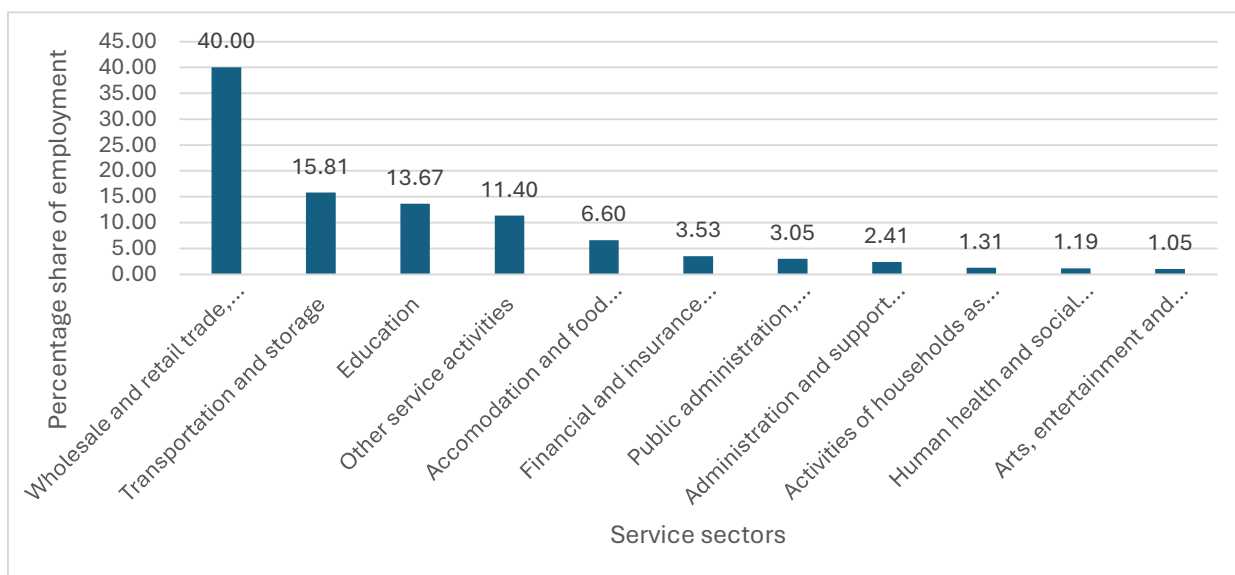


Data Source: KNBS 2021- Kenya Continuous Household Survey

### Services Sector Employment

The majority of those working in the services sector are in wholesale and retail trade (Figure 14). This sector represents the intermediate steps in the distribution of merchandise between producers and consumers of goods. Despite the higher share of employment in the services sector, the output of the sector remains low with the sector having prominent levels of informality.

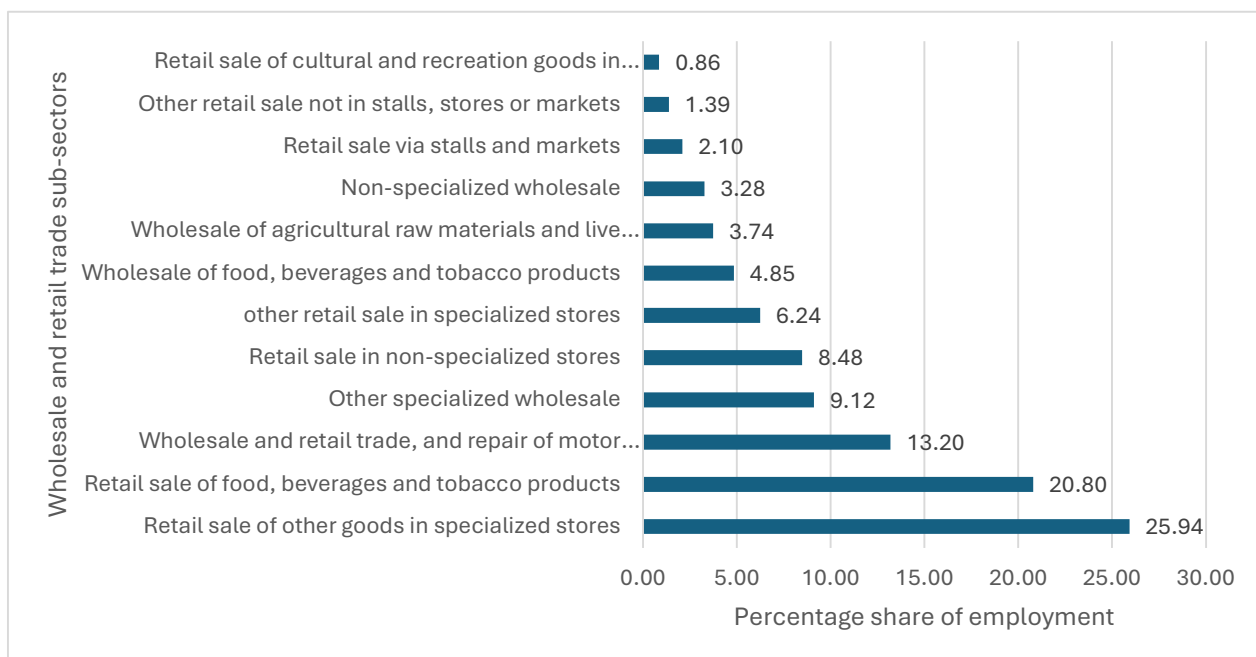
**Figure 14: Percentage share of employment in services sectors**



Data Source: KNBS 2021- Kenya Continuous Household Survey

In the wholesale and retail trade, the majority work in the retail sale of other goods in specialized stores as shown in Figure 15.

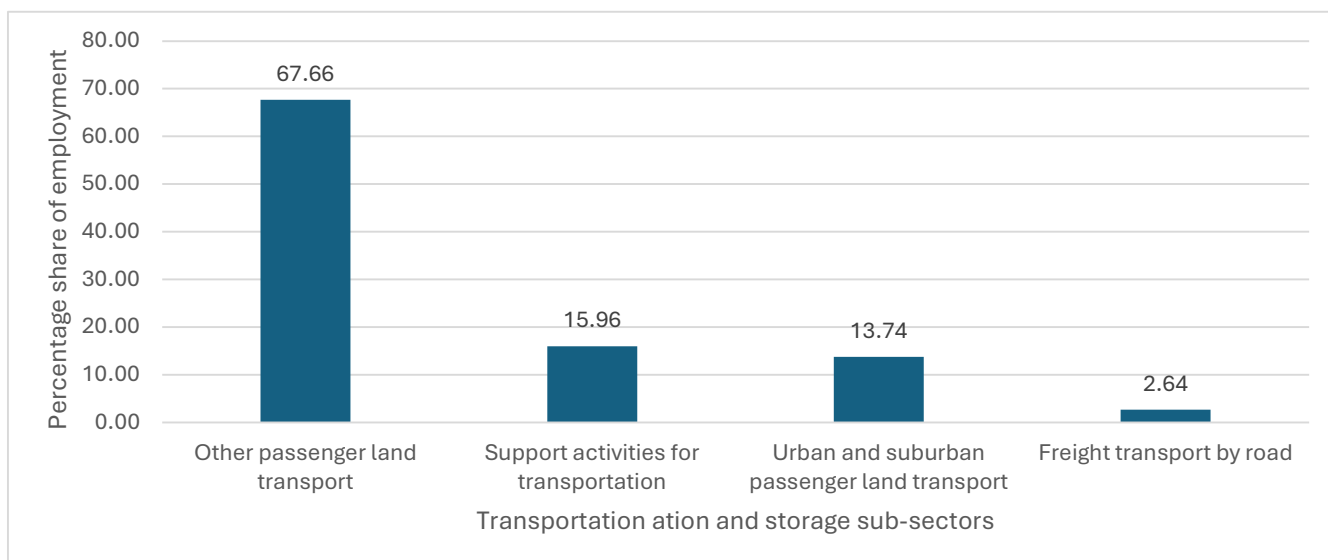
**Figure 15: Percentage of persons employed in the wholesale and retail trade; repair of motor vehicle sub-sectors**



Data Source: KNBS 2021- Kenya Continuous Household Survey

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

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

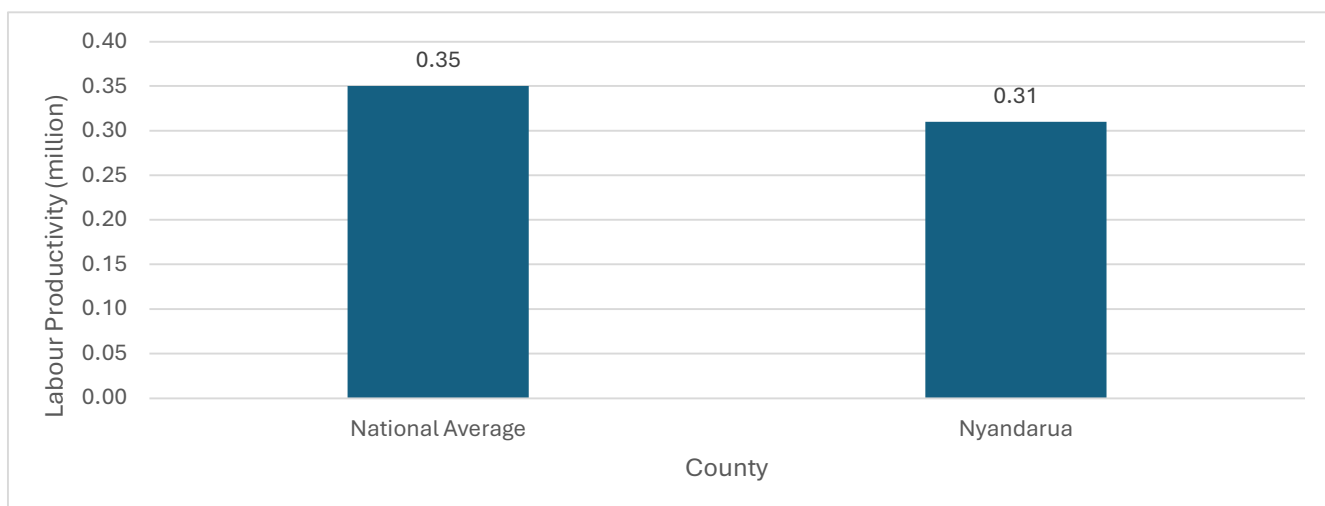


Data Source: KNBS 2021- Kenya Continuous Household Survey

## Labour Productivity

Labour productivity<sup>1</sup> for Nyandarua County is lower than the national average as shown in Figure 17.

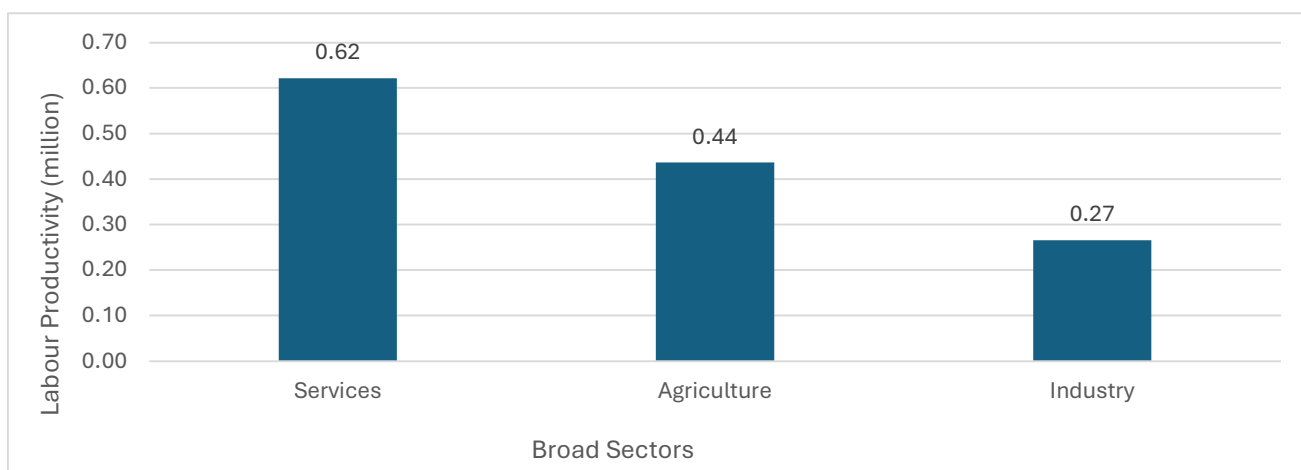
**Figure 17: Labour productivity ratios (millions)**



*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 at 0.62, followed by the agriculture sector at 0.44, and thirdly the industry sector at 0.27 as shown in Figure 18.

**Figure 18: Labour productivity by sectors**



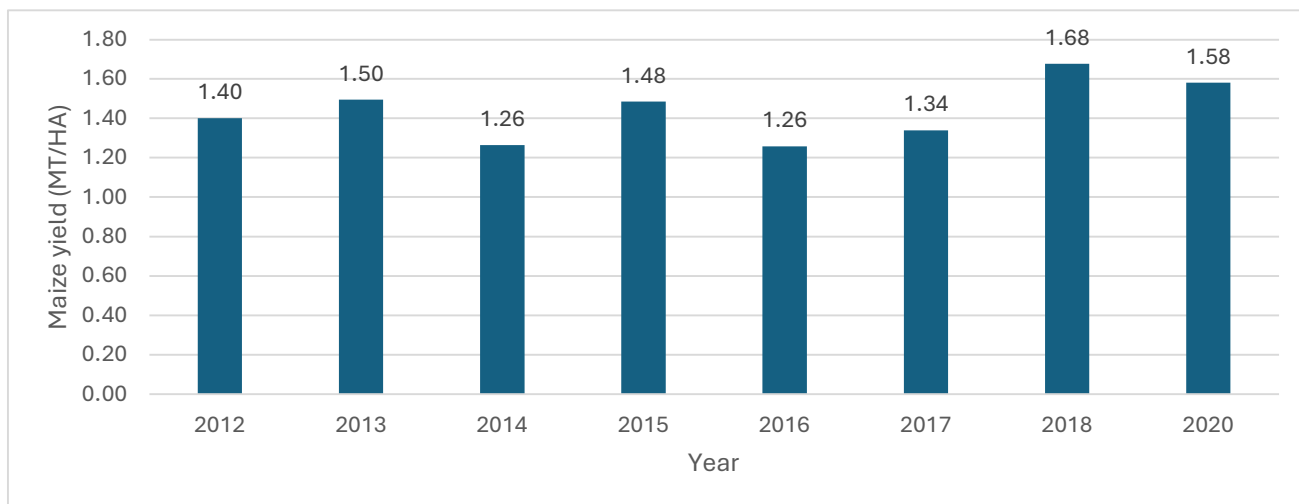
*Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey*

<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 has remained relatively constant over the years with an average of 1.44 MT/HA (Figure 19).

**Figure 19: Maize yield (MT/HA)**

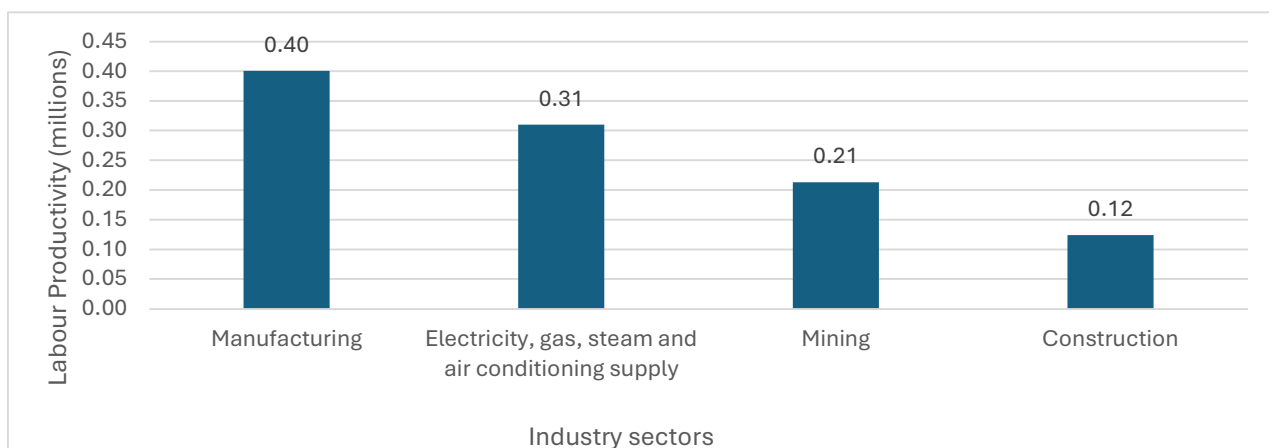


Data source: National Information Platform for Food and Nutrition (NIPFN)

## Industry Sector Labour Productivity

Manufacturing and electricity, gas, steam, and air conditioning supply sub-sectors had the highest labour productivity in the industry sector as Figure 20.

**Figure 20: Labour productivity by Industry sectors**



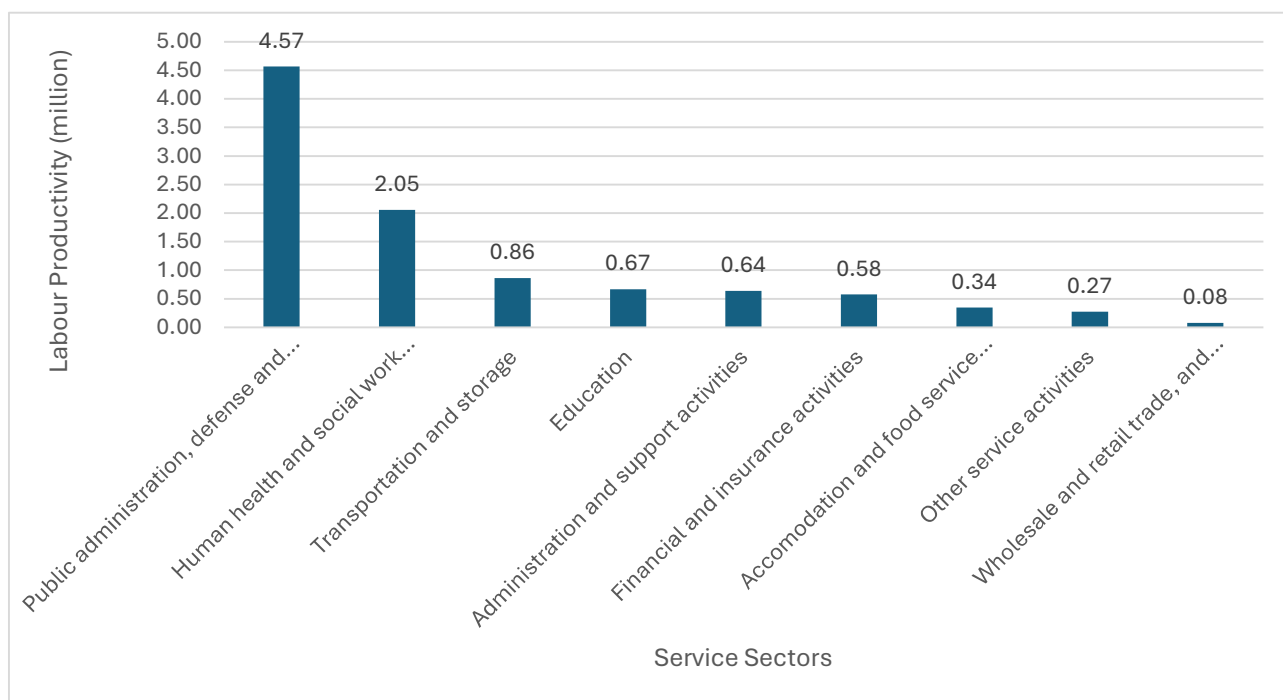
Data Source: Author's computation using KNBS 2023-Gross County Product and KNBS 2021- Kenya Continuous Household Survey

## 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 sub-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) Agriculture is a key sector in the gross value added dominated by crop production. The share of the industry sector has declined over time. With an increased production area, maize output almost doubled in less than 10 years which demonstrates its potential. Livestock production is small and dominated by dairy cattle and sheep. For the industry sector, manufacturing has the largest share while in the services sector transportation and storage has the largest share.
- (ii) Several of the indicators for quality of labour performed above the national average. However significant efforts are required to reduce food and child poverty. In addition, secondary school enrolment is low, and the level of stunting requires further attention.
- (iii) Essential infrastructure is within the national average. That said, investments are required in internet connectivity and access to electricity.
- (iv) Agriculture dominates employment mainly in mixed farming. Livestock and fish farming have the potential to generate jobs. The industry sector has the lowest employment share dominated by construction while in manufacturing, food, beverage, and tobacco products dominate. Textile and wearing apparel are a key sector for employment. With the sheep for wool as a specialty for the county, there is potential for the wool industry. The wholesale and retail trade dominate employment in the services sector.



- (v) Labour productivity is highest in the services sector where public administration and human health and social work dominate. In the industry sector, manufacturing has the highest productivity. In agriculture sector, the potential for maize can be exploited to enhance productivity. Further is unlocking the potential for livestock production.

### **Policy Recommendations**

- (i) Transform agriculture sector to increase agriculture productivity. This includes developing the livestock value chain to integrate the small farmers into the dairy and leather value chains; promoting value addition to reduce post-harvest losses and increase manufacturing; and building skills for farmers to uptake technologies that improve productivity.
- (ii) Encourage investments in manufacturing to support the transformation of the agriculture sector by engaging in agro processing; exploiting the wool sheep by promoting the wool value chain to support the textile industry; and supporting the County Aggregation Industry Park to enhance productivity of the MSMEs.
- (iii) Secure quality of labour with nutritional programmes to reduce child poverty and stunting. Further, encourage secondary education to facilitate upgrading skills development.
- (iv) Create an enabling environment for private sector growth by investing in essential infrastructure to improve access to electricity and internet.

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