Assessing Labour Productivity for Samburu County

By Cecilia Naeku and Esther Irungu

Overview of the County

Samburu County is a member of the Frontier Counties Development Council (FCDC). It is arid, experiencing 85-100 per cent aridity. Samburu County covers an area of 20,182 km² and has three Sub-Counties namely: Samburu Central, Samburu East, and Samburu North.

Key Highlights

The productivity of Samburu County is characterised by the following:

(i) High frequency of severe droughts that constrain realization full potential for the livestock production despite the county having a comparative advantage. The non-market service dominates the services sector indicating lower output from the market-oriented services.

(ii) The quality of labour is characterised by low literacy rates, school enrolment and transition, and high stunting and teenage pregnancy. In addition, essential infrastructure, and capital to support production are lower than the national averages.

(iii) Child labour is high at 32.95 per cent and high out of school children who are engaged in economic activities hinders early attainment of formal skills needed for alternative livelihoods and industrial transformation of counties. Further is high inactivity rate for the non-youth which indicates lower labour utilization.

(iv) Labour productivity in Samburu is lower than the national average. Agriculture sector has the lowest which can be explained by the effects of drought on agriculture output in the county. That said there is potential for diversifying to crop production including maize. Productivity is highest in manufacturing in the industry sector. Samburu has potential for beadwork given the traditional demands, but it is not fully commercialised. In the services sector, productivity is highest in human health and social sector, real estate, and public administration.
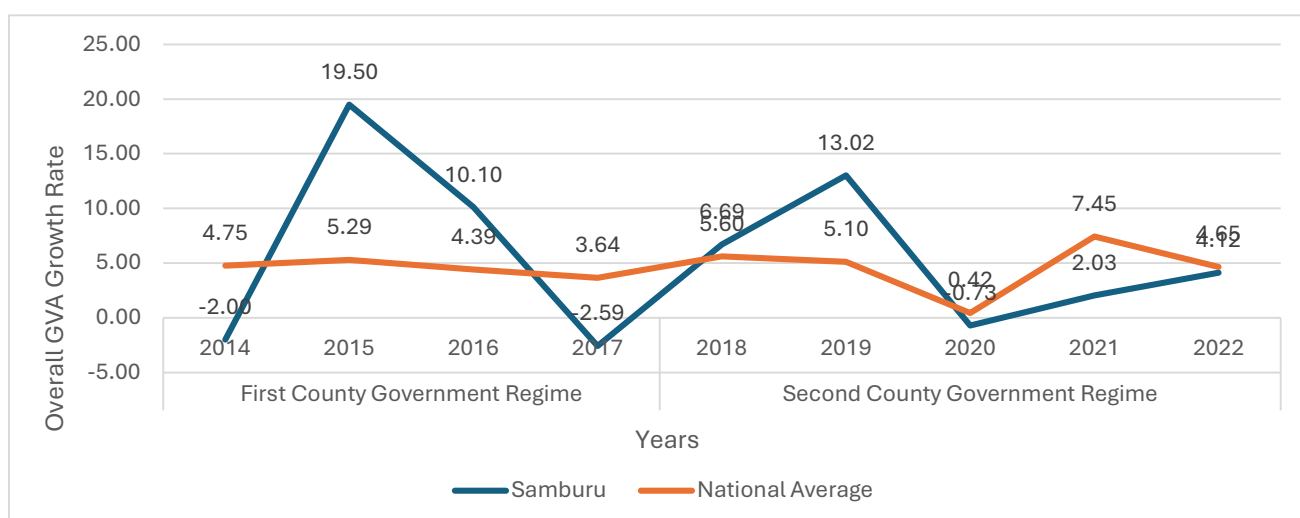
To improve on productivity:

(i)   Build climate resilience in the livestock sub-sector. This can be achieved through; increased uptake of weather-based insurance scheme; optimal use of drought early warning systems to encourage commercial offtake of livestock to mitigate losses; and establishing county livestock enterprise fund to finance pastoralists to restock after drought episodes.

(ii) Integrate livestock production into the leather value chain by commercialising supply of hides and skins, increasing extension services to improve the quality of hides and skins, and facilitating aggregation and pooled sales of hides and skins.

(iii) Reduce the dominance of non-market services by encourage development of market-oriented services like tourism. This requires marketing the tourist sites and incentivizing players in the hotel and accommodation to invest in tourist facilities. Leveraging on cultural tourism and desert safaris that are unique to the region.

(iv) Commercialise beadwork. With the rich capability of beadwork, it is possible to produce for targeted market at domestic and international level.

(v)   Encourage participation in the Adult and Continuing Education programme to improve the quality of the current labour force.

Samburu County Economic Performance

Samburu County contributes on average 0.3 per cent of the National Gross Value added with an average GVA of Ksh. 21,943 million. The GVA per capita for Samburu County is Ksh 68,942 with an average population growth of 3 per cent and overall poverty levels at 66.2 per cent. Samburu County has an erratic growth rate with high growths and sharp declines. The county's average growth rate from 2013-2022 is 5.57 per cent which is higher than the national average growth of 4.37 per cent. The highest growth rate was in 2015 at 19.50 per cent while the highest decline in growth was in 2014 at -2 per cent as shown in Figure 1.

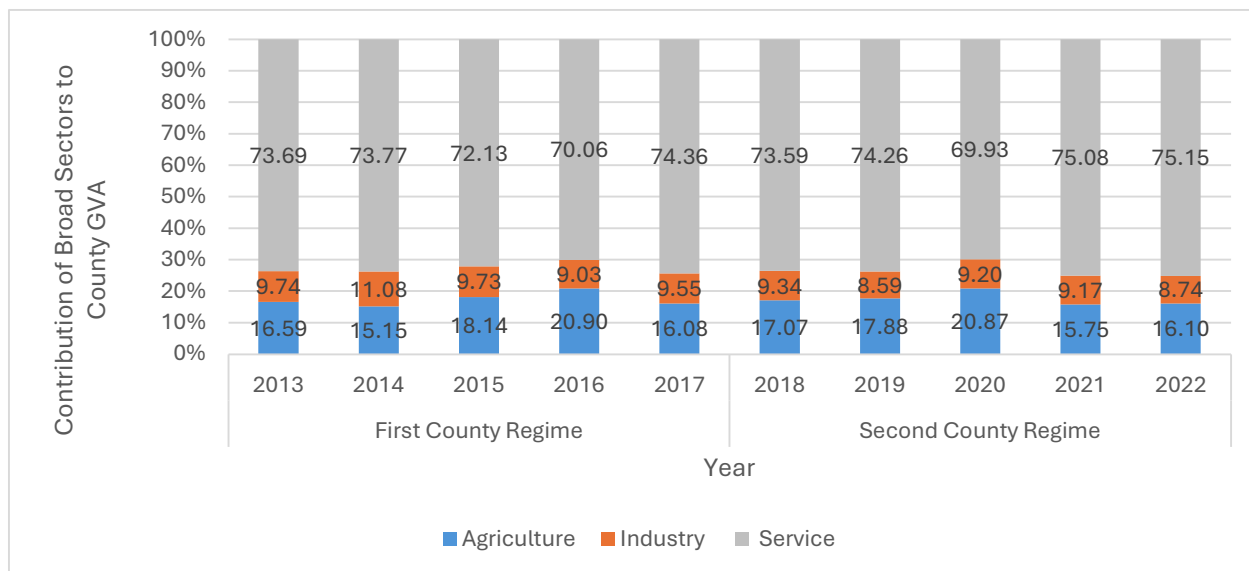### Figure 1: Samburu County GVA growth rate

Data Source: KNBS 2023-Gross County Product

Sectoral Analysis of GVA

The service sector is dominant in Samburu County with an average contribution to GVA of 73.20 per cent. The agriculture sector is second, contributing an average of 17.45 per cent to the GVA while industry contributes about 9.42 per cent as shown in Figure 2.

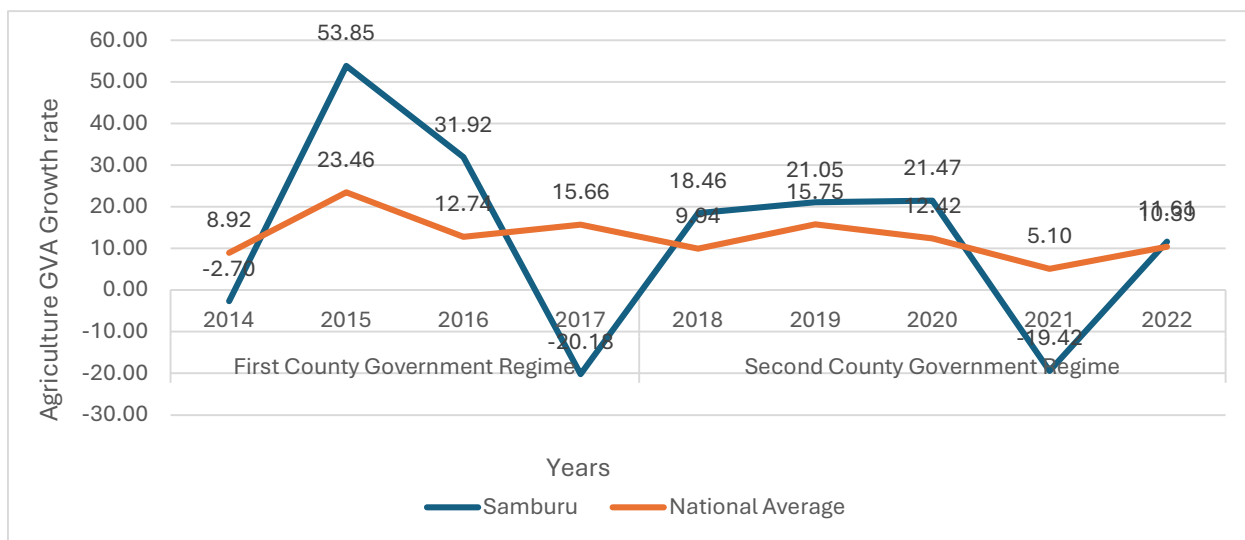## Figure 2: Contribution of broad sectors to Samburu County GVA

Data Source: KNBS 2023-Gross County Product

Agriculture Sector

The average growth rate in agriculture GVA in 2013-2022 is 12.90 per cent, which is above the national average of 12.71 per cent as shown in Figure 3. The agriculture sector growth rate has a very erratic trend as it is highly vulnerable to drought shocks. The highest decline in growth was in 2017 at -20.18 per cent, attributable to a severe drought that affected about 2 million people. The 2014 drought also contributed to the decline in growth in growth while the 2020-2023 multi-year drought contributed to contraction (-19.42 per cent) of agriculture GVA in 2021. The county has also experienced high growth rebounds as they recovered from drought episodes with the highest growth being in 2015 at 53.85 per cent.
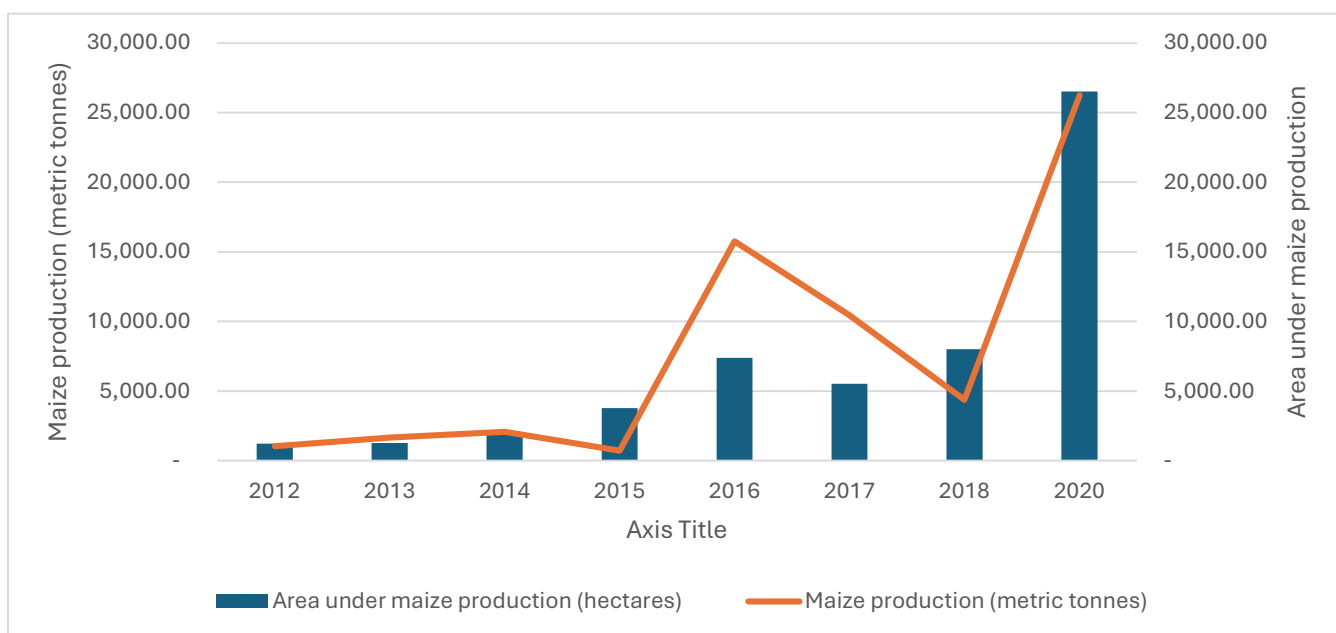
Figure 3: Samburu County agriculture sector GVA growth rate

Data Source: KNBS 2023-Gross County Product

The high aridity in Samburu County limits rainfed crop production, this is reflected in the low area harvested for maize. Despite this both maize production and area under maize production has been increasing overtime with the highest increase being in 2020 as the county is increasing adopting agro pastoralism (Figure 4).

Figure 4: Maize production and area of maize harvested
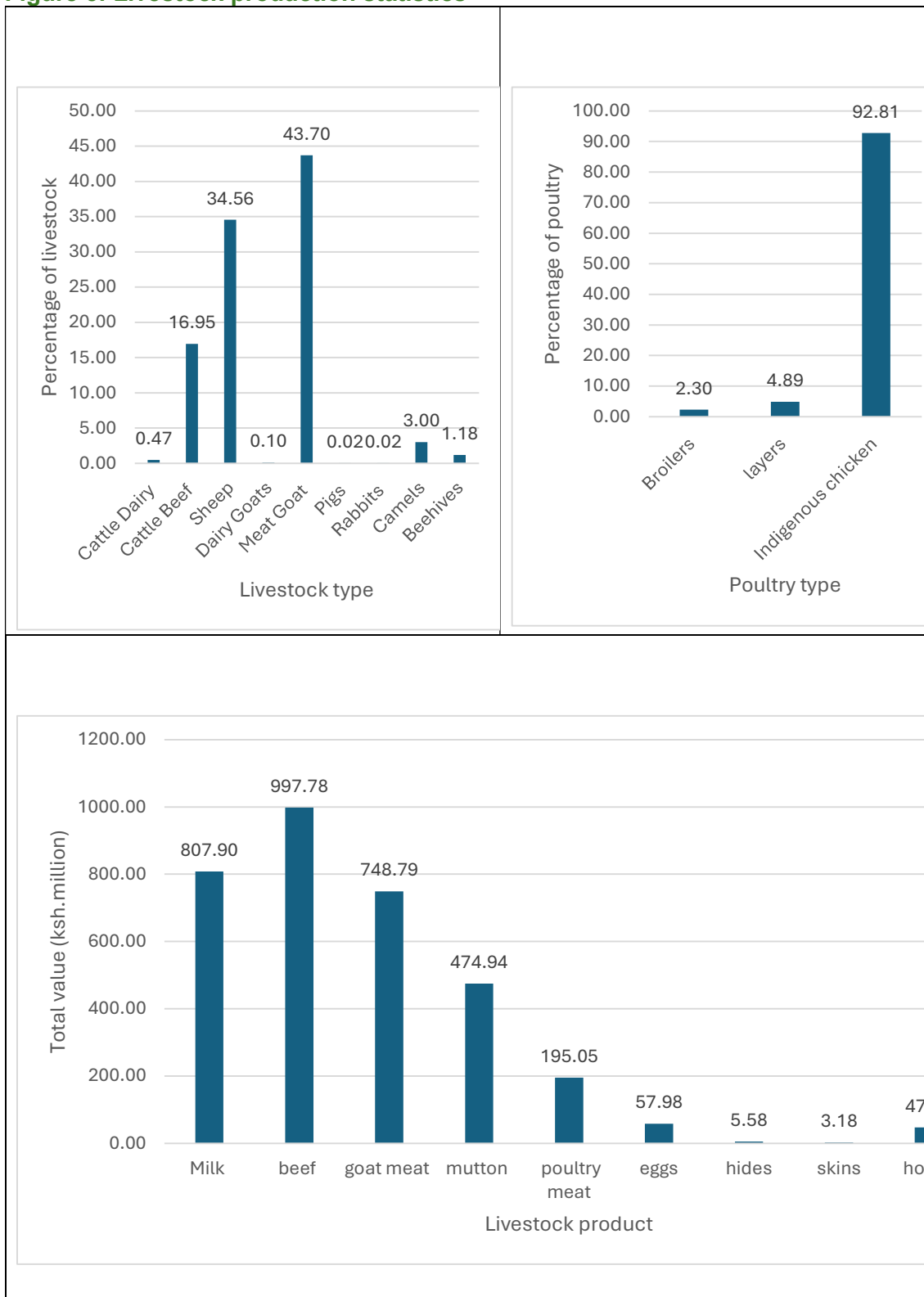

Data source: National Information Platform for Food and Nutrition (NIPFN)

Samburu county has a comparative advantage in livestock production, the county has high number of beef cattle, sheep, and meat goats in the country. Meat goats are the most popular livestock kept, although the number of poultry farming is comparatively low in the county, indigenous chicken is more popular. Milk and beef, products of cattle farming have the highest value in the county. Although Samburu County has significant livestock resources the value of marketed hides and skins is incredibly low, as livestock

production is yet to be fully integrated into the leather value chain. Additionally, climate change through frequent and severe droughts is also inhibiting the full realization of the potential in livestock production (Figure 5).

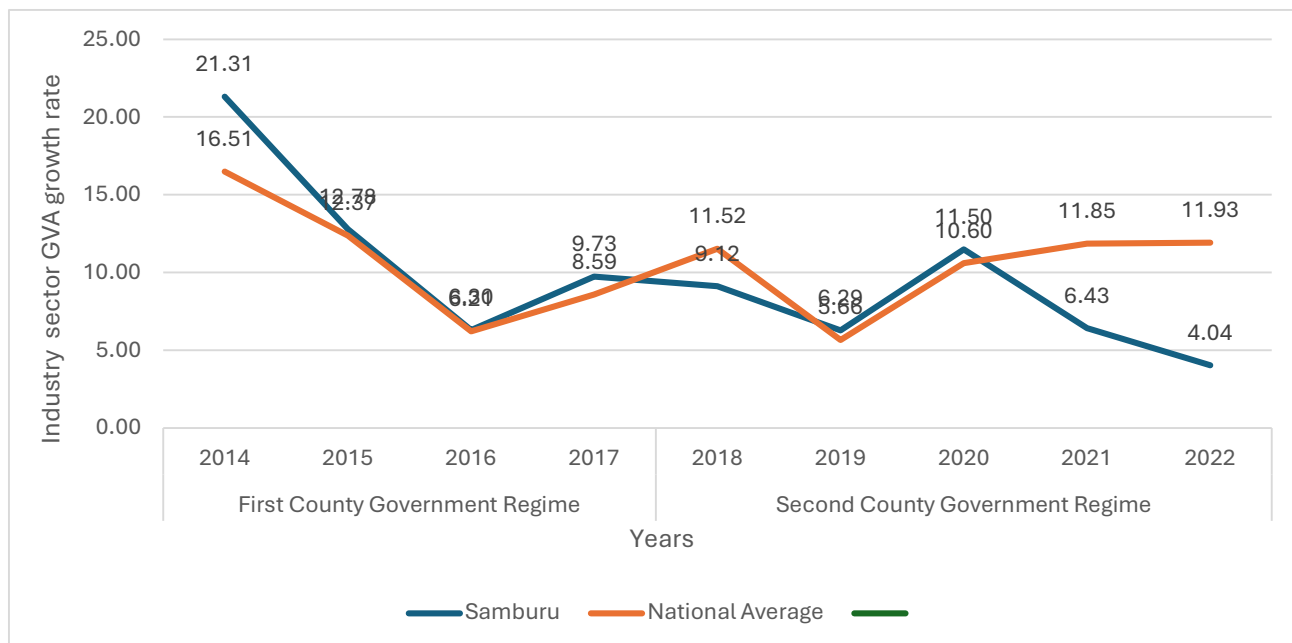**Figure 5: Livestock production statistics**

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

Industry Sector

The average growth rate of industry sector is 9.72 per cent, which is below the national average of 10.58 per cent as observed in Figure 6. The industry GVA has shown a positive and steady trend for all the years under review.
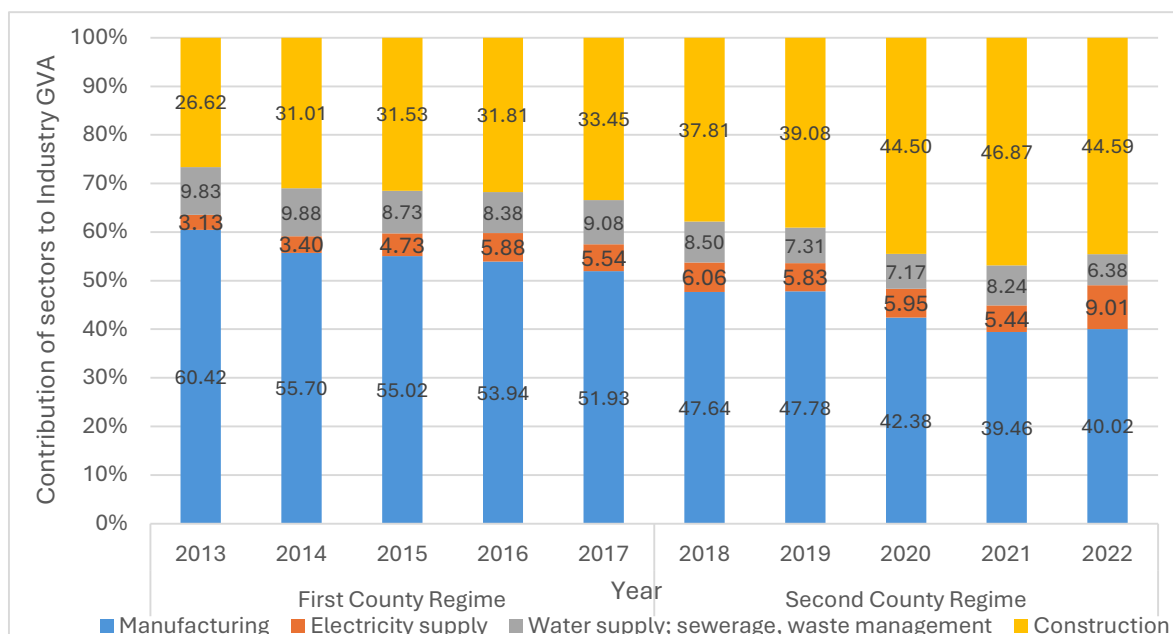
Figure 6: Samburu County industry sector GVA growth rate

Data Source: KNBS 2023-Gross County Product

Manufacturing and construction are other important sub-sectors in Samburu County as they dominate the industry sector as shown in Figure 7.

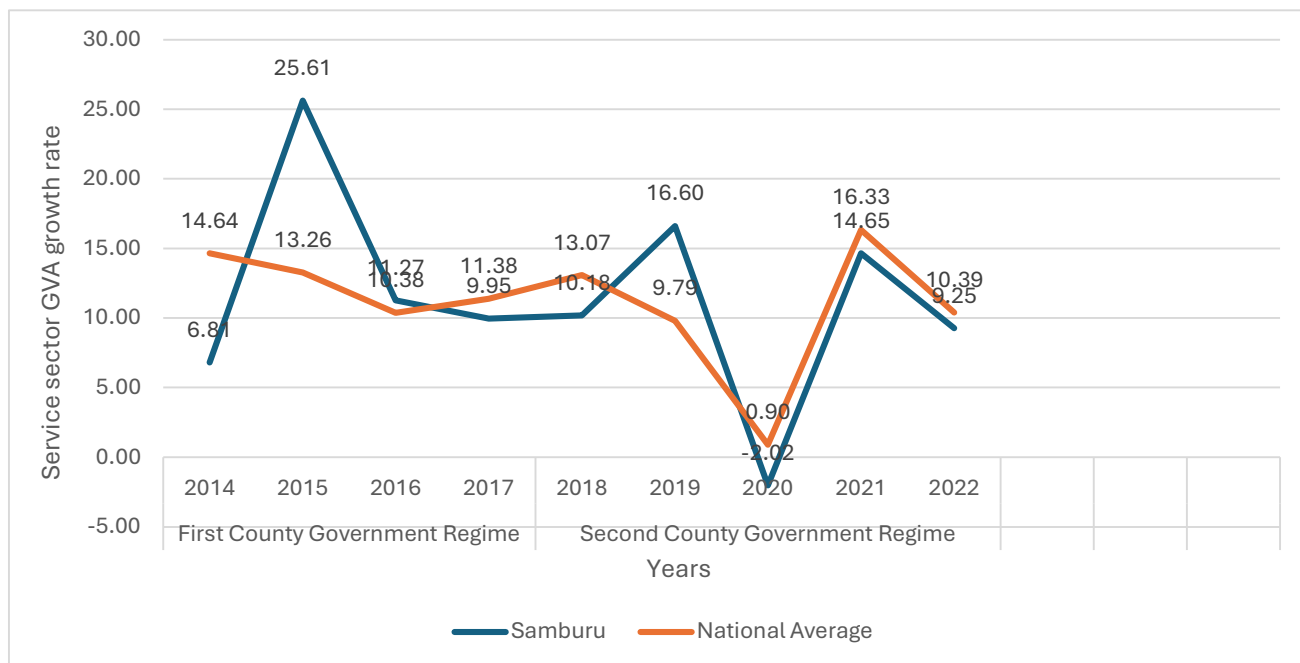**Figure 7: Contribution of industry sectors to industry GVA**

Data Source: KNBS 2023-Gross County Product

Services Sector

The average growth rate of service sector is 8.31 per cent which is below the national average of 11.13 per cent as shown in Figure 8.

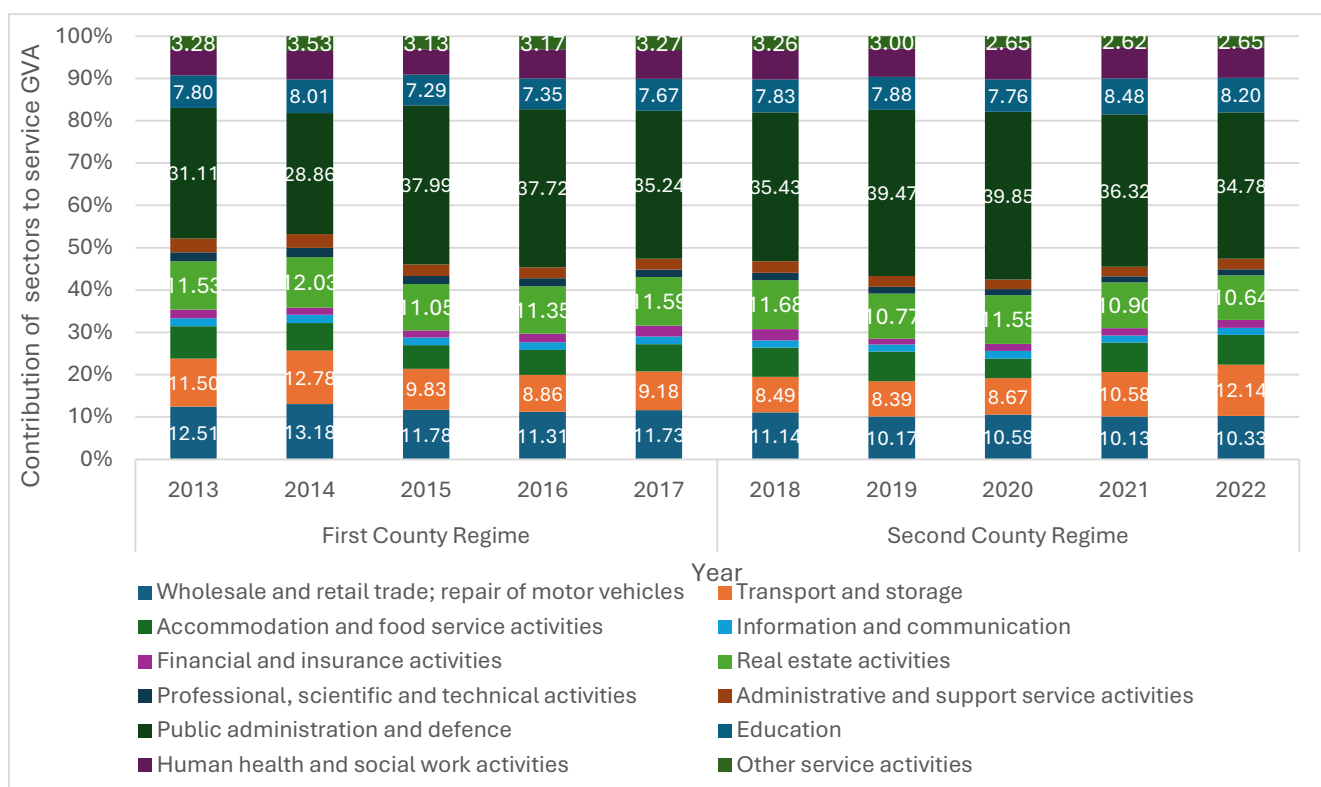**Figure 8: Samburu County services sector GVA growth rate**

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 35.68 per cent. The real estate sub-sector is the second highest contributor to services GVA at 11.31 per cent. The wholesale and retail trade sector is third at an average of 11.29 per cent as shown in Figure 9.

The tourism potential in the county has not been fully exploited as the contribution by accommodation and food services is low contributing between 2-3 per cent to services GVA. Samburu County has three national reserves namely Samburu National Reserve; Shaba National Game Reserve which spans between Samburu and Samburu counties. Other tourism potential includes the rich cultural heritage and Mount Kulal, an extinct volcano which is one of the six biosphere reserves in the country.

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

Data Source: KNBS 2023-Gross County Product

Quantity and Quality of Labour Force in Samburu County

Samburu County has a total of 149,054 working-age population which is less than half of the total county population 48.03 per cent. Much of the working-age population is youthful (18-34 years) at 55.26 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	12,869	10,382	23,251	15.60
18 –24	21,304	20,871	42,175	28.30
25-34	19,373	20,818	40,191	26.96
35-64	21,684	21,753	43,437	29.14
Total	75,230	73,824	149,054	

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

Most of the population in Samburu sub-counties are persons in the working age categories. Samburu Central has the highest percentage of working-age persons at 59.70 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**	
Samburu Central	164,940	13,059 (16.23)	22,681 (28.18)	21,263 (26.42)	23,474 (29.17)	80,477 (48.79)
Samburu East	77,993	5,077 (13.44)	10,596 (28.06)	10,575 (28.00)	11,518 (30.50)	37,766 (48.42)
Samburu North	67,387	5,115 (16.60)	8,898 (28.88)	8,353 (27.11)	8,445 (27.41)	30,811 (45.72)

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

In Samburu County majority of socioeconomic indicators that affect the quality of labour performed lower than the national average as reported in Table 3. Interventions are required to improve literacy rates and health indicators that will improve the quality of labour.

Table 3: Human capital indicators

Human capital indicators	County	National average
Literacy rate	40.30	78.41
Pre-primary net enrolment rate (2019)	43.39	67.51
Primary school net enrolment rate (2020)	44.00	77.72
Secondary school net enrolment rate (2020)	30.00	54.18
Average years of schooling (2014)	6.70	7.78
Percentage of children 12 -23 months fully vaccinated (%)	64.10	74.97
Percentage of stunted children	31.40	19.75
Percentage of teenage pregnancy	50.10	15.79
Primary to secondary transition rates (2020)	80.60	86.13
Pupil-teacher ratio (primary school)	22.00	28.28
Food poverty head count (%)	60.20	33.63
Child poverty head count (%)	68.50	42.67

Source: KNBS (2022), Kenya Demographic and Health Surbey - 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 Samburu County majority of the essential infrastructure and capital indicators that support production of county output performed lower than the national averages. There is a need for interventions to improve the quality and quantity of essential infrastructure to enable the county to exploit latent resources as observed 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	14.80	38.52
Distribution of population using the internet (2019 census)	9.70	18.69
Rural Access Index (2018)	10.57	63.72
Access to improved sanitation (2018)	32.00	59.04

Access to improved water (2018)	42.00	65.33
Financial inclusion level (2021)	68.60	81.01
The proportion of primary schools with internet	11.40	27.65
Proportion of secondary schools with functional internet	23.10	35.13
Percentage of households by housing material composite-finished materials(adequate) (2019)	48.05	51.71
Percentage of households using bank usage (overall)	30.90	38.18
Percentage of households using mobile money	62.90	78.58

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

County Employment Status

Employment to population ratio is at 66.34 per cent. Most of those working is the youthful working population 18-34 years at about 37.20 per cent while those 35-64 years is at 23.10 per cent. There is little disparity in employment by gender as percentage of the males employed is 46.01 per cent while females are at 47.06 per cent. The unemployment rate is at 9.14 per cent with unemployment being slightly higher for the youth (18-34 years) at 5.54 per cent and those between 35-64 years at 2.73 per cent as reported in Table 5.

There is high percentage of persons 5–17 years old working at 32.95 per cent. The cultural practices may explain this as children and teenagers in pastoral communities play a key role in livestock production grazing the livestock. Although this is critical in helping them attain indigenous knowledge that is critical for the sustenance of pastoralism it is at the expense of early attainment of formal skills that are needed for alternative livelihoods and industrial transformation of counties. Climate change through frequent drought that force communities to migrate search of resources could also be contributing. Incidences of insecurity which disrupt learning activities is also a cause of the high out of school children who are engaged in economic activities.

Inactivity rate for the youth category is 17.15 per cent while for the non-youth is 6.23 per cent. The higher inactivity rates for persons of prime age is of concern as it indicates lower labour utilization.

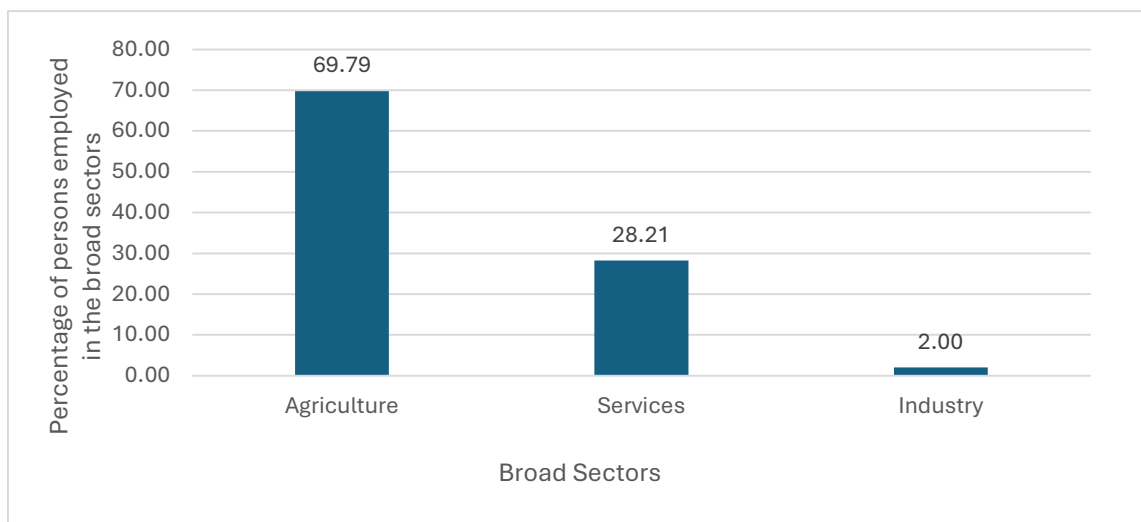### Table 5: Samburu County employment statistics

Employment statistics	Youth	Non youth
Employment to population ratio (%)	37.20	23.10
Unemployment rate	5.54	2.73
Percentage of persons 5–17 years old working	32.95	-
Inactivity rate	17.15	6.22

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

Sectoral Employment

The agriculture sector is the highest employer in Samburu County at 69.79 per cent followed by the services sector at 28.21 per cent. The industry sector is third at 2.00 per cent as shown in Figure 10.

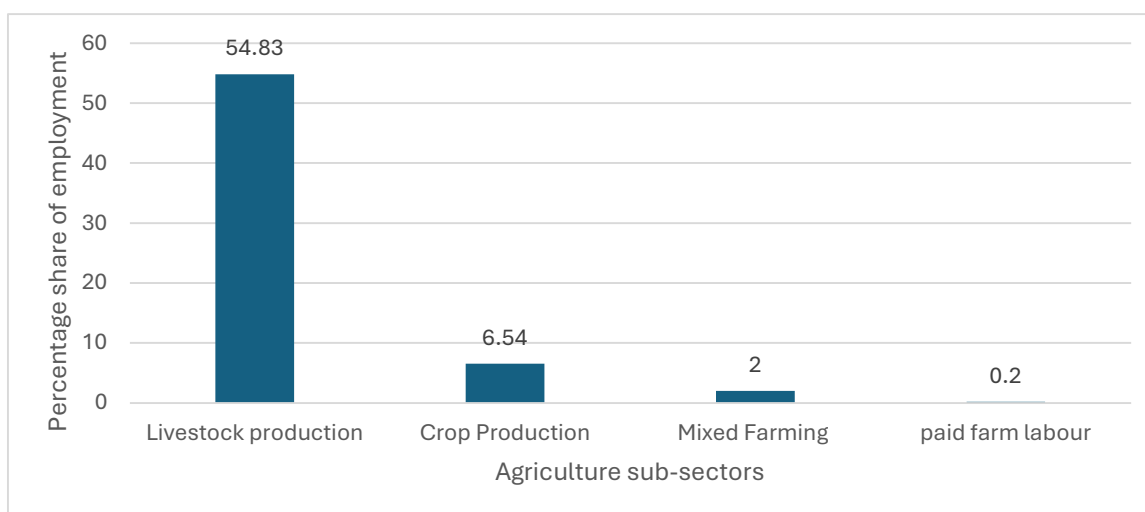**Figure 10: Percentage of persons employed in the broad sectors**

Data Source: KNBS 2021- Kenya Continuous Household Survey

Agriculture Sector Employment

In agriculture, the majority are those practicing livestock production. This reflects the comparative advantage of the county in livestock production (Figure 11).

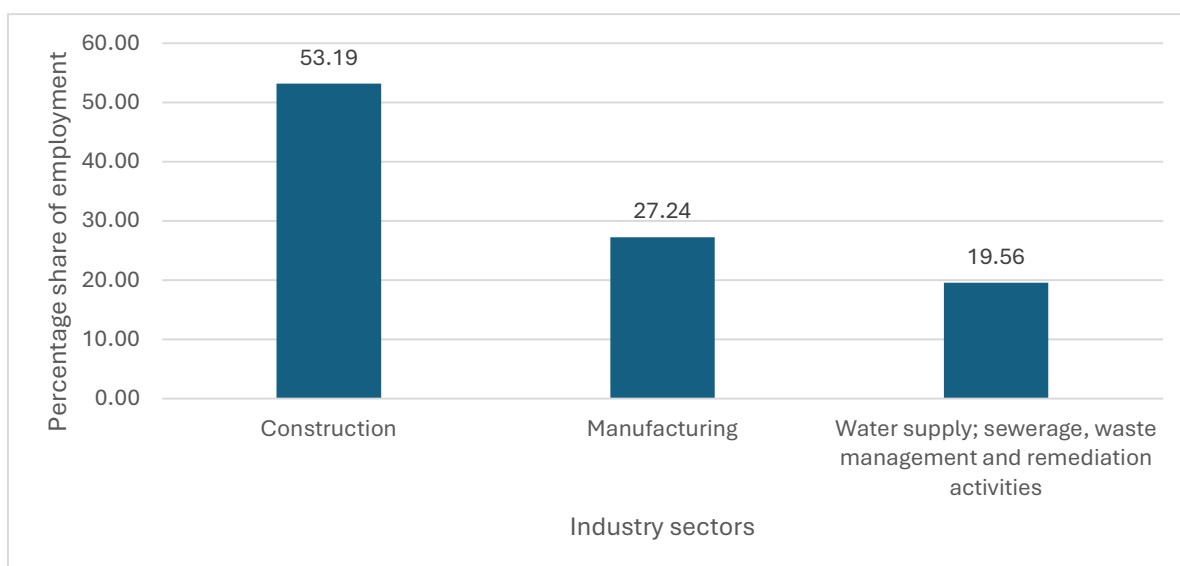**Figure 11: Percentage share of employment in agriculture sub-sectors**

Data Source: KNBS 2021- Kenya Continuous Household Survey

Industry Sector Employment

The majority of those working in the industry sectors are in the construction of buildings as shown in Figure 12. The construction sector is highly volatile, and employment in the sector is subject to significant fluctuations. The construction industry is also subject to seasonal employment patterns raising concerns over the sustainability of employment in the sector.
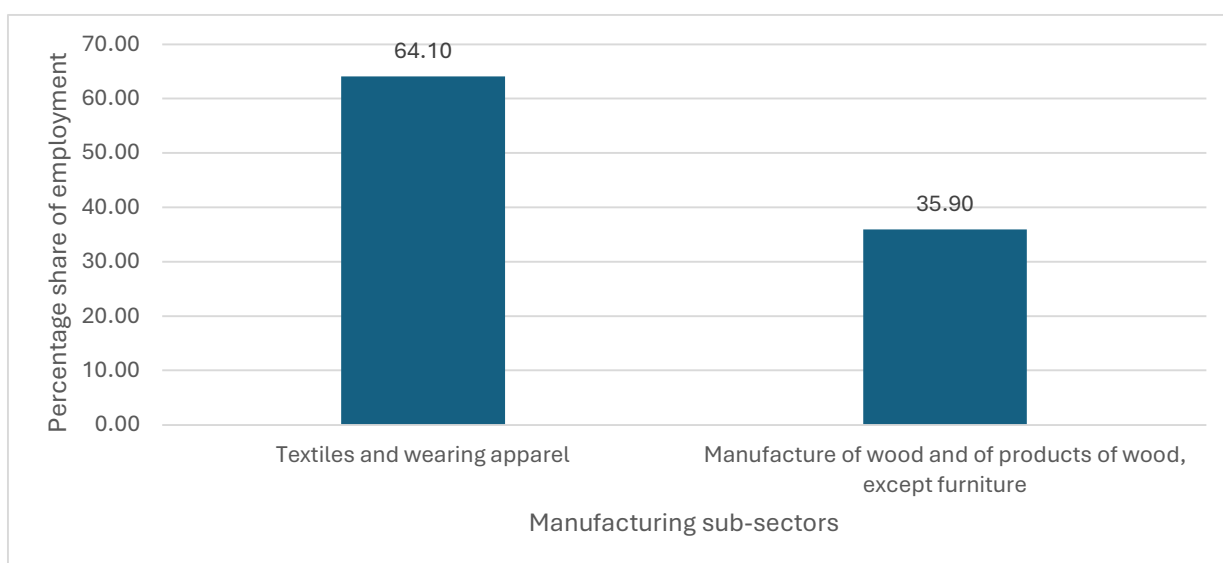
Figure 12: Percentage share of employment in the industry sub-sectors

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 textiles and wood industries as shown in Figure 13.

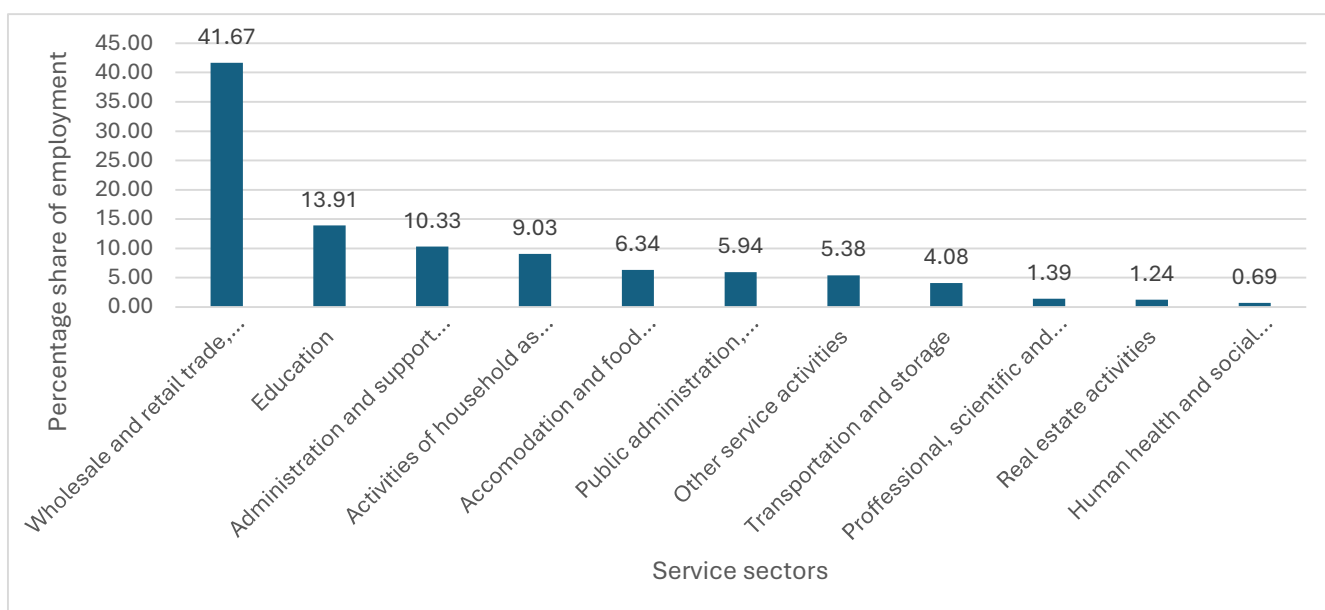**Figure 13: Percentage share of employment in manufacturing sub-sectors**

Data Source: KNBS 2021- Kenya Continuous Household Survey

Services Sector Employment

The majority of those working in the services sector are in wholesale and retail trade as shown in Figure 14 which is dominated by the informal sector.
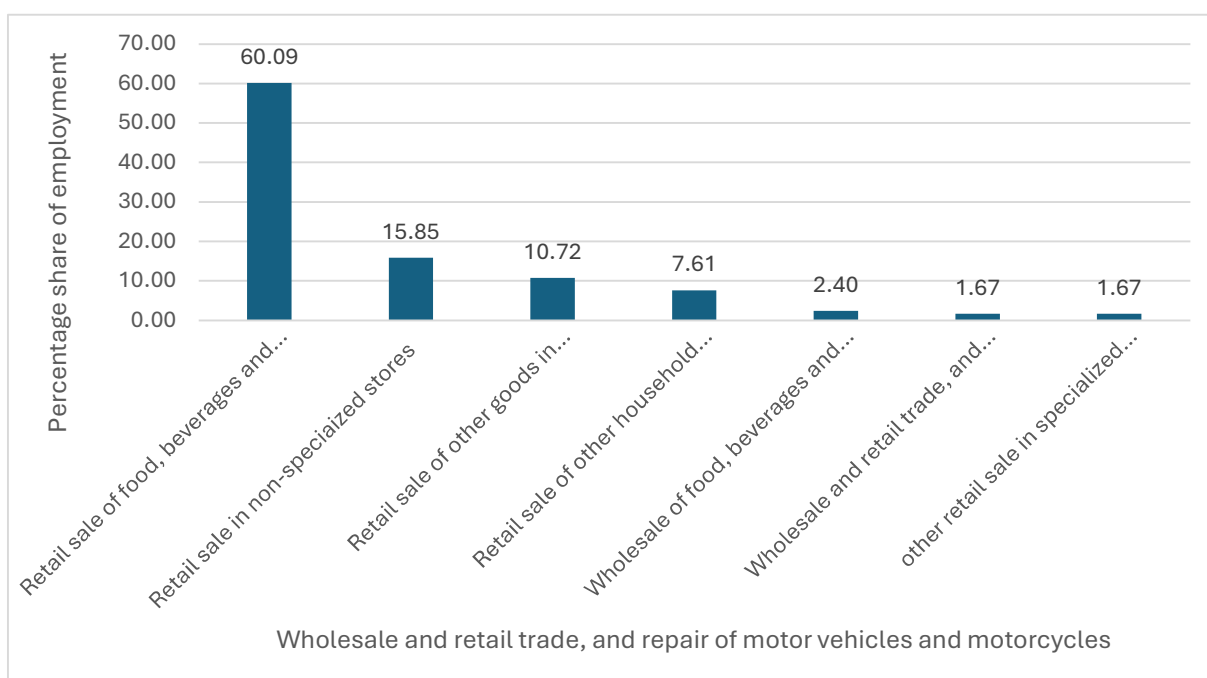
Figure 14: Percentage share of employment in the service sector

Data Source: KNBS 2021- Kenya Continuous Household Survey

In the wholesale and retail trade, and repair of motor vehicles and motorcycles, the majority work in the retail of food, beverages, and tobacco products as shown below in Figure 15.
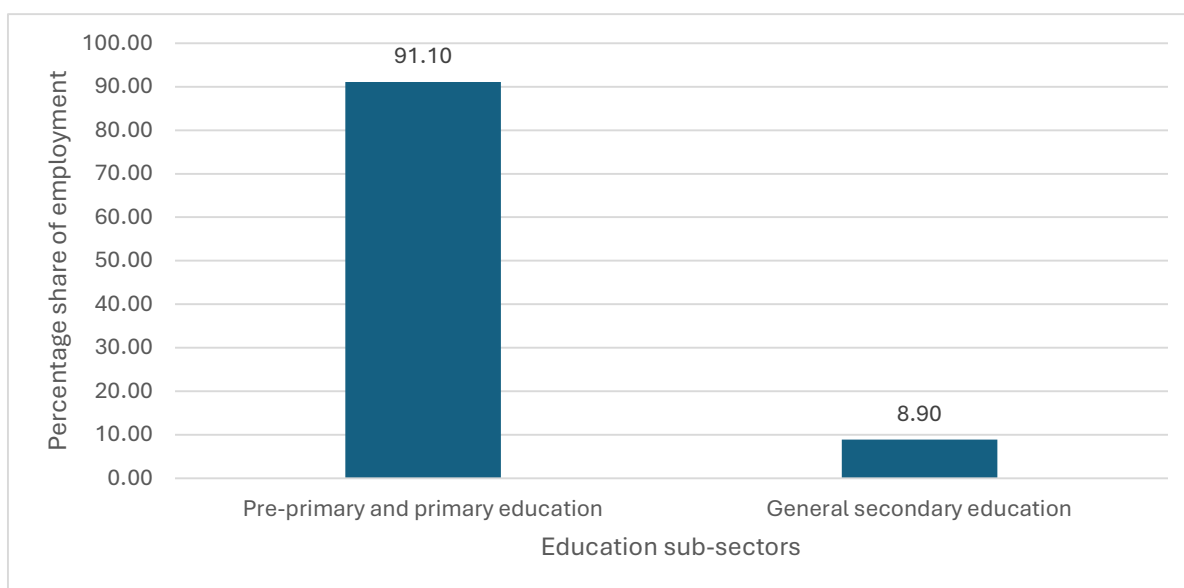
Figure 15: Percentage of persons employed in the wholesale and retail trade; repair of motor vehicle sub-sectors

Data Source: KNBS 2021- Kenya Continuous Household Survey

In the education sector, the majority of those employed are in pre-primary and primary education as shown in Figure 16.

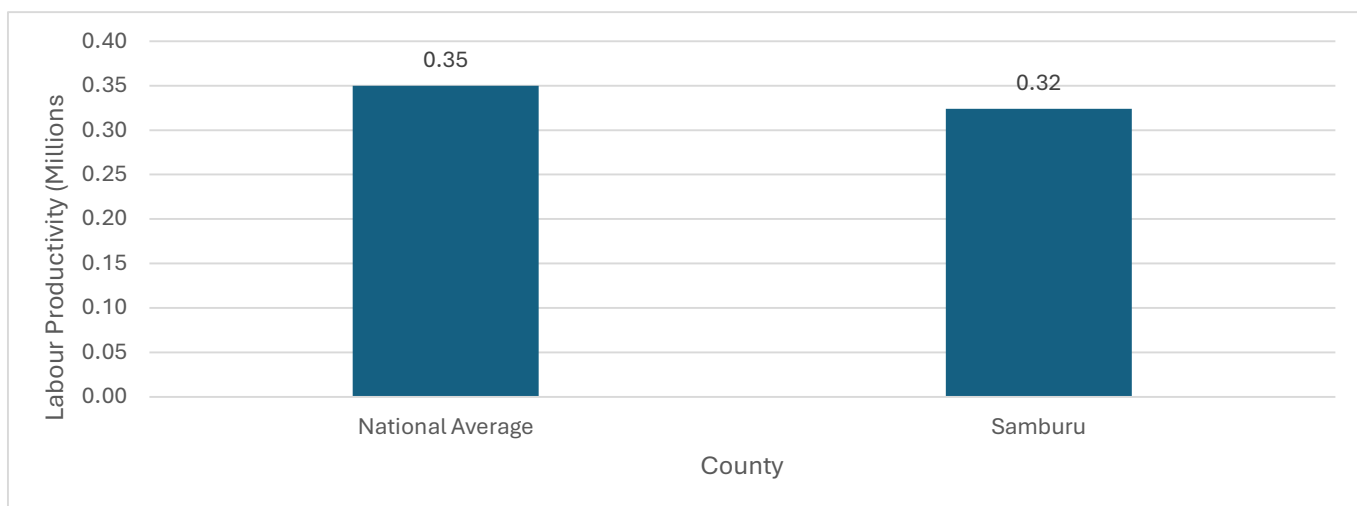**Figure 16 : Percentage share of employment in the education sub-sectors**

Data Source: KNBS 2021- Kenya Continuous Household Survey

Labour Productivity

Labour productivity for Samburu County is 0.32 per cent which is below the national average of 0.35 per cent as shown in Figure 17.
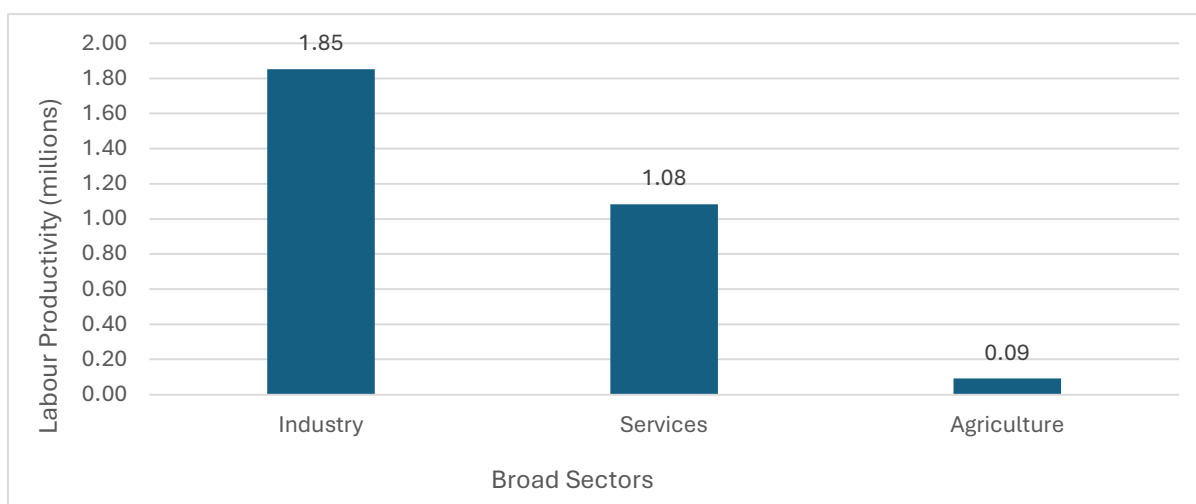
Figure 17: Labour productivity ratios (millions)

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 1.85 per cent, followed by the industry sector at 1.08 per cent, and thirdly the agriculture sector at 0.09 per cent as shown in Figure 18.

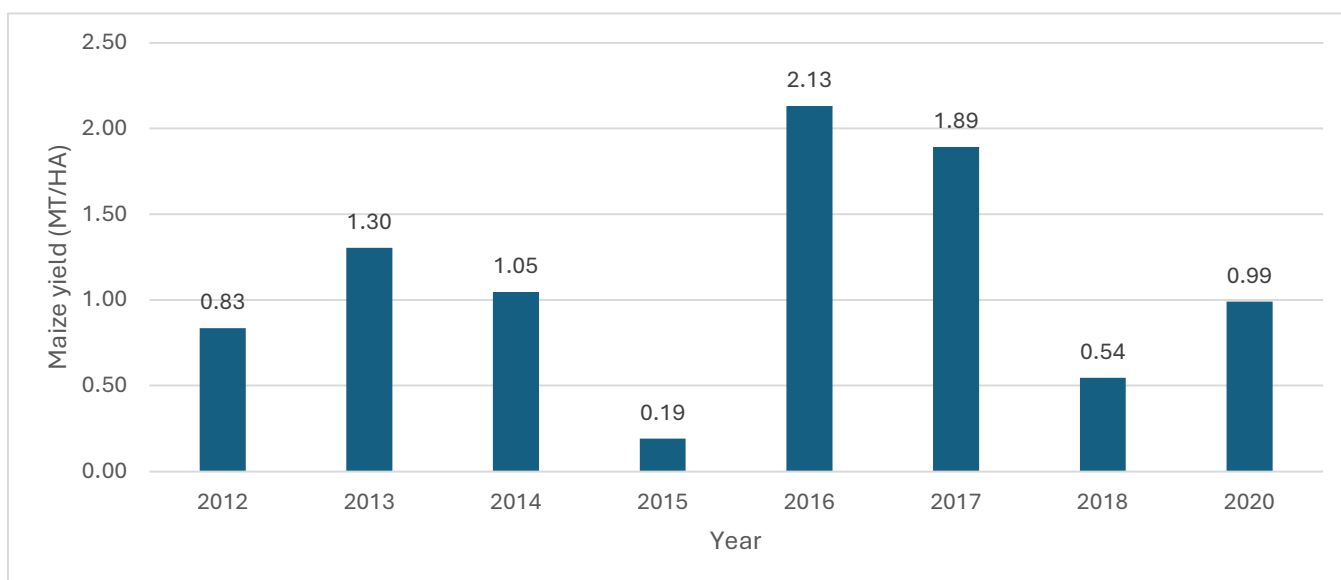**Figure 18: Labour productivity by sectors**

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

Agriculture Productivity

In agriculture sector, maize yield is higher in Samburu County compared with other arid counties at an average of 1.12 MT/HA. The 2014 drought episode contributed to the lowest maize yield in 2015 as shown in Figure 19.
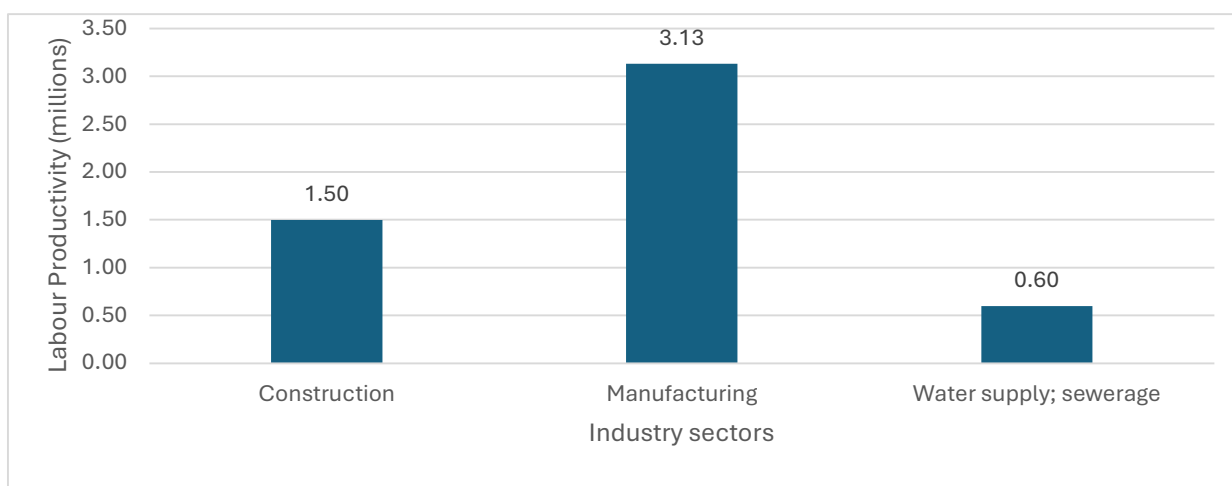
Figure 19: Maize yield (MT/HA)

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

Industry Sector Labour Productivity

Manufacturing sub-sector had the highest labour productivity in the industry sector as shown in Figure 20.
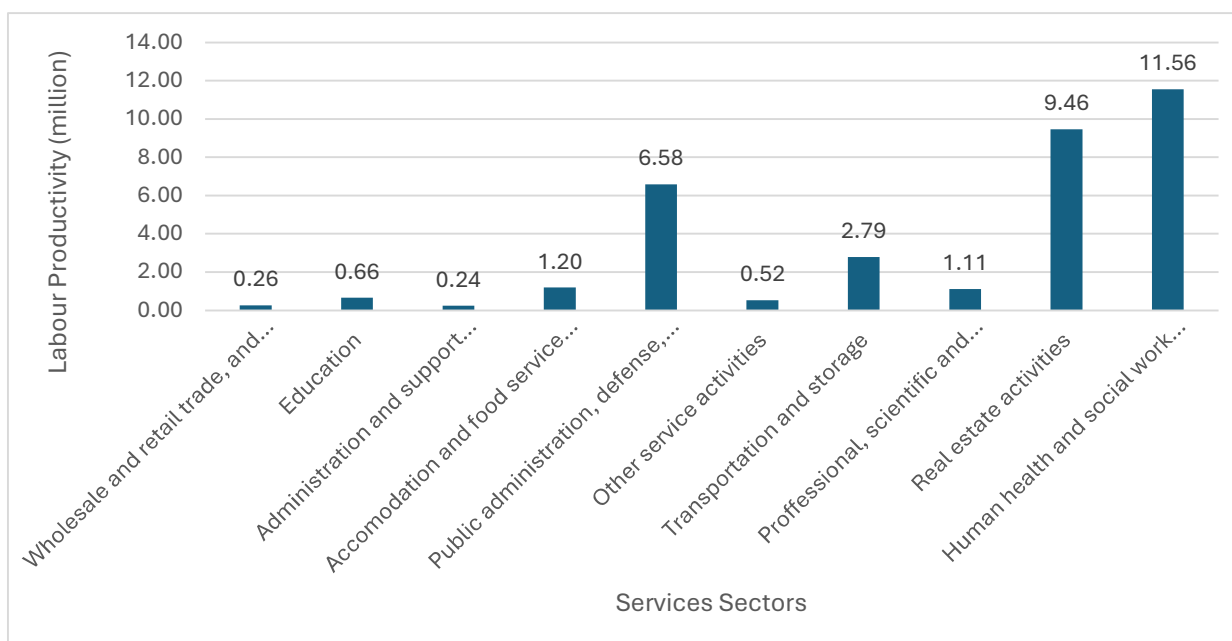
Figure 20: Labour productivity by industry sectors

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

Services Sector Labour Productivity

The human health and social work sub-sector had higher labour productivity when compared with other sectors within the services sector. The wholesale and retail trade sector which had the highest employment in the services sector had the lowest labour productivity as observed 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) Frequent and severe droughts inhibit full realization of the livestock production potentials and crop production. Samburu county has a comparative advantage in livestock production, but the low marketed hides and skins indicate that livestock production is yet to be fully integrated into the leather value chain. The non-market service dominates the services sector indicating lower output from the market-oriented services.

(ii) The quality of labour is lower than the national average. Interventions are required to improve literacy rates, school enrolment and transition, stunting, and teenage pregnancy, that affect quality of labour.

(iii) Majority of the essential infrastructure and capital indicators that support the production of county output are lower than the national averages. There is a need for interventions to improve internet and electricity connectivity, rural roads, water and sanitation, and financial inclusion.

(iv) There is a high percentage of persons 5–17 years old working at 32.95 per cent. Cultural practices, insecurity and droughts are the causes. The high out of school children who are engaged in economic activities hinders early attainment of formal skills that are needed for alternative livelihoods and industrial transformation of counties.

(v) Inactivity rate for the non-youth is high at 6.23 per cent. The higher inactivity rates for persons of prime age is of concern as it indicates lower labour utilization. The high number of persons inactivity by discouraged jobseekers is also of concern as it indicates low labour utilization.

(vi) Labour productivity in Samburu is lower than the national average. Agriculture sector has the lowest which can be explained by the effects of drought on agricultural output in the county. That said there is potential for diversifying to crop production including maize. Productivity is highest in manufacturing in the industry sector. Samburu has potential for beadwork given the traditional demands, but it is not fully commercialised. In the services sector, productivity is highest in human health and social sector, real estate and public administration.

Policy Recommendations

(i) Build climate resilience in the livestock sub-sector. This can be achieved through; increasing uptake of weather-based insurance scheme for livestock production; promoting use of asset backed insurance and subsidizing premiums for disadvantaged pastoralists; optimal use of drought early warning systems to encourage commercial offtake of livestock to mitigate losses. The county can also consider establishing county livestock enterprise fund that will finance pastoralists to restock after drought episodes to accelerate recovery.

(ii) Integrate livestock production into the leather value chain. This can be achieved by commercialising supply of hides and skins by creating awareness among pastoralist on the value of hides and skins, increasing extension services to improve the quality of hides and skins, facilitating aggregation and pooled sales of hides and skins to increase producers bargaining power. This to go in tandem with efforts that would increasing the number of leather processing facilities by providing incentives to local leather product manufacturers to establish tanneries in the arid counties.

(iii)   Reduce the dominance of non-market services in Samburu County and encourage development of market-oriented services, there is need for the county to leverage on its tourism resources. This requires marketing the tourist sites in the counties to encourage local and international tourism. Also incentivizing players in the hotel and accommodation to invest in tourist facilities in the arid counties. Leveraging on cultural tourism and desert safaris that are unique to the region.

(iv)   Commercialise beadwork. With the rich capability of beadwork, it is easy for the bead workers to produce for targeted market at both the domestic and international market. This may require building capacity on standards to produce for export market. At domestic level promote selling of customised beadwork beyond Samburu.

(v)   Encourage participation in the Adult and Continuing Education programme to improve the quality of the current labour force. This can be done through increasing awareness campaigns on the benefits of adult learning, targeting out-of-school youth and adults in the county. Improving the effectiveness of adult learning centres in the Samburu County by investing in mobile adult learning centres that target nomadic pastoralists who move during droughts. Increase funding to the Adult and Continuing Education programme to increase the number of facilities and trainers.

Acknowledgement

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