NATIONAL BUREAU OF STATISTICS

LABOUR PRODUCTIVITY IN NIGERIA (2010-2014): A SHORT ANALYSIS

MAY 2015

Introduction

Among the key measures of the well-being of an economy, is the level and growth of economic output, commonly known as the gross domestic product (GDP). However, economists and policy makers are also interested in the factors of production that are used in generating such output, as well as the level of efficiency associated with those inputs. The *productivity* of inputs, for example, capital and labour, used in the production process remains an important indicator of the relationship between overall economic output and other aspects of the economy, such as the labour market, the money market, the capital market etc.

The productivity of inputs, or more technically, total factor productivity, refers to the amount of input required to produce a unit of output. It is typically computed as a ratio of output to the input utilised. While the total factor productivity for an economy can be computed this way, this can often be a difficult task, and a more specific and commonly used measure of productivity is labour productivity. Specifically, labour productivity refers to the quantity of labour input required to produce a unit of output. This is often the case, even though it is recognised that labour is NOT the only input utilised in the production process.

High labour productivity can be an important signal of the improvement in real incomes (wages of labour). It also has implications for the conduct of both monetary and fiscal policies. It is recognised that labour productivity is not necessarily an indicator of the effort of each worker, but it still provides a useful measure of the rewards to labour as a factor in the production process. In many developing economies with large endowments of labour, measuring the productivity of labour is an important way to understand the dynamics occurring in the labour market, and useful in providing insights to policymakers regarding trends in unemployment, job creation and wages. Ultimately, these have implications for higher economic output and poverty reduction.

In Nigeria, although economic growth has been high and stable in recent years, constraints on productivity of labour and other factor inputs continues to put a drag on overall economic growth. Coupled with high unemployment rate, the Nigerian economy faces a considerable threat to realising its full growth potential due to productivity challenges.

The purpose of this brief report is to review recent trends in labour force and labour productivity in Nigeria, as well as compare with other emerging economies, with a view to highlighting possible areas of interest in the analysis of labour productivity in Nigeria. This short report also forms a preparatory note for a forthcoming rigorous and detailed study on labour productivity in Nigeria by the National Bureau of Statistics.

1. Data

Data used for this report are from the National Bureau of Statistics Labour Force Surveys, as well as the OECD EuroStat database [1]. For our purposes, labour productivity is derived as the ratio of total output (annual GDP, current prices) to labour input (total hours worked per year). The analysis is restricted to the period 2010-2014, while country comparison is carried out for the year 2012 only.

2. Analysis

Table 1 shows the trend in total GDP, hours worked as well as the derived labour productivity for the period 2010 – 2014. It can be seen that labour productivity rose only marginally during the period under review, from about N420 to N639 during the 5 year period, translating to about $1 increase.

Table 1: Gross domestic product, labour force and labour productivity (2010-2014)

	labour force	GDP at current prices (N)	Total hours worked per year	Labour productivity per hour (N)	Labour productivity per hour (USD)*
2010	65,170,629	54,612,264,176,577.90	130,123,360,694.74	419.70	2.79
2011	67,256,090	62,980,397,224,984.50	133,450,380,068.97	471.94	2.98
2012	69,105,775	71,713,935,062,171.60	129,986,885,620.18	551.70	3.51
2013	71,105,800	80,092,563,380,000.00	134,648,242,319.81	594.83	3.78
2014	72,931,608	89,043,615,256,190.20	139,274,059,524.51	639.34	3.77

**N/USD exchange rates are year-end rates for the Central Bank of Nigeria's Dutch Auction System (DAS)*

The low values in labour productivity in Nigeria have often been associated numerous constraints facing economic activities notably power and transport infrastructure, access to finance, as well as science and technological capabilities. In addition, the quality of educational institutions, investment climate and favourable policy support to businesses are some of the major challenges identified over time by business owners especially small and medium scale enterprises, which dominate the Nigerian economy.

[1] http://stats.oecd.org/Index.aspx?DatasetCode=LEVEL
http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tsdec310&plugin=0

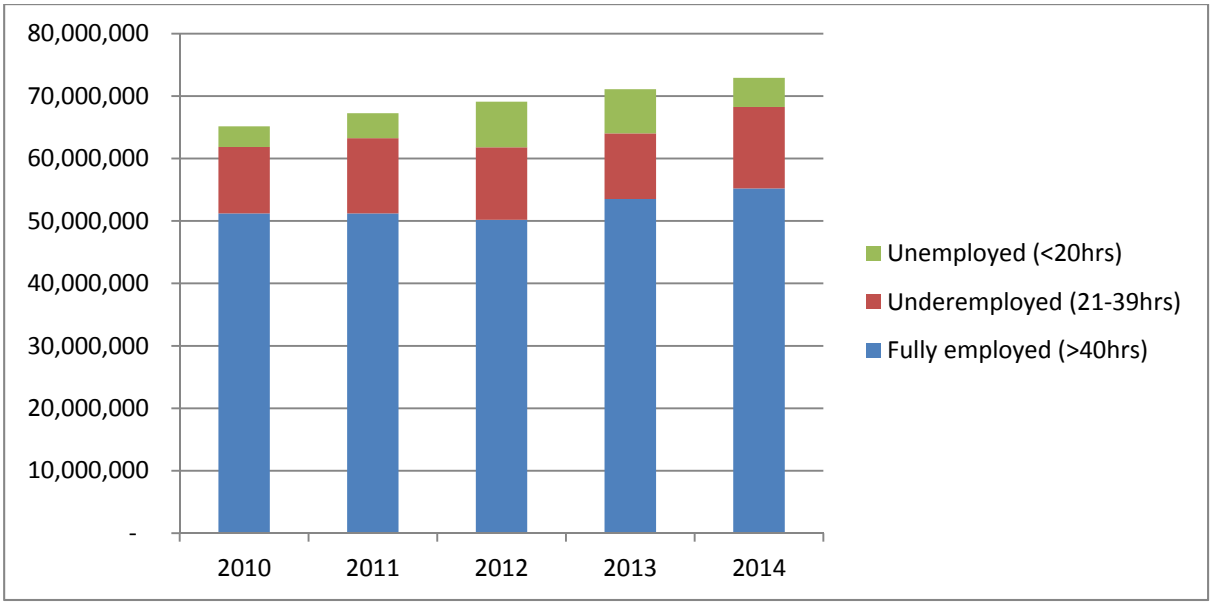
Another possible reason for low productivity could be due to excess supply of labour, persistent high unemployment gradually evolving into underemployment, as previously idle labour move into low-skilled, low wage subsistence jobs. As shown in Table 2, while the total labour force expanded by about 12% between 2010 and 2014, the size of the unemployed (i.e those working less than 20 hours a week) rose by over 40% during the same period, and those fully-employed rose by only 7%. This represents a major drag on growth in wages, as well as providing a ready supply of cheap labour.

Evidence of the fact that output in Nigeria is driven by low skilled employment and underemployment is seen table 4, which shows that only 11% of the labour force has post-secondary school education. Moreover a recent survey by the NBS and SMEDAN on Micro Small Medium Scale Enterprises revealed that over 95% of businesses in Nigeria were Micro enterprises employing about 84% of the labour force and contributing to about 48% of output. On average, across sectors, there was a large skills gap of 42.10% in the Micro enterprise and Almost 1 in 5 people in Micro enterprises have absolutely no education.

Table 2: Labour force statistics for Nigeria, 2010-2014

	Fully employed (>40hrs)	Underemployed (21-39hrs)	Unemployed (<20hrs)	Total labour force
2010	51,206,304	10,645,900	3,318,425	65,170,629
2011	51,208,594	12,041,275	4,006,220	67,256,090
2012	50,198,596	11,605,546	7,301,634	69,105,775
2013	53,508,478	10,518,868	7,078,454	71,105,800
2014	55,206,940	13,052,219	4,672,450	72,931,608

Figure 1: Total labour force, 2010-2014

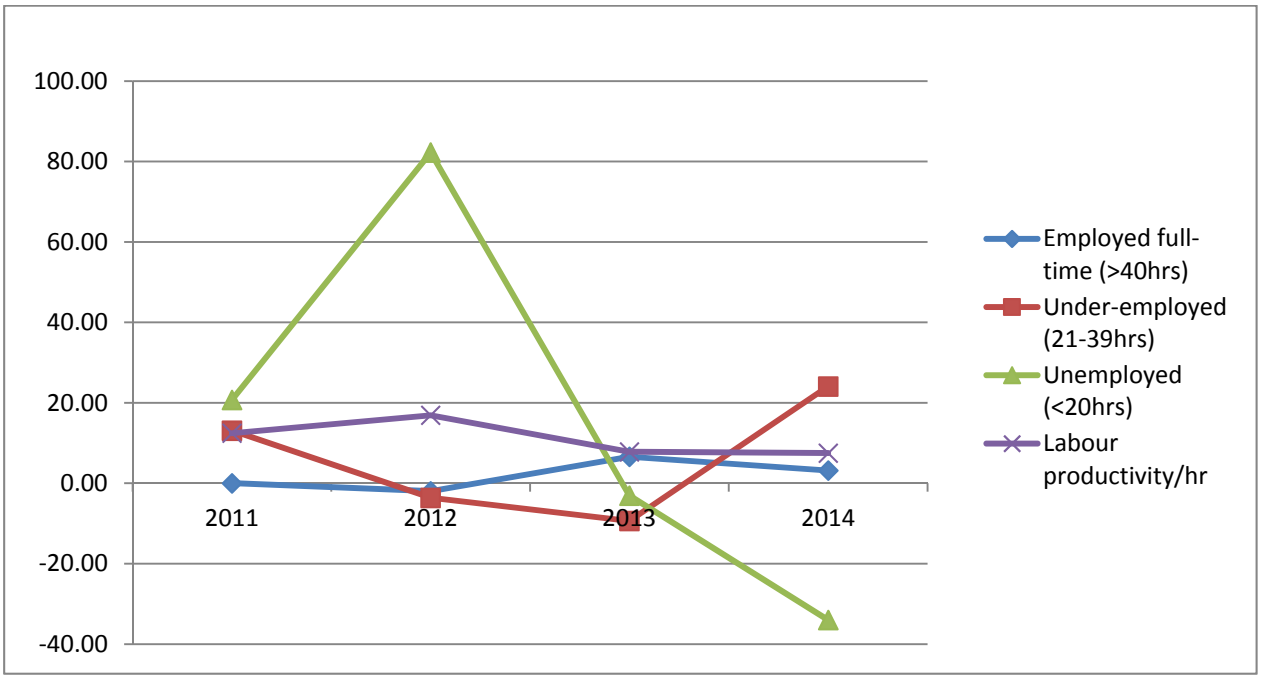


In table 3, we present the rate of growth (in percent) of the size of the labour force as well as productivity. It can be seen that the rate of expansion among fully employed workers is much lower compared to the rate of growth in unemployed/underemployed persons. For example in 2012, the number of unemployed rose by 82% while the underemployed and fully employed workers declined in size. This reversed in 2014, with a small expansion in number of fully-employed and underemployed individuals and a decline in unemployed individuals. During this period however, labour productivity growth slowed, from 16.9% in 2012 to 7.5% in2014. It is possible that the high rate of unemployment presents a ready pool of low skill workers who contribute to output but more slowly over time. Figure 2 presents a graph further illustrating this point.

Table 3: Growth rates of labour force and labour productivity (%)

	Employed full-time (>40hrs)	Under-employed (21-39hrs)	Unemployed (<20hrs)	Labour productivity/hr
2011	0.00	13.11	20.73	12.45
2012	-1.97	-3.62	82.26	16.90
2013	6.59	-9.36	-3.06	7.82
2014	3.17	24.08	-33.99	7.48

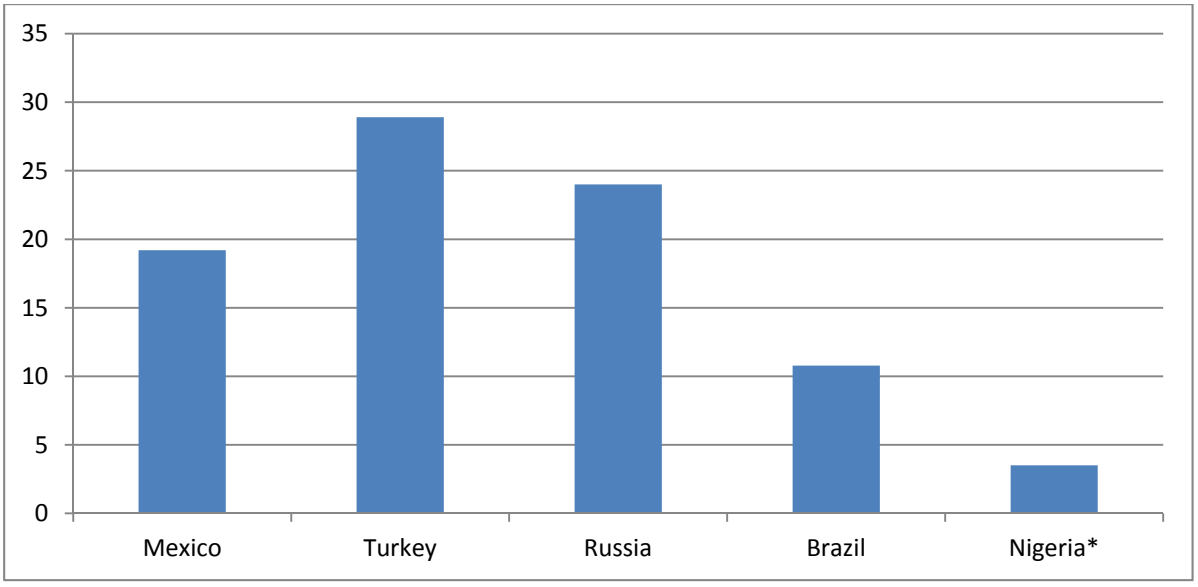
Figure 2: Percentage growth rates of labour force and productivity, 2010-2014



3. Country comparison

In many emerging economies, labour productivity (output in USD per hour worked) appears much higher than in Nigeria. For example, as shown in figure 3, emerging economies such as Mexico and Turkey (part of the MINT) and Brazil and Russia (part of BRICS) reflect fairly high levels of labour productivity compared to Nigeria. Among the selected BRICS/MINT countries, in 2012, Turkey recorded 28.9 USD/hour, Russia, 24 USD and Brazil 10.7 USD/hour. This are much higher than Nigeria's equivalent of 3.5USD/hour for 2012.

Figure 3: Labour productivity in selected emerging economies (USD / hours worked, 2012)



4. Conclusion

The results of the brief analysis reported here show that Nigeria has relatively low labour productivity despite several years of stable and high economic growth. In addition, the growth of labour productivity appears to be neutralised by the high level of unemployment and its expansion. Lastly, compared to other emerging economies, Nigeria's labour productivity levels are considerably lower.

Possible areas of interest therefore will relate to improving the unemployment situation in the country by improving the opportunities for more businesses to start, grow and employ labour. In addition, it is necessary to improve the quality of education and training of workers for higher productivity. Lastly, further methodological refinements on the approaches to determining factor productivities for the Nigerian economy are necessary.