

Comparative Study of Work Output and Wages of Construction Craftsmen in the Nigerian Public Sector

Dr. Philip O. Lawal

Department of Quantity Surveying,
Federal University of Technology PMB 65, Minna, Nigeria
E-mail: lawalp@futminna.edu.ng, gsm: +2348034531271

Patience Tunji-Olayeni

Department of Building Technology
Covenant University, Ota, Nigeria
E-mail: fkyesbofonie@yahoo.com

Abstract Work output of construction craftsmen in the service of the Federal Republic of Nigeria was the focal point of this study, compared on an annual basis to the wages they received. Comparison was also made of the wages in both the private and the public sectors. The aim of the research was to quantitatively verify the authenticity of the assumption of the general public of Nigeria that the skills of the craftsmen in the public sector were being underutilized. The Federal Government Ministry of Works offices in three of the north-central states were used for the survey. Each of the three state field offices had four departments that were having construction craftsmen of various trades as the core employees. Each of the twelve heads of departments was interviewed based on prepared questionnaire, on the volume of direct-labour work the department undertook annually. Records of the wages of the craftsmen were obtained from the accounts department while some craftsmen filled and returned questionnaire relating to their perception of the work. Percentages were used for data analysis. The results show that the wages of the craftsmen in the public sector were lower than the wages their counterparts in the private sector receive until the 1999 when the wages of the former were increased. It was equally found that the values of work output of the public sector craftsmen were infinitesimally small when compared to their wages over the period covered by the investigation. The employers were actually paying the wages of the craftsmen for work not done.

Keywords: Craftsmen, direct labour, public sector, wages, work output.

1. Introduction

Nigeria is still extremely short of trained, skilled and professional manpower, but in terms of the totality of the labour market, the former scarcity of wage labour supply has been transformed into almost a permanent surplus. In contrast to the pre-independent day, the problem now is how to stem the tide of rural migration to cities in search of wage employment. Indeed ninety-one million of the one hundred and forty million total Nigerian population are projected to reside in urban centres by the year 2025 (Ekpiwhre, 2009). The aim of the research was to quantitatively verify the authenticity of the notion of the general public of Nigeria that the skills of the craftsmen in the public sector were being underutilized.

2. Review of Relevant Literature

2.1 Characteristics of the Construction Industry Labour Market

Aggregating all construction site labour forces in Nigeria together would indicate that a large proportion

of the total working population of the country is involved. Indeed the National Population Commission (NPC), the Federal Office of Statistics (FOS), the Nigerian second and third national development plans put the population proportion of this group of the workforce in Nigeria as third after those of Agricultural workers and Sales workers respectively (NPC, 1998 and FOS, 1999). Andawei (2002) is of the opinion that the Construction Industry in Nigeria is the largest employer of labour. The industry participants who, though are from diverse disciplines, are mainly tradesmen and unskilled labourers. The buyers of labour in the construction industry are the employers, while each worker constitutes the sellers of labour.

Like any other industry, labour market for the building industry is comprised of: (a) public service sector (PSS), (b) organised private sector (OPS) and (c) informal private sector (IPS).

It is basically understood that the buyer of the construction labour is the Employer while each construction worker constitutes the seller of labour. The first two sectors operate a buyer's market but the informal private sector is the seller's market in Nigeria.

2.1.1. The Public Service Sector

This is a regulated market with the inflows (and sometimes the quits) highly under the control of the employer either by way of governments planning embargoes on employment and periodic retrenchment of labour force. This public sector policy prevents employment from growing. The direct labour projects with which the public sector building operatives were associated are seldom done any longer. Where it is carried out, it is of minimum extent and application. It more often ends up either abandoned or completed with compromised quality, excessive delays, high overhead costs or a combination of these.

Whereas in the real sense of it, direct-labour, by definition refers to the wages of the workers that actually manufacture a specific product, or the direct production cost which includes only those people who are directly making the product (Wikipedia). Direct-labour actually involves employees who are directly involved in the production of goods or services. Thus direct-labour costs are part of the costs that are assignable to a specific product, cost centre or work order (business dictionary, Toolingu).

2.1.2. The Organised Private Sector

This comprises mainly, of the multinational (foreign but indigenised) construction firms and wholly indigenous firms employing ten or more staff. The employer group here is dominated by the multinationals that are serviced by the Nigerian tradesmen. Mogbo (2002) observed that salaries and remuneration received by the tradesmen working in the multi-national firms, which although are higher than those offered by indigenous contractors of the same sector, are but a pittance compared to the volume of profits made by the multinationals. He further stated that generally, the multinationals always repatriate their huge profits to their own home countries.

The bulk of Nigeria's capital spending goes to this sector, especially to the multinational contractors. (Mogbo 2002) asserted that a close study of the annual budgets of Nigeria may indicate that once the multinationals are paid for major construction works, the residue is only for the running of the status quo (payment of salaries and general administration) with nothing left for other meaningful development projects.

2.1.3. The Informal Private Sector

The informal private sector of the industry consists mostly of individuals and small firms; small in terms of any or a combination of the followings; capital employed, labour turnover, profit margins, category of registration and the sizes of projects handled. These small firms operate at low profit margins and so they try to avoid high labour turnover by recruiting as occasion demands. This is by far the sector containing the largest proportion of the Nigerian labour market mainly because it is the easiest to enter and the demand for its service is always high. This sector controls about 60% of labour force in urban areas and the figure is put at 80% for the rural area (Fajana 2000). Fajana (2000) believes the sector to be experiencing the lowest wages in the country. This assertion may be valid when the number of days of non-employment per annum is considered. Pilot survey may likely show this sector to be having many "idle" days per annum, especially during raining season and during economic recession.

The firms in this sector, especially in Nigeria, depend mainly on casual labour. This casual labouring aspect means job security is non-existence for this group of the labour force. For want of assurance of

supply of steady income to the household, such casual labourers are always on the lookout for permanent employments in other sectors of the industry.

2.2. The Economy of Labour

Mansfield and Odeh (1991) observed that when labour supply is high, productivity is also high and that the converse is true during low supply period. They adduce the reason to job security. That is, workers tend to compete and show better performance in order to keep their jobs when jobs are harder to come by – high labour supply period.

2.2.1. Labour Demand Characteristics

The demand characteristics of building construction are inelastic. A specific amount of labour is required for a specific project, no matter the amount of labour available. Similarly no matter the change in unit price of the labour, the quantity of labour required for a piece of work remains constant.

2.2.2. Labour Supply Characteristics

The supply characteristics of building labour are unlike the demand characteristic, they have some elements of elasticity. Generally when a little change in price of labour occurs the supply tends to respond to it correspondingly. Increase in unit price of labour attracts increase in supply, and vice versa for the decrease in unit price. The high mobility of labour across the sectors would not be able to adjust the variations in labour demand that would result and thereby creating a vacuum in the deserted building construction industry with negative effects on the output of the industry.

For the skilled labour of the industry, mobility to other industry is not laterally feasible as the skill is peculiar to the industry. To fit into other industry will necessitate retraining which may not augur well for the economic life of the transferee. Hence the skilled worker is fixed to the industry. In developing economies new entrants to the labour market would prefer to avoid such low wage- earning industries or sectors.

The public sector wages are supposed to be the regulator for those in the private sector. The informal private sector, instead of responding to actions in the public sector is only responsive to the dictates of the market forces. As brought out by the pilot survey shown in the Table1 below, the wages of the informal private sector had gone up twice within 20 months of the wage adjustment in the public sector of the Nigerian economy.

Table 1. Pilot Survey Showing Building site Operatives' Daily Wages (Informal Private Sector) in Abuja and Minna – Nov. 2000

Operation	Daily Wages		Skilled Labour		Unskilled Labour	
	Abuja ₦	Minna ₦	Abuja ₦	Minna ₦	Abuja ₦	Minna ₦
Concreting	700 – 900	800 – 1000	300 – 400		400 – 500	
Block laying	600 – 700	700 – 800	350 – 400		300 – 400	
Plastering/ Screeding	600 – 700	700 – 800	250 – 350		300 – 400	
Carpentry	600 – 700	700 – 800	N.A		N.A	

Source: Field Survey

Relative wage levels will, along with other factors, bring about a movement of wage earners from one enterprise, industry or region (where there is a surplus of manpower) to another where it is in short supply.

The ILO (1992) believes that the main reason that makes wages to be a basic issue in every country in the world is that wages are the main source of income for wage earners and at the same time a major production cost for the enterprise. A worker and his family depend almost entirely on his wages to meet their needs: the basic (food, shelter clothing), esteem and self actualization needs. Therefore he is always concerned with increasing (or at least maintaining) his purchasing power.

2.3 Productivity Appraisal

The productive sector of the Nigerian economy is suspiciously be-devilled with under-employment of its labour resources resulting in low productivity as noted by various observers (Okwa, 1981; Akerele, 1991 and ASCSN, 2001). The poor performance cuts across both the public and the private sectors (FOS, 1997). Moreover the public sector salary and wages structure forms the basis for the private sector wage structure. Sobowale (2000) observed that capacity utilization of the manufacturing industry in Nigeria had been on the 30 per cent average since the introduction of Structural Adjustment Programmes (SAP) in 1986.

Prokopenko (1987) was of the opinion that tools such as Gross Domestic Product (GDP), Gross National Product (GNP), National Income (NI) or Value Added (VA) may not reflect a true picture of the nation's (or sector's) economic health. He then suggested that measurement of the absolute level of productivity can be achieved through an appraisal by means of a series of indices. Total Productivity, P_t , is measured with the aid of the formula

$$P_t = O_t / (L + C + M + Q)$$

Where O_t = total output

L = labour input factor

C = capital input factor

M = material and purchased parts

Q = other miscellaneous goods and services input factor.

Productivity indices help to evaluate economic performance and the quality of social and economic policies. However, it is worth noting that appraisal of the public sector productivity takes into consideration factors that are different from those of the private sector. In the public sector the output compared with the input is its efficiency. Achievement of set objectives is the main determinant of how efficient a public organization is. The impact the programme of a particular public sector organization makes on the beneficiary is a measure of its effectiveness or its efficiency.

3. Methods

A detailed study of the utilization of the capacities of the construction craftsmen in the public sector of the North-central states of Nigeria was carried out, though limited to craftsmen of the Federal Ministry of Works domiciled in the north-central states. Data were collected through historical means (record in the departmental files), questionnaire administration and oral interviews with the heads of departments.

The study relied on data systematically collected from the craftsmen through responses to the questionnaire, from the supervisors (directors of departments) through historical data, questionnaire and interviews and from the accounts department of each Ministry of Works in the selected states. The accounts department of the ministry was the source of historical data collection for the wages and salaries of the site operatives (craftsmen and labourers). This seeks to obtain information on total annual expenditure of the ministry on salary and wages of the craftsmen – labour input data.

The target population of the respondents to the questionnaire and interview comprised of the departmental heads and the selected craftsmen of the Ministries of Works. The proportion of the craftsmen that was served with questionnaire was selected by simple multi-stage random sampling. Each trade of the craftsmen available in the Ministries was covered proportionately. See Table 2 for the numbers of craftsmen issued with questionnaire in each trade. The entire questionnaire were appropriately filled and returned.

Table 2. *Distribution of the Sampled Craftsmen by Trade Groupings*

	Total No	% of Total
Mason/Tiler	23	15.8
Carpenter/Glazier	14	9.6
Welder/Blacksmith	5	3.4
Plumber	7	4.8
Painter	9	6.2

Plant Operator/Driver Mechanic	33	22.6
Road Overseer/Road Assistants	25	17.1
Electrician	30	20.5
Total	146	100.0

Source: *Field Survey*,

4. Results

While restraint on wages and salaries has been strictly enforced in the public sector of the Nigerian economy up to 1998, the same has not been the case in the private sector. Therefore, as can be seen from Tables 3 and 4 below, the differentials in wages and salaries of the workers in the public and private sectors have been widening over the years in favour of the private sector. Although it is argued that employees in the public sector have better working conditions than those in the private sector. The privileged working conditions which result in increase in real wages as enjoyed by the public sector workers includes job security and retirement benefits (Hollinshead and Leat, 1995). However, these privileges have been seriously eroded in the Nigerian public sector since 2004. Workers were retired en-mass, gratuity payments were delayed for years. Pensionable employment was replaced with “contributory pension” as stipulated by the Nigerian Pension Act of 2004.

Table 3. *Average Minimum Wages and Salaries for Junior Workers in Major Sectors of the Nigerian Economy, 1992-1999 (N Per Annum).*

Sector/ Year	1992	1993	1994	1995	1996	1997	1998	1999
1. Agriculture	3700	5096	3869	5365	5798	6231	8801	12431
2. Building & Construction	6003	6525	7016	7385	6869	6741	7774	8965
3. Financial Institutions	6530	8244	4245	8222	8780	9338	14911	23810
4. Manufacturing	2400	3692	3840	3900	4450	5000	5184	5375
5. Mining & Quarrying	9620	10689	11252	22149	23649	25150	30110	36048
6. Ministries & Departments (public sector)	1408	1977	2397	2500	2668	3837	5996	9370
7. Trading&Business service	3195	4971	5000	6966	6983	7000	7200	7406
8. Transport &Communication	3027	3187	3355	3753	4646	5540	9061	14820

Source: CBN (2006). *Central Bank of Nigeria Annual Wages & Salaries Survey, Statistical Bulletin Vol.17, December.*

From the Table 3 above, it could be clearly seen that the public sector (Ministries & Departments) junior workers remained the poorest paid among the sectors from the inception till 1998 when there were some upward reviews of the salaries in the sector. As a result of the review, the sector became second poorest paid sector, it overtook the manufacturing sector. The manufacturing sector had been comatose for quite some time (Lawal, 2004) with capacity utilization oscillating between 30 and 40 per cent (Table 7 below).

The low level of wages in the public sector up to 1998 can be attributed to low, or almost zero, productivity in the sector as attested to by Table 5 below. If the job is properly designed productivity can improve. In 1999 there was another review of the salaries and wages of the public sector workers. This review (which did not produce any improvement in utilization of the workers’ capacities) shot up the workers above their counterparts in the Trading and Business service and those in the Building and Construction trades of the private sector. Table 4 below gives a comparison of the wages of craftsmen in the public sector with those in the informal private sector.

Table 4. *Comparison of Wages of Craftsmen in the Public Sector with those in the Private Sector.*

	1992	1993	1994	1995	1996	1997	1998	1999
Public -No6 Table3 (↔)	1408	1977	2397	2500	2668	3837	5996	9370
As %of Private (No2Table3)	24.45	30.30	34.16	33.85	38.84	56.92	77.13	104.5

Source: *Table 3*

The comparison of the wages of construction craftsmen in the public sector with those in the private reveals that the former group was trailing behind the latter until 1999 when the latter was overtaken by the former in terms of the wages, Table 4.

Table 5. *Value of Work done Annually (Nm) by each department 1992 – 2001*

Dept/Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
F01B	0.05	0.05	0.05	0.05	0.10	0.05	0.05	0.05	0.05	0.05
F01C	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.10	0.10
F01E	0.05	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.10
F01M	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	1.00	1.00
F02B	0.40	0.50	0.50	0.50	0.50	0.50	0.60	0.60	0.60	0.05
F02C	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
F02E	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
F02M	0.05	0.05	0.05	0.05	0.05	0.10	0.10	0.10	0.05	0.05
F03B	0.10	0.05	0.05	0.05	1.00	1.00	1.00	0.10	0.10	0.10
F03C	0.25	0.30	0.65	0.10	0.05	0.05	0.05	0.05	0.05	4.75
F03E	0.10	0.10	2.00	2.00	1.00	1.00	0.10	0.10	0.10	0.10
F03M	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	0.10
Average	0.19	0.20	0.38	0,34	0,33	0.34	0.36	0.28	0.27	0.54

Source: *Field Survey*

KEY TO DEPARTMENT CODES

F = Federal Ministry of Works, State branch

01 = State 01, 02 = State 02, 03 = State 03

B = Building Department

C = Civil Engineering/Highway Department

E = Electrical Engineering Department

M = Mechanical Engineering Department.

Table 5 is presenting the total annual worth of the work carried out by the craftsmen in each of the twelve departments for the period 1992 – 2001. On the other hand Table 6 is denoting what it cost the employers to retain the services of their employee craftsmen annually over the same ten year period.

Table 6. *Departmental Annual Labour Input Costs (Nm) 1992 – 2001*

Dept/Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
F01B	0.22	0.23	0.24	0.24	0.26	0.27	2.00	1.35	2.98	2.98
F01C	0.29	0.30	0.32	0.33	0.35	0.36	2.70	1.82	4.02	4.02
F01E	0.28	0.30	0.31	0.32	0.34	0.35	2.63	1.77	3.90	3.90
F01M	0.54	0.57	0.59	0.62	0.64	0.67	5.02	3.38	7.47	7.47
F02B	0.28	0.29	0.30	0.32	0.33	0.34	2.57	1.73	3.81	3.81
F02C	0.52	0.54	0.57	0.59	0.62	0.64	4.83	3.25	7.18	7.18
F02E	0.13	0.13	0.14	0.15	0.15	0.16	1.19	0.80	1.76	1.76
F02M	0.44	0.46	0.48	0.50	0.52	0.54	4.04	2.72	6.01	6.01
F03B	0.34	0.35	0.37	0.38	0.40	0.41	3.11	2.09	4.62	4.62
F03C	0.35	0.36	0.38	0.39	0.41	0.43	3.21	2.16	4.76	4.76
F03E	0.09	0.10	0.10	0.10	0.11	0.11	0.85	0.57	1.26	1.26
F03M	0.13	0.14	0.14	0.15	0.16	0.16	1.22	0.82	1.81	1.81
Average	0.30	0.31	0.33	0,34	0,36	0.37	2.78	1.87	4.13	4.13

Source: *Field Survey*,

Annual wage bills of the production line staff per operational department of the Ministries investigated were in millions of Naira (Table 6) while the annual labour outputs were in most cases less than two hundred thousand naira worth (Table 5). The wide gap between the values of labour input and output observed in the period 1998 – 2001 is probably due to the salary increases carried out for the civil servants during the period; and without the period recording any appreciable increase in the work output of the craftsmen.

The annual average returns of the employers investment on craftsmen was always negative, indicating that the craftsmen were not mainly employed to have work output of bigger values than the costs of labour input. It was further found that part of what contributed to the insufficient supply of work to the public sector construction craftsmen was an orthodox means by which construction/maintenance works were given out on contracts by the state or federal executive as well as the unavailability of fund to execute the budgets.

Table 7. Nigeria's Annual Average Manufacturing Capacity Utilization Percentages 1990 – 2001

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
40.3	42.0	38.1	37.2	30.4	29.3	32.5	30.4	32.4	34.6	36.1	42.7

Source: Central Bank of Nigeria Statistical Bulletin Vol. 7, December 2006.

5. Conclusions

These results show that craftsmen labour capacity is seriously underutilized in the public sector, confirming the assertions of Okwa (1981), Akerele (1991) and the Association of Senior Civil Servants of Nigeria (ASCSN, 2001). The main factor responsible for this underutilization is the non-availability of fund to the departments for implementing the planned annual production. The withholding of fund from the departments to execute the work could be traced to the background reason of the unorthodox means by which the executives (Ministers) were issuing out the work to the private sector by contracts.

These results suggest that employment of the construction craftsmen by the public sector bears very little relationship with labour productivity. Among the issues raised in the analyses of the craftsmen responses to the questionnaire was the dissatisfaction of the craftsmen with the capacity underutilization that they were subjected to. Most of them preferred change of employment to enhance full utilization of their skills. It can be inferred from this work that policy simulation in establishing public sector construction/maintenance outfit in Nigeria does not accord sufficient priority to optimal utilization of labour resource in which case the staff strength of such departments does not have any relationship with workload or output.

With the level of labour performance indices found operating in these public sector departments it is evident that there is the need for government position in responsibilities and functions to be shifted towards proper utilization of the construction labour capacity in the sector. The followings are also suggested for the long run economic viability of the departments.

The study of labour performance in the public sector should be a continuous and consistent project. By this, there would be well built-up data banks, which should be published regularly. The published data will be useful for various forms of evaluation of the public sector labour market. This, in turn, will facilitate proffering of appropriate solutions to the problems of labour capacity utilization.

References

- Akerele, A. (1991). The role of labour in productivity. Nigerian Journal of Industrial, 5. December: 50 – 58.
- Andawei, M.M. (2002). Motivation: an alternative to improve workers' performance in today's construction industry. *The Quantity Surveyor* 40 (3): 2 – 6.
- ASCSN (Association of Senior Civil Servants of Nigeria). (2001). Why civil servants' productivity declines. Vanguard (Lagos), 23 October, p.7
- Business Dictionary www.businessdictionary.com/definition/direct-labour Accessed 1st May 2011.
- CBN (Central Bank of Nigeria), (2006). *Statistical Bulletin*, vol.17, Dec. Central Bank of Nigeria, Abuja.
- Ekpiwhre, G. (2009). 91 million Nigerians to live in urban centres by 2025. 'Daily Trust' newspaper of 7th August, p47. Media Trust Nigeria Ltd; Abuja
- Fajana, S. (2000). Functioning of the Nigerian labour market. Lagos. Labofin and Company. 450p.

- F.O.S. (Federal Office of Statistics). (1997). Why industrial performance is poor, by analysts. "The Guardian"(Lagos), 10 May 1996 in Nigeria in Numerical news. Lagos, FOS. 73p
- F.O.S. (Federal Office of Statistics). (1999). Annual abstract of statistics Abuja. Table 226.
- Hollinshead, G., and Leat, M. (1995). Human resource management. London. Pitman Publishing. 274p
- I.L.O. (International Labour Organization). (1992). Minimum wages: wage-fixing machinery, application and supervision. International Labour Conference 79th Session. Geneva. ILO. 213p.
- Lawal, P.O. (2004). Fiscal/Concessions to favour growth of the local building material manufacturing sub-sector. Eighth Annual Conference of Heads of Quantity Surveying Divisions, Federal/States Ministries and Parastatals. 8 July.
- Mali, P. (1978). "Improving total productivity". John Wiley & Sons, Accessed 20th February, 2009 from www.worldcatlibraries.org/wcpa/ow/95bc
- Mansfield, N.R., and Odeh, N. S. (1991). Issues affecting motivation on construction projects. International Journal of Project Management. 9 (2): May, 93 –98. Mogbo, T.C. (2002). Globalisation, sustainability and Democratisation: Imperatives for Integrated Construction Education and Contract Practice in Nigeria. A paper presented at the Nigerian Institute of Quantity Surveyors' (Kaduna chapter) Workshop. 26, January. Kaduna.
- NPC (National Population Commission). (1998). 1991 Population census of the Federal Republic of Nigeria: Analytical Report at the National level. Abuja, NPC.
- Okwa, A.A. (1981). Improving productivity in the Nigerian construction industry – A management approach. An M.Sc. Thesis of the Ahmadu Bello University. Zaria. Sept, 1981
- Prokopenko, J. (1987). Productivity management: A practical handbook. Geneva, International Labour Office. 287p
- Sobowale, D. (2000). Minimum wage: Impact on the manufacturing sector. Sunday Vanguard (Lagos), 21st May.
- Toolingu, www.toolingu.com/definition-950140-54633 Accessed 21st April, 2011.
- Wikipedia, www.wikipedia.org/ Accessed 21st April, 2011.