

Evaluation of Capacity Utilization of Construction Technicians and Craftsmen in Selected Construction Industries of Oyo State, Nigeria

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Abstract: Sequel to speculations that construction craftsmen and technician in the private construction industry have high level work output while public construction sector have low level work output and the fact that work output borders on labour capacity utilization, this research examined the utilization levels of the capacities of the construction technician and craftsmen in the Nigerian construction industry. Craftsmen and technician in the construction industry were identified in the study and the extent to which their services were utilized by the employing departments was verified. The research was focused at generating information that can be used to improve on usage of labour resource in the construction industry. The methodology entails comparing the wages operating in the public with the private sector. Data collected were sourced by questionnaires and personal interview. Different sets of structured questionnaire were served on the craftsmen and technician. All the departments were covered by the research. Results revealed that craftsmen were unequally represented by gender with 91.8% male; 81.5% were between 30 and 50 years old; their salary clustered in levels 03 to 07; they remain with single employer though some respondent working with public sector prefer change of employment for better utilization of their skills; they were idle most days of the year for lack of job orders. The revealed that there was no significant relationship between the work output of the technician and craftsmen in the public construction sector and the corresponding wages earned. Also, it was concluded that low output in public construction sector is consequent upon craftsmen and technicians labour capacity being underutilized due to non-availability of fund and inadequate planning by their employer.

Keywords: *Utilization, Technicians, Craftsmen, Construction Industries*

I. INTRODUCTION

The issues of labour are vital and sensitive to the economic growth of any nation. No nation can do without labour resource. Even in developed economies no matter the level of automation of their industries, labour force still remains the single most important factor of production (Woodgate, 1991; Mansfield & Odeb, 1991 and Kolawole & Boison, 1999). Though most, if not all, of the various industries of a developing economy are labour dependent, construction industry is especially labour dependent and labour intensive. The Nigerian economy being a developing one is generally more labour dependent than machine dependent (World Bank, 1984). The Construction Industry's contribution to the national output of Nigeria, in terms of fixed capital formation and the Gross National Product (GNP), is as high as 10 to 20 per cent (United Nations, 1976). Various researchers reported diverse percentages of the GNP for the industry in Nigeria. For instance, Jagboro (1989), reported 14 per cent, while Mogbo (2000), reported 11 per cent. These are in line with the global contribution of the industry to the Gross National Product, which is taken to be worth N350 trillion and accounting for 10 — 15 per cent of gross national products (Mogbo, 2002). It is therefore certain that the industry is basically contributor to the economic growth of Nigeria. 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 Building and Construction Industry in Nigeria is the largest employer of labour. Olaloku (1987) quantitatively put the employment figure for the Building and Construction industry as close to a third of the total workforce. The industry participants who, though are from diverse disciplines, are mainly tradesmen and unskilled labourers.

The productive sector of the Nigerian economy is suspiciously bedeviled with under employment of its labour resources resulting in low productivity as noted by various observers (Okwa, 1981 and Akerele, I 991). The poor performance cuts across both the public and the private sectors (FOS, 1997a). However,

utilization of the Nigerian construction industry labour force is far below expectations (ASCSN, 2001). 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, It is none-the-less appreciated that optimum utilization of labour resource is not the sole reason for employment in the construction industry. That is the promotion of employment in the construction industry should be seen as a means of improving social conditions and social integration, and not solely or simply as a means of meeting the economic or political objectives of the employer.

The objectives of the study include generating distribution of craftsmen by skill, determining the relationship between annual labour output and input of each department and making appropriate recommendations.

II. METHODS

The methods used for data collection were structured questionnaire, personal interviews and case study. This research follows a quantitative strategy and adopted survey questionnaire which was preceded by thorough literature review and interview. Ninety (90) questionnaire were distributed based on the sample frame which involved the construction technicians and craftsmen. A survey structured questionnaire was used because of the need for generalization of the findings across the construction industry. It also enhances the reliability of observations and improves replication due to inherent standardized measurement and sampling procedure.

III. RESULTS AND DISCUSSION

The study revealed that 91.8 percent of the craftsmen were male, while the female population is 8.2 percent and level 4 respondents have the highest number. From the result of age grouping of the craftsmen, 87 percent of them were between the ages of twenty to fifty years. In actual fact 81.5 percent of the group were in the age brackets of thirty to fifty years, 91.8 percent of the group surveyed were married. 81.2 percent of the respondents have post primary education qualification and those with over fifty years of age were 5.5 percent.

Table 1 Sex of technicians and craftsmen

Sex	Level 3	Level 4	Level 5	Level 6	Level 7	Total	(%)
Male	24	27	15	7	5	78	91.8
Female	2	4	0	1	0	7	8.2
Total	26	31	15	8	5	7	100

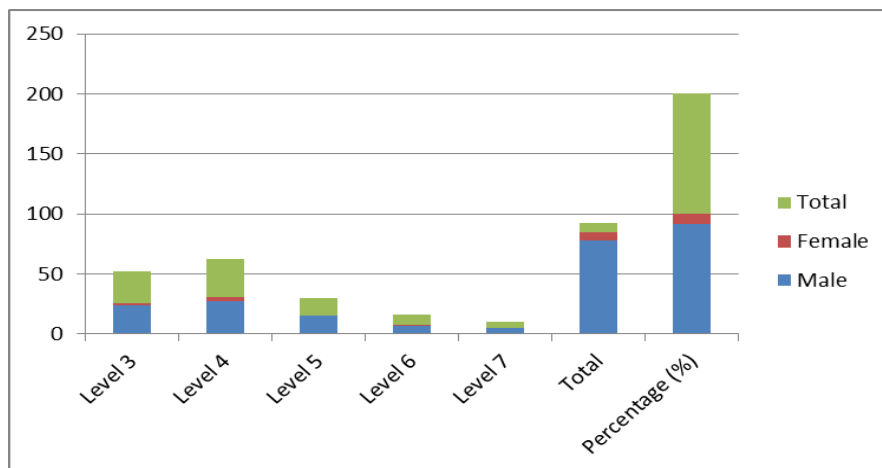


Figure 1; Sex of technicians and craftsmen

On the working experience of this group, there is a close relationship between the working experience and length of period with the present employer. The proportion of the respondents that had been working with the Nigerian construction industry for between 15years and above was 24.7 percent, 10-15years was 40 percent, 5-10years was 8.2 percent, 2-5years was 15.3 percent, 2 years and below was 11.8 percent.

Table 2: Showing the years of experience

Years of experience	Number of respondents	Percentage (%)
15years and above	21	24.7
10 – 15 years	34	40
5 – 10 years	7	8.2
2 – 5 years	13	15.3
2 years and below	10	11.8

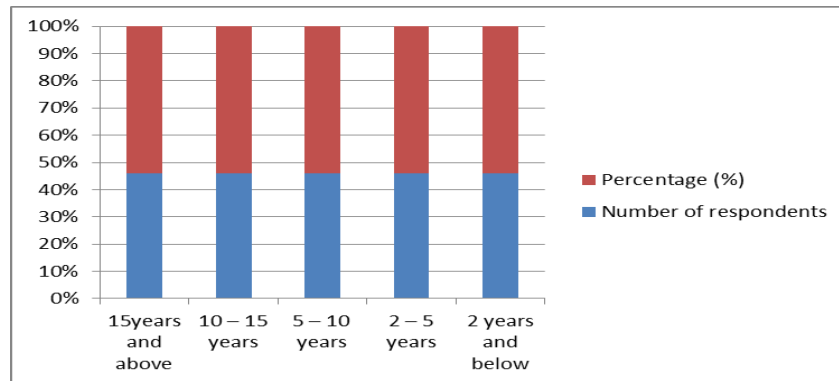


Figure 2; Showing the years of experience

Table 3: Academic Qualification of the Respondents

Trade	Secondary	Tertiary	Total
Mansory /tiling	18	5	23
Welder blacksmiths	8	1	9
Carpenter /glaziers	14	3	17
Electricians	11	1	12
Mechanics	4	1	5
Plumbers	7	3	10
Painters	3	0	3
Driver/operators	3	2	5
Road overseer/assistants	1	0	1
Total	69	16	85

Table 4: Analysis of salary level

Trade	Level 3	Level 4	Level 5	Level 6	Level 7	Total
Masonry /tilling	9	6	4	3	1	23
Welder/ blacksmith	3	2	2	1	1	9
Carpenters/glaziers	7	5	2	2	1	17
Electricians	5	1	4	0	2	12
Mechanics	2	0	2	1	0	5
Plumbers	3	1	2	2	2	10
Painters	1	1	1	0	0	3
Driver/operator	2	1	1	1	0	5
Road oversee/assistants	1	0	0	0	0	1
Total	33	17	18	10	7	85

The study observed that the level 3 respondents have the highest number, followed by level 5, level 4, level 6 and level 7 respectively.

3.1 Analysis of Level of Utilization

In the public construction sector, only 53.1 percent of the workers have sufficient work to do within the eight hours available for them to work on daily basis. On the question of getting involved in overtime work in

the last ten years, only 12.5 percent had more than sufficient volume of work to warrant overtime engagement. Those who prefer a change of employment were 54.10 percent and their preferred new places include self employment or private construction firm jobs.

However, in the private construction industry, 30.2 percent of the workers had sufficient work to do within the eight hours available for them to work on daily basis, 66 percent engage in overtime, which implies that they utilized them very well.

Table 5: Hours of working of respondents in public construction sector

Hours	Number of Respondent	Percentage (%)
4 hours	2	6.3
6 hours	9	28.1
8 hours	17	53.1
Overtime	4	12.5

Table 6: Hours of working of respondents in the private construction industry

Hours	Number of Respondent	Percentage (%)
4 hours	1	1.9
6 hours	2	3.8
8 hours	16	30.2
Overtime	35	66.0

IV. CONCLUSION

The study observed that most of the craftsmen and technicians (75 percent) were in the age bracket of between 30 – 50years. There was a high tendency for the construction technicians and craftsmen to remain with a single employer for all their working life. About 87 percent of them had been working with their employers for between ten and thirty years. It was also found that there were no significant differences between the wages of construction craftsmen and technicians in the private Nigerian construction industry and those in public construction sector. The results of the research showed that craftsmen and technicians labour capacity is underutilized in the public construction sector due to non-availability of fund and inadequate planning by their employer.

V. RECOMMENDATION

The study of labour performance in the Nigerian construction industry should be a continuous and consistent process. Adequate planning should always be ensured towards achieving the required level of productivity while performance standard should be created to facilitate better usage of craftsmen and technicians involved in the construction industry. A similar study should be carried out on the evaluation of capacity utilization in Nigerian construction industry in the remaining departments.

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