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HUMAN AND PHYSICAL CAPITAL OF CRAFTSMEN IN THE CONSTRUCTION INDUSTRY

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ABSTRACT

Construction craftsmen are one of the most vulnerable groups of workers. Hazardous working environment, temporal nature of work and poor wages characterize construction work. The study assessed the livelihood pattern of craftsmen with a view to improving their socioeconomic conditions. The study adopted a descriptive case study research design. Human and physical capitals of craftsmen were assessed. The most common livelihood activity of the craftsmen surveyed was bricklaying. The livelihood outcome of the craftsmen can be described as fair since they were able to meet their basic needs; however, the craftsmen desire to have a more steady flow of income and a better neighbourhood to live in.

Key words: construction industry, craftsmen, human capital, livelihood, physical capital.

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1. INTRODUCTION

Craftsmen play a key role in the actualization of project objectives. Craftsmen are individuals who work skilfully with their hands to bring about the realisation of construction projects (Rafee, 2012) including bricklayers/masons, carpenters, iron fixers, painters, tillers, plumbers and electricians (Odediran et al., 2012). However, the working condition in the construction industry makes craftsmen one of the most vulnerable groups of workers (Tunji-Olayeni, Afolabi and okpalamoka, 2018). For instance, work in the industry is seasonal and has become one of the most enduring sources of hardship for craftsmen (Majale and Albu, 2001). In emerging countries where labour is readily available and cheap contractors take advantage of craftsmen by paying them below standard wages. Craftsmen on the other hand are willing to accept any wage just to make ends meet. Furthermore, craftsmen work under very precarious conditions (Vosko, 2006; Abrey and Smallwood, 2014; Ajayi *et al*., 2016) which lead to injuries , body pains (Kebrit and Rani, 2013) and dust related illnesses like asthma,

bronchitis and other respiratory diseases. The poor socio-economic conditions of craftsmen can breed unhealthy, depressed and unenthusiastic workforce; a situation that can impact negatively on construction project performance. Hence, this paper analyzed the livelihood pattern of craftsmen in the construction industry with a view to improving the socio-economic conditions of construction craftsmen. To achieve the stated aim, the following objectives were fulfilled:

- To assess the most common livelihood activity of construction craftsmen.
- To assess the human and physical capital portfolio of construction craftsmen
- To assess the livelihood strategies of construction craftsmen.
- To assess the livelihood outcomes of construction craftsmen.

2. METHODOLOGY

The study adopted a descriptive case study research design. It is based on a realist paradigm particularity those of Yin (2014) which views case study as a form of empirical inquiry that investigates a contemporary phenomenon within its real-lie context. Case study research design is considered to be a robust research design particularly when a holistic, in-depth investigation is required (Zainal, 2007). It is used mainly for complex social issues (Grassel & Schirmer, 2006) like poverty, unemployment, drug addiction and illiteracy (Johnson, 2006). Since the phenomenon under study *livelihood* is a social issue, hence it's appropriateness for this study. The study used a quantitative method of case study research design to fulfill empirical requirement. Specifically, well-structured copies of the questionnaire were used to elicit information from 34 construction craftsmen on a convenience sampling basis in Lagos Island Local Government Area of Lagos State, Nigeria. Data from the study were analyzed by means of descriptive statistics such as frequencies and mean item score.

3. RESULTS

3.1. Most Common Livelihood Activity

Out of the 34 respondents studied, 10 of them were bricklayers, 9 were carpenters, 8 iron fixers, 4 electricians, 2 plumbers and 1 welder (Table 1).

Table 1 Livelihood activities

Livelihood activity	Frequency
Bricklaying	10
Carpentry	9
Plumbing	2
Welding	1
Electrical installations	4
Iron fixing	8
Total	34

3.2. Asset Portfolio

3.2.1. Human Capital

3.2.1.1. Level of Literacy

Table 2 indicates the literacy level of the craftsmen studied. 25 out of the 34 craftsmen can read and write.

Table 2 Literacy level

Trade	Read only	Read and write	Total
Bricklaying	4	6	10
Carpentry	2	7	9
Plumbing	0	2	2
Welding	0	1	1
Electrical installations	1	3	4
Iron fixing	2	6	8
Total	9	25	34

3.2.1.2. Mode of Training

From table 3 it can be seen that 30 craftsmen acquired their training from apprenticeship schemes while only 4 craftsmen obtained their training from vocational centers.

Table 3 Mode of Training

Trade	Vocational Training	Apprenticeship scheme	Total
Bricklaying	1	9	10
Carpentry	2	7	9
Plumbing	0	2	2
Welding	0	1	1
Electrical Installation	1	3	4
Iron fixing	0	8	8
Total	4	30	34

3.2.4. Physical Capital

Table 4 shows that the 3 most common asset acquired by the craftsmen studied are land, motorcycle and house while the least asset acquired is car

Table 4 Physical Asset

Asset	frequency
House	5
Car	1
Land	14
Motorcycle	10
Bicycle	4
Total	34

3.3. Livelihood Strategies

3.3.1. Purpose of Physical asset

Table 5 indicates the purpose for which craftsmen acquire asset. The 3 most important reasons why craftsmen acquire assets are: as alternative source of livelihood, or comfort and as financial security or the future.

Table 5 Purpose of the Asset

Purpose	*MIS	Rank
Alternative source of livelihood	0.976	1
Comfort	0.924	2
Financial security in the future	0.824	3
Prestige	0.442	4
Collateral	0.306	5

*MIS- mean item score

3.4. Livelihood Outcomes

Table 6 shows the livelihood outcomes of the craftsmen studied. The 3 most common livelihood outcomes are: most craftsmen are able to provide for the basic needs of their family, provide housing for their family and provide basic education for their family.

Table 6 Livelihood outcomes

Outcome	*MIS	Rank
I am able to provide or the basic needs of my family	0.952	1
I am able to provide housing for my family	0.918	2
I am able to provide basic education for my children	0.864	3
I am able to provide basic health care or my family	0.800	4
I am proud of the neighborhood I live	0.470	5
I have a regular source of income	0.470	5

*MIS- mean item score

4. DISCUSSIONS

The two most common livelihood activities of the craftsmen studied were bricklaying and carpentry. This finding is consistent with Umar (2003) who studied the training needs of construction craftsmen in North West, Nigeria where out of 91 craftsmen studied the two most common crafts were bricklaying *(32)* and carpentry *(20).*

Majority of the craftsmen studied have the ability to read and write. This may be because the craftsmen studied were gang leaders. On a construction site, a gang leader is a craftsman having about 5-10 craftsmen under his leadership. The study also showed that most of the craftsmen acquired their training through apprenticeship scheme. This finding corroborates with Oni (2014) that apprenticeship system of training is common in Sub-Saharan African countries.

The study also indicated that land was the most common physical asset among craftsmen. This corroborates Lawal, Omonona and Oyinleye (2011) who found that land was the most significant livelihood asset of farmers in South West, Nigeria. Most of the land owned by the craftsmen studied are communally owned and have been bequeathed to them as inheritance. Such lands have no clear title, are fragmented and reduced to uneconomic sizes; as such cannot be used as collateral for bank loans. Even though most of the craftsmen have land that are fragmented to uneconomic sizes and do not have proper titles, these craftsmen see their land asset as a source of alternative livelihood. They are able to plant crops on their land to meet their domestic needs and also sell their crops, particularly maize and cassava to pig farmers. Motorbike is also another common asset owned by the craftsmen. They use their motorbikes as alternative source of income when there are no jobs on the construction sites.

The craftsmen use their income mainly for food, housing and providing basic education for their children.

The livelihood outcomes of the craftsmen seem to be fair because most of them are able to provide for the domestic needs of their family, provide housing for their family and provide basic education for their children. However, the craftsmen desire to have a more regular flow of income and a better neighbourhood to live in.

5. CONCLUSIONS

The study assessed the livelihood pattern of craftsmen in the construction industry. The most common livelihood activity of the craftsmen surveyed was bricklaying. Most of the craftsmen could read and write and they acquired their training through apprenticeship schemes rather than vocational training. Most of the craftsmen do not belong to trade associations because of lack of trust in the leadership of such associations. The average daily wage of the craftsmen was between $6-1$15 while their total savings was less than $150. The two most common assets of craftsmen are land and motorbikes which is used as an alternative source of livelihood when there is no work at the construction site. The livelihood outcome of the craftsmen can be described as fair since they are able to meet their basic needs; however, the craftsmen desire to have a more regular flow of income and a better neighbourhood to live in.

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REFERENCES

[1] Abrey, M and Smallwood, J.J (2014). The effects of unsatisfactory working conditions on productivity in the construction industry. Procedia Engineering, 85, 3-9

[2] Ajayi, O.O., Joseph, J.O., Okanlawon, S.A and Dunyo, O.O. (2015). Assessment of the impact of muscoskeletal disorders on Nigerian construction workers. International Journal of Civil Engineering and Estate Management, 3(8), 69-84

[3] Grassel, E and Schirmer, B. (2206). The use of volunteers to support family careers of dementia parents: results of a prospective longitudinal study investigating expectations towards and experiences with training and professional support. Zeitschrift Fur Gerontologie Und Geriatrie, 39(3), 217-226, Jun

[4] Johnson, M.P. (2006). Decision models for location of community correction centers. Environment planning and design, 33(3), 393-412

[5] Kebrit, D and Rani, S. (2003). Assessment of work related muscoskeletal disorders causes and prevention. Journal of Research in Science and Technology, 2(8)

[6] Lawal, J.O., Omonona, B.T and Oyinleye, O.D. (2011).Effects of livelihood assets on poverty status of farming households in South Western, Nigeria. Paper presented at the European Association of Agricultutal Economists 2011 Congress held from August 30 to September 2, 2011 in ETH Zurich, Switzerland

[7] Majale, M and Albu, M (2001). Livelihoods among the roofing construction subsector in Nakuru, Kenya: A Report by the Intermediate Technolgy Development Group (ITDG) Schumacher Center for Technology and Development, United Kingdom

[8] Odediran S.J, Adeyinka B.F., Opatunji O.A., & Morakinyo K.O. (2012). Business structure of

[9] indigenous firms in the Nigerian construction industry. International Journal of Business Research & Management (IJBRM), 3 (5), 255-264.

[10] Oni,J.O.(2014). Improving the informal training model of construction tradesmen in Nigeria. Asian Journal of Engineering and Technology, 2(6), 490-497

[11] Tunji-Olayeni, P.F., Afolabi, A.O and Okpalamoka, O.I.(2018). Survey dataset on occupational hazards on construction sites. Data in Brief, 18, 1365-1371

[12] Umar, M.B.(2003). Assessment of the training needs of crafts skilled workers in North Western Nigeria. Masters Thesis. Ahmadu Bello Univeristy, Zaria, Nigeria

[13] Vosko, L.(2006). Precarious employment: towards improved understanding of labour market insecurity, in Vosko et al., (eds). Precarious employment: understanding labour market insecurity in Canada, Montreal and Kingston.McGill Queen's University Press

[14] Zainal, Z.(2007). Case study as a research method. Jurnal Kemanusian Bil 9, Jun 2007

[15] Caroline, FX Sugiyanto, A.S. Kurnia and Firmansyah , Human Capital Category Interaction Pattern to Economic Growth of ASEAN Member Countries in 2015 by using GeoDa―Geo - Information Technology Data‖ . International Journal of Civil Engineering and Technology, 8(11), 2017, pp. 8 89 – 900.

[16] Nithya Sankar, Dr. S.S. Rau Managing Emotions to Managing Human Capital. International Journal of Management, 2(2), 2011, pp . 176-181.

[17] Sudershan Chadha and Dr. Daleep Parimoo, Human Cap ital Management in Banking Sector-A Conceptual Framework. International Journal of Management, 8 (6), 2017, pp. 44–55.