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IMPACT OF PERSONNEL CHARACTERISTICS ON CONSTRUCTION SITE PRODUCTIVITY IN EBONYI STATE

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ABSTRACT

Productivity is physiological measure of therate at which workers performed in the construction sites. Condition of contract empowers the employer to engage operative to undertakecertain aspect of work in the construction sites.This research therefore aim to determine the impact of personnel characteristics in construction sites productivity. The supervisor's goal is to stimuli-directcharacteristics behaviourof workersinto effectiveness and competiveness. The research design was descriptive survey. Eighty (80) copies of questionnaires (ability test) were administered randomly to supervisors ofvarious trade, namely, masonry, carpentery, concrete work and steelworks of small–medium sized limited liability firms and publicly quoted construction firms operating inEbonyi State. The data collected were analyzed with correlation (with a raw score method), Likert scale and chi-square to test the hypothesis. From the result, most construction sites engage services of casualization of employment for cost reduction and maximizing profit and spread of bad condition of work such as employment of insecurity, irregular work hour, and intermittent employment benefit. In conclusion construction industry should in make joint decision making for establishing job rules, job values and for cooperation of manpower resources necessary for the attainment of the organizational objectives. In recommendation the supervisors should possess skills aside from technical, analytical and conceptual skills in order to build cohesive terms from improved performance in the construction sites.

INTRODUCTION

According, to Fajana (2002) productivity can be defined as efficiency and effective way by which firm converts human resources, technology and raw materials (inputs) into product and services (output).Labour is the major factors of production of any firm, individual productivity has assured so much importance in determinedthe effectiveness and competitiveness. Individual constitutesgroups of people that makeup the resources for construction activities. Section 13:12:3 of the National Building Code (NBC) mandates the construction site to comply with the registration laws of the country. The contractor will have in his employment all the relevant professionals required for successful delivery of a building project in order to qualify for project execution capacity. Clause 29 of the conditions of contract JCT 2000 empowers the employer to engage operativese.g skilled labour, unskilled labour, high skilled labour, Artisans and craftsmen to undertake certain aspect of the works.In construction site supervisors need to be trained, motivated, satisfied and well-informed. The purpose is to equip them with skills to manage people with diverse backgrounds and cultural values to enable them work together for effectiveness and efficiency. Satisfaction tends to be higher when employees believe that their supervisors is competent and considerate to evaluate individualbehaviour. The supervisor's goal, when he employs is to direct and guide construction worker or

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workersbehaviour into individual action. Perception, personality, learning, ability and needs are human factors that affect behavior. The reasons, to a large extent, why people react differently to motivation techniques is because people differ in the aforementioned factors. In terms of perception, person will react based on their per-established biases, cultural experiences and experiences in early life. What a person has learned also can have a partial influence on the person's behavior. What an individual has learned formulates long lasting attitude within that individual. These attitudes can causes co-operation in a work environment, but, also may cause the individual to reject certain working conditions. Personality is often the first thought a manager considers when evaluating an employee's behaviour. People also differ in their abilities within the construction field. There are different traits, and within each trait there are varying degrees of skill. Better employee motivation can be the most powerful factor of all.Behaviour is tied in their motivation, proper motivational technique must be used with the given behavioral pattern to achieve the desired action with favorable lasting results.This is the primary objective of trade unionism.Trade union has the ability to determine the overall working condition (comfort, salary, challenge and resource availability) which have a direct bearing on the level of satisfaction.Bamisile (2004) posits that in-spite of advancement in technology, the construction industry relies heavily on individual skills of tradesmen. Before, payment for labour services were in kind, as the issue of monetary payment was not popular in the economy, because there were no employment of labour and no payment of wages. There was no organized labour to fight for the interest of workers.

STATEMENT OF THE PROBLEM

Construction site activities are often executed under a variety of conditions involving many unknown, unexpected, frequently undesirable and often unpredictable factors. This research work seeks to proffer solution to the problems, which vary from site to site as a result of reflex movement, basic fundamental movement, individual perception, personality, physical ability, skill movement, non-discursive communication which have direct bearing on the psychomotor behaviour of the workers working in the construction sites. On the other hand affects their knowledge and development of intellectual skill.

Poor site management, adapt to change in technology, poor planning of the project, lack of mobilization of workers affects the standard working operation and leads to inefficient management of construction resources can result to low productivity.

Lack of motivation, poor payment of operatives, poor salary, delay, lack of knowledge, material research/development and discordant work behaviour resulted from casualization of service, which have direct impact on the performance rate of construction productivity.

Therefore, this work is to provide a solution to the problems and possible means of managing it to achieve better project objectives by allocation of sufficient time, to assess these behaviour, be regularly assessed on the basis of which evaluation judgment are made on the construction sites and selection of a competent and reliable supervisor to discharge his functions by harmonization of various skills to increase production in construction site.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

Atomen (2016) refers construction site productivity as measures of rate at which work is performed. It is a ratio of production output to what is required to produces it. Productivity at construction sites is just another fancy term for trying to get people to complete their work on time. Shehato (2011) defines organizational behaviour as tasks towards improving construction labour productivity and projects. Stephens (2011) further explains organizationalbehaviour as a study of human behaviour in organizational settings, the interface between human behaviour and organization itself. That is the structure and function of organization. In organization (construction site) some staff members (supervisors) who need to be trained, motivated, satisfied and well-informed to carry out work in an organizational set-up and therefore needs to comprehend

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some of the concepts and problems. Robbins (2014) refers Organizational behaviour as structure of our workplaces and looks at waysin which they can be improved. Organizational behaviour is a field of study that investigates the impact that individual, groups and structure have on behaviour within the organizations for the purpose of applying such knowledge toward improving an organizations effectiveness. The purposed is managing people with diverse backgrounds and cultural values have to work together effectively and efficiently. Organizationalbehaviour seeks to emphasis the understanding of behaviour in organization, so as to develop competencies in foreseeing how people are likely to behave. This knowledge may then help in controlling those behaviours that are not befitting the objectives of the organization. Factors like objectivity, reliability and sustainability are important while selecting the methods for this purpose. Questionnaire, interview, simulation and survey are generally used to elicit responses of individuals located. In different types of organizations. To a large extent their personalities affect the nature of their responses. Various individual and socio-economic variables are linked to job satisfaction. Researchers have found that younger people are more satisfied. Similarly men are more influenced than women, if they are provided more autonomy in their work (Malini, 2001). There is a direct link between job satisfaction and performance of an employee. Satisfactory tends to be higher when employees believes that their supervisors are competent and considerate. Overall working condition (comfort, salary, challenge and resource availability have direct bearing on the level of satisfaction.Fredrick (2010) defines individual behaviour as a process of observing behaviour and then determining its cause based on individuals personality or situation. Attribution based on personality is due to internal causes and is termed as dispositional attribution. It includes personality traits like shyness, arrogance, intelligence. Sandhya (2011) explains individual behaviouras experienced throughout an individual entire lifetime. It includes the way they act based on different factors such as genetics, social norms, core faith and attitude. Behaviour is impacted by certain traits each which individuals has. Individuals constitute groups of people that constitute resources for construction activities. The construction managers' goal, when he employs is to stimuli-directed construction behaviourinto competent and effectiveness. Understanding the individual'sbehaviour is paramount to use the proper motivation techniques, when attempting to influence the individual'sbehaviour. The construction manager does not always use a stimulus that can be defined as a motivator. Not all stimuli can be classified as motivators. Stimuli can direct behaviour for a short term, but, stimuli that are not sensitive to the individuals behaviour can produce result that may be short lived and, with time, may even produce negative results. Only motivators, when properly applied, stand the best chance of producing the desired behaviour with favorable and lasting results. Human behaviour affects the success or failure of management's attempts to increase productivity improvement. Motivation is tied in with behavioural pattern to achieve the desired action. Different people are motivated by different methods. Understanding why a person behaves in a certain manner can help the manager decide which motivation technique would best accomplish the manager's goal. If nothing else, it will help the manager to avoid using stimuli that have an overall negative impact.

Factors that Influence Behaviour

Perception, personality, learning, ability, and needs are human factors that affect behaviour. The reasons, to a large extent, why people react differently to motivation techniques is because people differ in the aforementioned factors. In terms of perception, a person will react based on their pre-established biases, cultural experiences and experiences in early life. What a person has learned also can have a partial influence on the person's behaviour. What an individual has learned formulates long lasting attitude within that individual. These attitudes can cause co-operation in a work environment, but, also may cause the individual to reject certain working conditions. Another example is the fact that individual, from early childhood have learned that being late for work will result in disciplinary action. The result is that people are motivated to

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come to work on time. Personality is often the first thought a manager considers when evaluating an employeesbehaviour. Often, the manager can be heard to describe individuals as co-operative, ambitious, dedicated, honest, hard working, lazy, dominant, attentive. People also differ in their abilities. Within the construction field this is typical. There are different traits, and within each trait there are varying degrees of skill. Among other things, individuals with great strength, dexterity, technical competency and adaptability can gain an advantage in the industry. People also differ in their needs. Needs are physical and psychological.

Individual Perception

The way in which a worker reacts to a stimulus is in part a result of what the worker brings along from his or her past experiences. All people tend to stereotype other people according to age, sex, race or national origin. The perception process can help the manager to quickly deduce, with varying degrees of accuracy, the important characteristics of a person and the motivation that can work. Perceptions also determine the way an individual expects other people to act. This is especially important with the construction worker who may have some preconceived notions of how management will relate to and treat labour. If the construction worker does not see management as fair and supportive, any incentives or awards that may be offered by management may not produce the desired effect.

Factors that Influence Perception

A partial list of the things that influence perception includes a person's needs, stress, education, background, values, position, and group pressure.

i). Needs: An individual's needs can affect his or her perceptions. A construction worker who has been out of work for several months and believes that the economy is in a recession may accept a job at a lesser pay than he may accept during a period of construction boom. The worker perceives the economy as faltering and in order to work, the worker will settle for less pay.

ii). Stress: Individuals under stress often are less objective in their perception of the ongoing events about them. With regards to construction workers, they may feel that management is pressuring them to accelerate their productivity and yet, the tools, equipment, or material to complete the task are inadequate or unavailable. The workers may perceive that management is insensitive to their needs or has little idea of what problems exist on the job site.

iii). Education, Background and Values: Based on education, background, and values the individual may learn to associate certain groups with certain behaviour. Construction workers may characterize managers as members of a management group that places project goals ahead of individual wellbeing. The workers, because of their background and education, they may have a subconscious resentment against management. They may view management as typically being pompous and unapproachable. The construction manager/supervisor should be aware when such an attitude exist and ensure that the stimuli provided do not accentuate such an attitude. The manager must act in a manner that will not make him or her seem insensitive, snobbish, insincere, or pretentious.

(iv) Position: An individual's position can influence how he or she perceives the organization. Researchers have found that newly promoted foremen view the company as a better place to work compared with other companies. Foremen who, because of cutbacks, had returned to the position of lower level workers, they began to perceive the company from the point of view of workers. They no longer had positive perceptions of management.

(v) Group Pressure: Group can have a very strong influence on a person's behaviour. Human beings for the most part seek to be accepted by their peers. In some situations a worker may slack off, so as not to be shunned by others in the work group. Unions have a very strong position in creating such an atmosphere. In some countries, the culture is such that individuals hold work paramount and will never forsake their work

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because they will lose face with colleagues. The Manager/supervisor should be sensitive to the fact that workers way not perceive things as he or she does. This can be noted in the construction workers resistance to technological advancement. The manager may view the innovation as a means to improved productivity while the construction worker will view it as a threat to his or her job security. Management may view rewards as attractive incentives, but if construction workers distrust management's motives, such rewards may have little impact on productivity.

Personality

The unique quality that represents an individual is referred to as personality. Personality is a stable set of characteristics and tendencies that determine those commonalities and differences in the psychological behaviour (thoughts, feelings and actions) of people that have continuity in time and that may not be easily understood as the sole result of the social and biological pressures of the moment. (Maddi ,1980)

The definition contains several important ideas. The definition presents the idea that personality is a determinant of behaviour all the time. Second, every person is in certain ways, like all other people, like some other people and like no other person. This is important for the construction manager to understand. Construction workers, in many ways, are a breed of people with very similar personalities. Yet, it also should be understood that each individual worker is like no other and has his or her own unique characteristics. In realizing this, the manager should understand that each employee may not react the same way to a certain incentive program. The last idea presented in definition is that an individual's personality is somewhat undeviating and often cannot be changed suddenly. One last note is to shed light on the word actions that is enveloped within definition. It is the individual's actions that the manager seeks to direct, and therefore the manager should have some appreciation of the phenomena that drives individual actions.

LABOUR PRODUCTIVITY

According to Lema (2006) construction labour productivity as the ratio of outputs to the amount of all inputs. The outputs on a construction site are nonhomogeneous and are measured in different units. It is measured as labour hour per quantity of material installed. Shetta (2011) defines construction labour productivity as a tradesperson, labourer, or professional employed in the physical construction of the built environment and its infrastructure. Labourer are referred to as hardhat workers. The range from unskilled to highly skilled craft workers. They from a hierarchy with gang leaders having the highest status.Since human resource is a major factors of production of any firm, labourproductivity has assumed so much importance and determines effectiveness and competitiveness of skill. Training, knowledge and skills development are major factors for improving labour productivity.

RESEARCH METHODOLOGY

Introduction: This research was necessitated by the activities of construction sites in part of Ebonyi State that have been affected with the low productivity. To achieve this aim, a field research workwas carriedout in the construction sites at Ebonyi State.

RESEARCH DESIGN

This study is principally an investigative study on construction site productivity in Ebonyi State. This study adopted stratified random sample technique. The primary dataare collected directly from observations or measurements, usually in the form of observation and recording, using certain devices (equipment) to obtain the measurement. The values of such measured quantities are usually in accidental with some measure of probability. To use them, they need to be processed. Observation and recording is used to gather information through a well-organized system of thing happen and taking record. Documentation is used to document information obtained from construction site through observation. Data collected were analyzed with correlation with a raw data score method. From the table, if the degree of relationship (R-+0.5) indicate a

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perfect positive relationship exist on the variable. Inversely, if the degree of relationship (R - -0.5) indicate a perfect negative relationship exist on the variable.

A survey research was used in conducting this empirical study. The population of study includes eight (80) copies of questionnaires (ability test) were administered randomly to supervisors of various trade, namely, masonary, carpentry concrete work and steel works of small – medium sized limited liability firms and publicity quoted construction firms operating in Ebonyi state. Data collected were analyzed with likert scale and chi-square to test the hypothesis. From the table, if the significant value (P-value) are less than the given alpha value (a- 0.05), we should reject or accept the hypothesis. From the data analysis, only five (5) out of the nine (9) categories of responses based on likert 5 – point scale in the questionnaires were analysis/discussed.

POPULATION OF THE STUDY

The study comprised an exploratory cross-sectional survey of small-medium scale limited liability construction firms located in Ebonyi State. This work concentrates on supervisor of various trade namely, masonry, carpentry, concrete works and steel work operating because these sites determine the output of site productivity performance.

DATA SOURCES

Research data are classified into primary, secondary, observation & recording, questionnaires and documentation based on the sources.

Primary data the basic frame work of this research are established and collected at the construction site.

Secondary data source are data obtained from existing works (publications in books, journals, lecture notes, seminar and conference papers, e.t.c.) They originated from intermediary sources.

Observation and Recording the data were collected by observing and recording the working disposition of each member of the gang at selected intervals without their knowledge. The records are qualitative and quantitative in nature. The action precipitating the things being observed (time, temperature, response, behavior) were either induced or stimulated by external influence or simply arose in their natural state without any form of inducement. Selective chronometric recording were adopted to estimate the time duration of event/activity.

Documentation is the process of recording information obtained from observation, experimentation for easy retrieval when needed, by the means of photographs, slides and video recording.This was used in our analysis to arrive at a result that increased or reduce site productivity from the sample collected**.**

DATA ANALYSIS

Differences in the physiological characteristics of construction sites operative as a result of height, skill, attitude and composure are observed as influenced by various factors resulting in differences in value which are hard to forecast. The obtained result is an accidental phenomenon, a value of an accidental quantity, and these are known as random variables.

The evenness in the plastering (finishing),concrete work, laying of blocks of a building is different for each wall, room, and sections, even though it is done by the same gang of workmen using the same implements and materials.

Values of tenders for a given project by different contractor is an accidental event, the variance of each tender form the reserved price is an accidental phenomenon and its measure for every tender received is a value of an accidental quantity.

In the laboratory analytical compressive strength of material used in construction sites usually vary from the expected (designed) strength due to many factors. Obtaining or not obtaining the designed strength is an accidental phenomenon, the obtained result is an accidental quantity and its value from every test.

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The random variable as a measureable quantity, which values depend on accidental causes and effects. Which is characterized by uncontrollable variance during repeated reproduction of the phenomenon associated with it. Several tests on a particular random variables and the observations are carried out to ascertain their quantity and validate or substantiate their application in the solution of real life problems.

SAMPLEAND SAMPLING TECHNIQUES

Due to the vastness of the geographical area selected, the stratified random sampling technique was used. Supervisor of various trade namely, masonry, carpenter, concrete works and steelwork from small – medium size limited liability firm operating in Ebonyi State. Having identified the targeted population and determined the sample size, it is imperative that a sampling technique be adopted to survey the population for the study. Ogunsemi and Jagboro (2006) noted that it is logical to collect data directly from the observation or measurement form the experiment within the study area. Sampling technique as stratified random sampling technique. Since the population for this study is clearly defined, the study adopted stratified random sampling technique.

RESULTS AND DISCUSSION

Table 1 Industrial Relation factors affecting labourbehaviour in construction sites productivity. (Analysis based on small and medium construction sites in ascending order of importance using raw score method of correlation)

S/n	Industrial relation factors	Small site	Medium site	Difference (D)	Square diff. (D^2)
A	Lack of proper incentive to the operatives	4	2	2	4
B	Lack of Motivations	3	3	0	0
C	Membership/Attendance of trade union	2	6	-4	16
D	Certificate/Cash long services award	6	5	1	1
E	Appreciation certificate	5	4	1	1
F	Better working conditions	1	1	0	0
	TOTAL				22

Source: field survey (2018)

Conclusion since the degree of relationship (R- +0.38) one indicate that a perfect positive relationship exists between industrial relation factors and productivity are highly significant. This implies the above stated factors should be seriously considered to improve productivity.

Discussions

In Nigeria, there is no hard and fast rule concerning to the minimum wage for the site operative as different wages are being paid in different sites across the country. Ebonyi construction sites are usually faced with poor wages, absence of medical care allowances, no job security, no promotion at work, no leave or leave allowance, no gratuity, no death benefit, no accident insurance at work, no negotiation or collective bargaining agreement, no transportation and leave entitlement. All these dissatisfyoperatives from performance and also arecontributing factor to the issues that makes it difficult for majority of construction worker to join any trade union.Regulate the terms and conditions of workers with regards to wages and salary, fringe benefits and all others pertinent to improving conditions of service. The productions function which is a joint interest between

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the employer/management and the trade union connected to a common goal of profit making in productivity and efficiency in organization has gained more acceptability in modern industrial relations practice.

Skilled, unskilled and high skilled workers of various trade like carpentry, masonary, concrete workers and steel workers employed as at when required and dismissed as soon as their operation terminates and are not entitled to redundancy pay. It is an unprotected form of employment because, it does not enjoy the statutory protection available to permanent employees.

Motivation is increased level of enthusiasm and commitment. Motivator, when properly applied, stand the best chance of producing the desired behaviour with favorable and lasting result. Motivation may come in various forms such as money, recognitions, promotions, welfare packages, company gifts, Christmas gifts, burial rites, marriage rites, bonuses. it is therefore theresponsibility of the supervisors to quickly identify the most demanding motivators for his operatives and make use of it.

Table 2 Human technical factors affecting labourbehaviour in construction sites productivity. (Analysis based on small and medium construction sites in ascending order of important using raw score correlation)

S/n	Technical human factors	Small site	Medium site	Difference (D)	Square diff. (D^2)
A	Apprenticeship skill	1	4	-3	9
B	Communication skill	3	3	0	0
C	Industrial training skill	5	6	-1	1
D	Social skill	4	5	-1	1
E	Oversea training	6	1	5	25
F	Time management skill	2	2	0	0
	TOTAL				36

Source: field survey (2018)

Conclusion since the degree of relationship (R- -0.03) one indicate that a perfect negative relationship exists between human technical factors and productivity are highly significant. This implies the above stated factors are **under** considered in the Ebonyi State construction sites.

Discussion

Is the enthusiasm of operatives to acquired practical/technical skill in performing a task in construction sites. In construction sites personal specification of operatives for apprenticeship are punctual, positive attitude to work and colleagues, practical ability and awareness of working safety, a good head for heights and sense of balance, self – motivation and desire to learn is both resilient and committed, good co-ordination skills and methodical approach is always looking to improved and enjoys being a team player. In construction operatives must acquire those personal specification to improve performance.

Construction sites is a labour driven sector, requiring the input of various skilled craftsmen, despite the mechanization of site operations and advancement in technology, the continuous availability of competent and skilled craftsmen is inevitable to construction site performance. Construction firms are expected to maintain and continuously trained/retrained their artisans to improved performance.

Is a process of organizing and implementing a strategy related to the time required for work activities on a construction sites. Estimates can then be made of how long each activity will take. In estimating the supervisor should consider interrelationship between tasks, holidays and sickness in staff, equipment breakdowns, and interruptions to work progress due to inclement weather, inspections, testing and other forms of quality control. The supervisor should manage delay without changing the overall project duration. In a large project, the client may appoint a programmer consultant to prepare a detailed programme for the

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project including an outline programme for construction before employing a contractor. The contractor will take responsibility for programming the construction works. This applicable to small construction sites.

Table 3 General factors affectin glabour behaviour in construction sites production (Ranking 1)

S/N	Attributes	1	2	3	4	5	Severity Index (%)	Rank
I	Perception	1	1	0	10	68	0.95	1
Ii	Personality	4	2	0	9	65	0.92	2
iii	Heredity	8	2	5	9	56	0.85	3
Iv	Family	5	15	5	32	23	0.73	4
V	Group membership	5	10	10	42	13	0.72	5
vi	Socio-economic factor	9	10	6	33	22	0.72	5
vii	Life experience	9	12	30	9	20	0.70	7
viii	Group pressure	13	17	21	10	19	0.61	8
Ix	Adaptation	15	13	27	10	15	0.59	9

Source: field survey (2018)

On the average, from the result of the study shown in table 3 and for all the parameters being considered 60% of the respondent agree that the factors affectingbehaviourof labourin construction sites productivity. (Table 3) indicated, they were of strong conviction that perception, personality, heredity, family, group membership were the five (5) strongest factors affecting productivity and effectiveness of the labour in construction sites productivity.

Perception seventy index (R-0.95) from the table 3 was ranked Ist and found to bethe most significant factor affecting construction sites productivity performance. Perception includes person's needs, education, background, values, position and group. The efficiency of the workers higher thought processes is a direct function of the basic motor skill upon which they are basedor past experience. In construction sites a task may be performed in easy, relaxed and coordinated movement or is he stiff, fearful and unrelaxed condition. The attributes can inform the selection, choice, relation, description and isolation of workers. Working in the construction, it also make them to lose concentration and affect their share assessment.

Personality seventy index (R-0.92) from the table 3 ranked 2nd and found to be the most significant factor affecting construction sites productivity performance. Personality set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations and behaviour in various situation. Characteristics can measured informed of emotional disposition, mania, social introversion, anxiety, alcohol/drug dependence, stress disorder, delusion, aggression, avoidant dysthymia, psychotenia, schizophrenia, depression, paranoia, hysteria, masculinity/feminity and psychopathic deviation. Construction workers in many ways, are a breed of people with very similar personalities. This will results to dysfunction in performing construction task by the workers.

Heredity seventy index (R-0.85) from the table 3 was ranked 3rd and found to be the most significant factor affecting construction sites productivity and performance. Heredity it is regulated by genetic principles one gene may influence many different personality characteristics. Heredity as behaviour in psychomotor domain require endurance, strength, vigour, agility, which produce a sound efficiently functioning body, physique and muscular characteristics. These require strenuous effort for long period of time, muscular exertion, a quick, wide range of motion at the hip joints and quick precise movements. It make construction workers to work over a long period of time.

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Family seventy index (R-0.73) from the table 3 was ranked 4th and found to be the most significant factor affecting construction sites productivity and performance. Family influences our personality behaviour, belief and values. The culture one grows up in can affect their happiness, morality, mortality behaviour and personality result to mismanaging of material proportion in construction sites. What individual likes and dislikes can be formulated through the influence of the parents, brothers, uncle and aunts. Relating this to construction workers, an individual who has an only child may seek to work independently. An individual raised in a poor family setting may develop a greater appreciation for economizing.

Group membership seventy index (R-0.72) from the table 3 was ranked 5th and found to be the most significant factor affecting construction sites productivity and performance. Group membership is influence of the group majority on an individual's judgment. Group membership experience continue to influence an individual'sbehaviour beyond that of the family group. Individual behaviour may be educated by people associates.

Socio – economic factor (0.72), life experience (0.70), Group pressure (0.61), Adaptation (0.59) were ranked 5th, 6th, 7th and 8thwas in agreement on the factor affectinglabourbehaviour in construction sites.

Statistical Analysis of Results 3

In this research study, two hypotheses were tested using the chi-square. X^2 distribution tests the observed by E. The variance is the difference between O and E the summary ∑

$$\chi^2 = \Sigma \frac{(O-E)}{E}$$

Where

χ^2– Chi-square

O – Observed frequency

E – Expected Frequency

Hypothesis 1

Cross tabulation on general factors affecting labourbehaviour in construction sitesproductivity.

Table 3.1 General Factor's affecting labourbehaviourin Construction Sites productivity (Test 1)

Attribute	SA	A	NS	D	SD	X^2	P-Value
Perception	68	10	-	1	1	24.142	0.005
Personality	65	9	-	2	4	11.312	0.000
Heredity	56	9	5	2	8	16.129	0.000
Family	23	32	5	15	5	32.317	0.002
Group membership	13	42	10	10	5	9.195	0.021
Socio-economic factors	22	33	6	10	9	24.420	0.025
Life experience	20	9	30	12	9	5.197	0.038
Group pressure	13	17	21	10	19	3.942	0.016
Adaptation	15	13	27	10	15	4.147	0.043

Source: field survey (2018)

SA – Strongly Agreed

A – Agreed

SD – Strongly Disagreed

P – Significant Value

NS – Not Sure

D – Disagreed

a – Acceptance Value

χ^2 - Chi-square

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Decision Rule: reject the null hypothesis (Ho) if the P-value is less than the given alpha value (a=0.05), **otherwise** accept Ho.

Conclusion: since the significant value (P-value) are less than the given alpha value (a = 0.05); we conclude that the general factors affecting behaviour of labour in construction site are highly significant. This implies that all the above stated factors should be seriously considered.

Table 4 thefactors affectingsupervisor's skill in construction sites (Ranking)

S/n	Description	1	2	3	4	5	Severity Index (%)	Rank
I	Acquiring interpersonal skills	5	3	0	6	66	0.91	1
Ii	Better industrial relation	4	4	2	5	65	0.90	2
iii	Acquiring leadership skill	7	10	3	28	32	0.77	3
iv	Planning skill (Network analysis)	12	11	7	24	26	0.70	4
V	Performance Skill	5	3	60	7	5	0.61	5
vi	Communication skill	11	49	5	8	7	0.47	6
vii	Diagnosed skill	7	64	1	4	4	0.43	7
viii	Economic/Social skill	23	28	6	8	5	0.43	7
X	Strategic Skill	28	38	5	5	4	0.37	9

Source: field survey (2018)

On the average, from the result of the study show in table 5 and for all the parameters considered, 60% of the respondent agree that these factorare affectingsupervisor's skill in construction sites.

From the result (Table 5) indicated, they were of strong conviction that acquiring interpersonal skill (0.91), better industrial relation (0.90), acquiring leadership skill (0.77), planning skill (0.70), performance skill (0.61) were the five (5) strongest factors affecting supervisor skill in construction sites.

Acquiring interpersonal skill seventy index (R-0.91) from the table 5 was ranked 1st and found to be the most significant factor to improve performance of the supervisor skill. Supervisor need to be trained, motivated, satisfied and well-informed. The purpose is to manage people with diverse backgrounds and cultural values having them work together effectively and efficiently. Supervisor ask appropriate questions to brings out ideals and stimulate discussion, listen closely and intently to member ideas and concerns, managing group discussion to encourage team members to participate also celebrates the achievement milestones and other team accomplishment and use recognition, task assignments and other techniques to motivate team member. Supervisor will also develop an understanding of the individual, because the individual comes from a close knit family, the individuals needs may be predominantly family oriented. Is for the supervisor to understand hisbehaviour and decide which motivation technique would best accomplish the supervisor goal and also evaluate the operator'sbehavoiur. The supervisors should be competent and considerate in directing behaviour in construction sites.

Achieving better industrial relationsseventy index (R-0.90) from the table 5 was ranked 2nd and found to be the most significant factor affecting the performance of the supervisor and construction sites productivity. By paying burial rite, wages, social security, safety, health and welfare at work, Christmas bonus, wedding gift, wedding rite, child dedication rite and birthday rite improved performance of site supervisor. The overall working condition have a direct bearing on the level of satisfaction.

Acquiring leadership skill seventy index (R-0.77) from the table 5 was ranked 3nd and found to be the most significant factor affecting the performance of the supervisor and construction sites productivity. Supervisor possess this skill will act as structure participation, balance participation, co-operation, ambitious, dedication,

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honest, hardworking, attentive and act as gate – keeper in directing actions in construction sites. The supervisor who have that dominantly leadership will take strategic and comprehensive view of problem – solving and decision – making processes and selects, from a board array, specific methods that match the groups needs and the tasks at hand, to improve it overall efficiency, productivity and cost effectiveness.

Planning Skill seventy index (R-0.70) from the table 5 was ranked 4nd and found to be the most significant factor affecting performance of the supervisor and construction sites productivity. The program of work with the used of network analysis will assist in analyzing the situation by determining the quality of work to be constructed for each activity expressed in an appropriate unit. Then he should estimate the probable rate at which the work will be performed, allowing for estimated loss in time owing to inclement weather. This can be achieved by number of labourers available or the number who can work efficiently.

Performance skills(0.61), Communication skills (0.60), diagonized skills (0.47), Economic/Social skills (0.43), Strategic skills (0.37) were ranked 5th,6th , 7th,8thand 9th was in agreement on the factor affecting the performance of the supervisor and construction sites productivity.

Test of hypothesis 2

In this research study, two hypotheses were tested using the chi-square. X^2 distribution tests the observed by E. The variance is the difference between O and E the summary ∑

$$\chi^2 = \Sigma \frac{(O-E)}{E}$$

Where

χ^2– Chi-square

O – Observed frequency

E – Expected Frequency

Cross tabulation on factor affectingperformance of supervisor skill in construction site.

Table 4.1 Factor affecting performance of Supervisor skillin construction sites (Test 2)

Attribute	SA	A	NS	D	SD	X^2	P-Value
Acquiring interpersonal skills	66	6	-	3	5	16.116	0.002
better industrial relations	65	5	2	4	4	14.517	0.016
Acquiring leadership skills	32	28	3	10	7	19.619	0.000
Planning skills	26	24	7	11	12	21.311	0.031
Performance skills	5	7	60	3	5	4.279	0.043
Communication skills	11	49	5	8	7	9.215	0.000
Diagonizedskills	7	64	1	4	4	26.411	0.000
Economic/social skills	23	28	6	8	5	9.311	0.004
Strategic skills	28	38	5	5	4	12.317	0.017

Source: field survey (2018)

SA – Strongly Agreed **NS – Not Sure**

A – Agreed **D – Disagreed**

SD – Strongly Disagreed **a – Acceptance Value**

P – Significant Value χ^2 **–Chi-square**

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Decision Rule: Reject Ho, if the P-Value is less than the given alpha, **otherwise** accept Ho.

Conclusion: since the significant value (P-values) are less than the given alpha value (a = 0.05), we conclude that the above factors affecting supervisor performance are highly significant and should be seriously considered.

CONCLUSION

Poor performance of construction industry workforce is attributable to their perception, personality, family, heredity, socio-economic factors.

The performance of construction workforce is measured in terms of their ability to meet target output, time schedule, quality/specification requirements and team cohesiveness, these should be based on talent, skill and capacity for co-operative working.

Supervisor's competence, leadership, building bonds competence, collaboration competence, consistently and visibly lead by example and set clear standards for site operatives.

It is evident that the made of employment (casualization) which dominant in the Nigeria construction industry today has not provided a conducive atmosphere for industrial relation practice. The efforts by most organizations/firms in the construction industry to maximum profits at the expense of its employees welfare, health, work conditions, long term/terminal benefits and share economic development has been major hindrance to the industrial practice in the industry.

Supervisors of construction sites must be satisfied and motivated to clearly spell out what role it has to play in the efficiency, effectiveness and profitability of the firm must be rigorously pursued attention should again be paid to other highlighted negatives influencing factors in our construction sites in this regard.

From the study, bad condition of work such as in-security, irregular work hour, low wage and standard employment benefit reduced construction site performance. The inexperience on supervisor in human relations skills is explained by the arbitrariness of their appointment in the work place. The situation leads to adoptions of cohesive approach by which the supervisors as they lack necessary interdependent working skills to mesh team members for productive endeavor. Team spirit and innovation is also lacking among team member since their working relationship lack the required cordiality to bring out their creative talents and internal abilities. Thus aside from possessing technical, analytical and conceptual skills, supervisors and team leaders or supervisor would need to vigorously develop their human relationship (interpersonal) skills in order to command team member respect create confidence, entrench high performance through collaborative and cohesive working relationship.

May employers especially within the private and public companies champion the continuous use of casual workers, thus introducing lots of casual workers in their workplaces, sometimes structuring almost the entire workforce to be casual workers believing that casualization has numerous benefits such as increased flexibility and lower overhead costs.

Construction industry should make joint decision making for establishing job rules and job values and for cooperation of manpower resourcesnecessary for the attainment of the organizational objectives of the enterprise, the industry or the nation and trade union.

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APPENDIX

LIST OF LIMITED LIABILITY CONSTRUCTION FIRM VISTED IN EBONYI STATE

S/N	CONSTRUCTION FIRM	ADDRESS	REMARK
1	Bebanicanet Technology Limited	No33 New Market Road AbakalikiEbonyi State	
2	GobalAllwell Tech. (Nig) Ltd	39 Nna Street AbakalikiEbonyi State	
3	Edon Group of Company Nig. (Ltd)	N01 Edward Nkwagu Close, Along Ogoja Road Abakaliki	
4	Filez Nig. Ltd	Ochodo city Ebonyi State	
5	UniGlobe Construction Engineering Company	NwueguAbakalikiEbonyi State	
6	Pyke Engineering Ltd	IkwoAbakalikiEbonyi State	
7	Chanto Engineering Ltd	IkwoAbakalikiEbonyi State	
8	Heavy Weight Engineering Ltd	IkwoAbakalikiEbonyi State	

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9	Zerock Construction Ltd	IkwoAbakalikiEbonyi State	
10	Embar Construction Ltd	Afikpo North Ebonyi State	
11	P & O Solid Ltd	Afikpo South Ebonyi State	
12	Ugolanson (Nig) ltd	Afikpo South Ebonyi State	
13	Joint Consult Ltd	IkwoAbakalikiEbonyi State	
14	Marum Construction Ltd	Ibii/Afikpo SouthEbonyi State	
15	Arab Construction Ltd	EgbooAbakalikiEbonyi State	
16	Setraco Construction Ltd	Isiagu Ivo Ebonyi State	
17	Julius Begger Construction Ltd	AkpohaIsieluEbonyi State	
18	BOA Construction Ltd	IkwoAbakalikiEbonyi State	
19	Graykon Construction Ltd	Afikpo North Ebonyi State	
20	Mulac Ventures Ltd	Ivo Ebonyi State	
21	Foundation Years Ltd	Ivo Ebonyi State	
22	Obis Associates Ltd	OhaozaraEbonyi State	
23	Mak&Mak Ltd	Ivo Ebonyi State	
24	Chipa Construction Ltd	Ivo Ebonyi State	
25	Vitro Engineering Ltd	Ivo Ebonyi State	
26	Tip Top Nig. Ltd	Ivo Ebonyi State	
27	CBC Global Ltd	Ivo Ebonyi State	
28	Chap Construction Ltd	OhaozaraEbonyi State	
29	Uxadola& Partner Ltd	Ivo Ebonyi State	
30	Stadecost Consultancy Limited	IkwoEbonyi State	
31	Okey Technical Ltd	Afikpo south	
32	Paul B Construction Ltd	AbakalikiEbonyi State	
33	Civok Construction Ltd	Afikpo South Ebonyi State	
34	Hapel Construction Ltd	AbakalikiEbonyi State	
35	AlCON Construction Ltd	AbakalikiEbonyi State	
36	JaavfEdwod Ltd	AbakalikiEbonyi State	
37	JECAE Engineering & Construction Ltd	AbakalikiEbonyi State	
38	B & B Construction Ltd	AbakalikiEbonyi State	
39	Swiff Construction Ltd	AbakalikiEbonyi State	
40	Network Consultancy ltd	AbakalikiEbonyi State	
41	Ministry of work & Transport	Abakaliki&AfikpoEbonyi State	
42	Sperol Construction ltd	AbakalikiEbonyi State	
43	A & O Construction Ltd	AbakalikiEbonyi State	
44	Arfro Construction Ltd	AbaomegeEbonyi State	
45	C CC Construction Ltd	IsielwuEbonyi State	
45	Gemaco Construction Ltd	AbakalikiEbonyi State	
46	James Cubic Construction Ltd	AbakalikiEbonyi State	
47	Skylimit Construction Ltd	AbakalikiEbonyi State	
48	Chimex Construction Ltd	AbakalikiEbonyi State	
49	Chumax Construction Ltd	AbakalikiEbonyi State	
50	Tripod Construction Ltd	AbakalikiEbonyi State	

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