

Developing Motivation Theory: A Model Linking Motivation, Resistance and Productivity

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Abstract: There is currently no consensus on a universally acceptable motivation theory; this is largely due to differing views on the key issues such a theory should address. This study therefore proposes a model to explain the relationship between motivation, resistance and productivity, with the aim of advancing motivation theory. The target population comprised craftsmen in construction firms in Lagos, Nigeria. Based on the review of literature, 16 resistance variables were identified and used to develop a structured questionnaire. The instrument used 5-point likert scale, where 1= very low and 5= very high. A total of 295 questionnaires were administered, out of which 150 were retrieved and found useable. Data were analyzed using Exploratory Factor Analysis and Multiple Regression Analysis. The findings reveal a strong and significant relationship between motivation and productivity. The study concludes that the impact of resistance among workers is insignificant as to impair productivity attainment in the construction industry.

Keywords: Motivation, Resistance, Productivity, Construction Craftsmen, Lagos.

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I. INTRODUCTION

Application of motivation techniques has been since the earliest days when the Egyptian pyramid was being constructed, as well as the wall of China (Inuwa, 2014). Advanced management practices were deployed with efficient motivation of the workforce (Armstrong, 2023). The Greeks advocates work specialization and motivation of the employees through music at workplace. However, there was no organised theoretical concept on which its application was based. Nevertheless, the evolution of the theoretical basis for the development of motivation theory has been evolving. The argument has been to ascertain whether motivation leads to productivity increase, or productivity attainment can equally be a source of motivation (Albano, 2014). This, in the perspective of the authors is seen to be a good way of thinking; because it is understood that one has influence on the other, hence it is bidirectional.

There is direct linear association between motivation and productivity thus; each of the two affects the other. Ndudi et al. (2023) observed that building structure, which is a construction production' end product has inherent motivation in itself that is sufficient to stimulate workers to higher productivity. Harvesting the full gains of motivation by industry managers, inherently based motivating factors should be encouraged as a way of dealing with the motivating needs of workers. Most research conducted on productivity focused on factors affecting productivity of

workers. The purpose has been to find out the most important issues influencing productivity (Usman et al. 2024; Loekito *et al.* 2025; Mohebbi *etal.*2013). Loekito et al. (2025) studied the factors influencing Construction workers' productivity in Indonesia, and came into conclusion that motivation causes productivity increase.

Yahaya (2021) conducted another study on influence of incentive scheme on productivity, his findings show that if these incentive schemes are implemented; it will help to improve productivity. Abdel-Wahab *et al.* (2008) in their study of trends of skill as it affects productivity in UK construction industry; observed that skill development alone does not transform into higher productivity. This is opposing to Olomolaiye (1990) result that states that productivity increase is all about skill development and cannot be hinged on motivation alone. It will be expedient to infer from these research outcomes that there is a level of productivity increase that skill development can attain. It will be sufficient to state that blending of skill and motivation may likely have an improvement on productivity level.

However, what is hidden underneath this process is what may not have been considered as capable of influencing productivity. This has to do with the influence of resistance of workers to motivation process. This may be the reason for inconsistent opinion of research findings. Researchers are of the view that motivation should be applied in conformity with workers need for it to have impact. One will be tempted to ask what has been a barrier

to productivity increase in construction sub-sector of the economy despite this collective agreement. The most likely explanation is lack of consideration of the effect of resistance among workers to application of motivation factors in the industry. It will not be out of place to state that if resistance to motivation is addressed; the outcome might bring productivity increase. Outcome of empirical study has established that thirty three percent of organisational change program succeeds (Herbert, 2024; Marvin, 2025). The lack of success of this process is credited to resistance of employees that are concerned in the change process (Herbert, 2024; Plaza, 2025). There are two types of responses to change pointed out by Mdletye *et al.* (2014). These are: reaction of people and resistance. They argue that when notice of change is passed, they respond based on their understanding of the change. This reaction is basically influenced by personal interest as well as organisational motive as understood by the employees or other related factors (Herbert, 2024; Mdletye, *et al.*, 2014).

However, whichever perspective people view organisational change, their perception drives their conduct as either positive or negative. If their impression of the change is positive based on their understanding of the process, they will support the change effort. However, if their impression of the change is negative, they will oppose the change (Herbert, 2024). Resistance happens in work setting because of the impression that it erodes their position or rank thereby increasing panic and worry of what might likely happen in the course of the change (Herbert, 2024; Plaza, 2025).

➤ Problem Statement

Motivation is seen as an important instrument for improving workers productivity. Construction sector cannot be exempted from this view. Research has proven that motivation has constructive influence on construction worker's productivity. Moreover, further studies have shown that construction sector has low productivity, not in Nigeria alone but globally (Mischike *et al.*, 2024). If motivation could enhance productivity, why has productivity not increased in the sector? Researchers are considering whether workers in the sector are not adequately motivated or they are resisting motivation process. Lagos being the study area for this research accommodates sixty five percent of companies in the country; moreover, about eighty percent of large construction companies in the country have their headquarters in Lagos (FOCI, 2024). Kolawole and Anigbogu (2004) attribute low productivity and project abandonment to disagreement between labour and management over working condition and payment. The determinant of productivity attainment in construction sector is workers. Addressing this challenge among construction workers in Lagos, Nigeria will be akin to addressing it in Nigeria. This is expected to boost the GDP of the sector in the country. This study is therefore designed to examine the association between motivation, resistance and productivity and develops a model of this association as a way of addressing this challenge.

➤ Objective

The objective of this study is to develop a model of the linkages between motivation, resistance and productivity as a way of improving the productivity level of workers and further the development of theory in the field of motivation.

II. LITERATURE REVIEW

➤ Theoretical Framework for the Study

The study adopts Herzberg theory, Kurt Lewin's theory of organisational change and Ohm's law as theoretical framework. They were adopted because of their relevance in expressing the relationship that constitutes the constructs for this study. Variables for motivation factors were derived from Herzberg theory, while that of resistance from organisational change. Productivity measurement was done by work study with the use of five minute field rating. However, because this study was exploratory in nature, the idea of resistance in physics most importantly Ohm's law of electricity was looked into with the aim of identifying its importance to the idea of resistance as intended by this study. Locke and Lathan (2004) are of the view that motivational matter requires strategic management which can only be achieved from change. They observed that change can be resisted by workers, moreover according to them resistance has not been given consideration in the field of organisational management.

Locke and Lathan (2004); Hart (2011) recommends that motivation in work environment cannot be limited to management field alone, that it will be proper to draw insight from other fields. Therefore, aligning with this view, the idea of resistance was bought from Ohm' law of electricity in physics. Ohm' in Ankahova (2016) investigates the current that goes through a conductor, potential difference connecting two points along the circuit and the resistance. Ohm' in Ankahova (2016) explains resistance to mean opposition to the flow of current through a conductor; current is also defined as the speed at which electric charge flow along same conductor. Potential difference (V) is the labour that is expected to be exerted in moving a unit of positive charge from one point to the other.

Ferry (2012) and Ankahova (2016) argue further that there is a linear or direct association between the current that is passing through a conductor and the potential difference (V) across its ends when other features are kept constant. This is presented in a symbol indicated as: $I \propto V$

Where I = current and V = Potential difference

When the correspondence sign is removed, we have

$$V/I = \text{Constant (K)}$$

They went further to state that the value of the constant is a determinant of opposition to the flow of current, in other words; it is the measure of resistance to current flow. The formula is represented as $V/I = R$ where R is resistance. All the factors represented in this formula can be measured (Anyakoha, 2016).

Looking at this relationship carefully, it will not be out of place to infer that V is comparable to workers productivity. Productivity is the measure of the input compared to output which is identical to potential difference. Moreover, the pace of current flow through a conductor is an indication of potential difference observed. This current therefore can be said to be the degree of motivation which is mathematically represented as $F=ma$. Where F stands for force, m stands for mass and a stands for acceleration. This was rearranged to $B = DH$ in an attempt to put up an explanation on how habit is formed. B stands for behaviour, D for drive, and H for habit. McDongall acknowledged eighteen needs of man he called instinct as against two listed by Hull. Furthermore, Skinner presented a modified version of instinct which he called behaviourism (Smelser & Bates, 2001).

He affirms that man is not just controls by his state of mind but also by his environment. Human beings react harshly to the happenings in his environment. He affirms that environment played a significant role at determining the behaviour that an individual exhibits. Motivation theory keeps on evolving with the introduction of reinforcement. This is in an effort to replace instinct theory with a model based theory (Steers *et al.*, 2004). Foremost contributors to this theory are Thorndike, Woodworth and Hull. The summing up of this theory is that if workers obtain positive reinforcement for an achievement, such as praise, that worker would repeat such behaviour. However, if negative reinforcement is obtained such worker would drop such behaviour.

The centre of behaviourism theory is on what is liable for activating a given need in man, while scientific based model is on how to increase productivity. Scientific based model was led by Taylor, the aftermath of industrial revolution when industrialists were yearning for productivity increase in the face of labour shortages. The outcome of this study and the recommendations that followed was able to achieve this purpose. However, the gains of this study did not last because of the domineering influence of the industrialist. The resulting resistance on the part of the workforce resulted in formation of trade unions (Hodgett & Koratko, 1991). The short comings of scientifically based model that sees man as machine brought about the dawn of social scientist movement normally referred to as human relations movement.

The theorist in this school observes that ‘carrot and stick’ approach to productivity increase is not the finest form of motivation. They portray man as a social entity and workplace as where to socialise. The human relations approach introduced to work environment brought about a better understanding between workers and managers, which subsequently increase productivity. The critic of the study emphasizes on its inability to give thought to environmental factors, refusal to recognize conflict of interest between workers and managers and not relating workers need to organisational goal. Further progress in motivation theory brought about the period of contemporary theory of motivation. This motivation notion is divided into content

and process theories (Aiyetan and Olutuah, 2006). Content theory identified factors that can lead to motivation. Advocates of this theory are Maslow, Herzberg and McClelland. Process theory edges on what leads to motivation. Some of the process theory includes goal setting theory, expectancy theory, ERG theory, equity theory, and McGregor’ X and Y theory. In conclusion, one vital thing to note in these theories is the modification introduced to each of them.

Furthermore, it is equally observed that consideration is not given to the influence of resistance in motivation theory development processes. The inclusion of resistance is however necessary to have a motivation theory that will be acceptable and take into consideration human reaction to organisational change.

III. RESEARCH METHODOLOGY

➤ Study Area

This study was conducted in Lagos, Nigeria. Lagos is in the south western part of Nigeria and has population of about thirteen and half million people (National Population Commission, 2022). The city was the Federal Capital of Nigeria until 1991 when it was relocated to Abuja for expediency of administration. Lagos is sited between Latitude $6^{\circ} 2'$ to $6^{\circ} 2'$ North of the equator and from Longitude $2^{\circ} 45'$ to $4^{\circ} 20'$ East of Greenwich meridian. It has a total land area of about 3475.1km^2 (Abiodun, 2010). It shares boundary in the North with Ogun State, in the East and West with the Republic of Benin, also in the south with Atlantic Ocean.

Lagos state is the economic nerve centre of the country because of the number of companies operating in the state which is estimated to about 65%. The state consumes 50% of power generation in the country. These attributes informed its choice for this study (Abiodun, 2010). It has fifty seven local council development areas which are headed by chairmen. The state has an executive governed who oversees its affairs. Lagos was declared the administrative headquarters of Nigeria after the merger of southern and Northern protectorate in 1914 by the colonial masters.

➤ Research Design

The research design for this study is quantitative design. Specifically, exploratory and causal designs were adopted for the study. Exploratory helps to explore other fields to gain insight into resistance and find a construct to define the association between resistance and motivation. Thereafter, causal design was used to establish the relationship that exists between motivation, resistance and productivity. Other steps that were taken include; interview with individuals on construction sites for their views on factors that constitute resistance, questionnaire design that focuses on ranking of factors that constitute motivation and resistance was administered, pilot survey was carried out to test the instrument, thereafter, analysis of pilot survey, correcting the observed anomalies from the pilot survey,

then the final survey, analysis of data and interpretation of results were done.

➤ Data Collection

Data for this study were collected from sixteen companies in Lagos, Nigeria. The companies were large and medium size firms in line with how they were categorized by Inuwa (2014). Large size firms can execute \$284,000 worth of contract and above, while medium size has capacity for executing \$284,000 worth of contract and below. The sampling technique adopted is purposive sampling. Data were collected through questionnaire and work study. The necessary information that has to do with research variables and theoretical framework of the study were retrieved from literature. Three most important variables were used; these are motivating factors, resistance factors and productivity.

In this study, dependent variable is productivity. Productivity was measured by work study with the use of five minute field rating to obtain the average productive hours of workers in each of the companies surveyed. Sixteen motivating variables were got from literature and used as independent variables. The third factor considered is resistance which also serve as independent variable. Thirty one variables were identified as capable of causing resistance to productivity attainment. The identified variables were used to develop a structured questionnaire designed in Likert scale of 1-5; with 1 representing very low, 2 low, 3 average, 4 high and 5 very high and were administered to craftsmen in Lagos, Nigeria. 295 questionnaires were administered to craftsmen in sixteen companies in the study area. 150 questionnaires were filled and returned which represent 50.85% success rate. The questionnaire was pretested through a pilot survey that was carried out among the population studied before the real survey.

In developing the model of the association among motivation, resistance, and productivity, multiple regressions were used. The under lying significance of

regression is to ascertain whether changes in one variable influences change in another. The reason for using multiple regressions in this study is to establish the contribution that motivation and resistance which constitute independent variables in this model formulation would make to the change in productivity. This productivity is the dependent variable. However, it is worthy of note that factor analysis of the variables was done to help in removing variables with low variance. The ranking of motivating factors influence on craftsmen was done. The mean of the factors were used in the formulation of the model.

➤ Model Development Assumptions

Three key assumptions guided the development of the model:

- Productivity was measured using tool hours. It was assumed that the craftsmen possessed the requisite skill to achieve the average tool hours expected of a competent operative. Therefore, the tool hours recorded was used as a substitute for productivity output. It was further assumed that the observed output reflects the motivation level of this category of workers.
- Motivation was measured using the mean ranking of motivating factors. This assumption was based on the belief that the rate of physical progress on site is determined by the efficiency of craftsmen, and that this efficiency is a function of their motivation level.
- Resistance level was measured based on craftsmen responses to resistance factors.

These assumptions formed the basis for modelling the relationship among motivation, resistance and productivity. The mean scores from the ranking of factors are presented in Tables 1 and 2.

Thereafter, the variables were subjected to factor analysis to group them according to how they cluster and to eliminate those with low loadings that did not adequately measure the underlying factors.

IV. DATA ANALYSIS AND DISCUSSION

Table 1 shows the ranking of the influence of motivating factors on craftsmen.

Table 1 Ranking of Motivating Factors Influence on Craftsmen

Factors	Mean	Std. Dev	Rank
Job security	3.6267	.7193	9
Good salary	3.8933	.4935	2
Compliance with safety	3.9400	.5819	1
Appreciation of effort	3.8200	.6763	4
Bonus	3.8667	.6203	3
Promotion opportunity	3.6400	.6783	8
Opportunity for skill development	3.6800	.6982	6
Challenging work	3.6533	.7942	7
Good supervision	3.6267	.7193	10
Recognition by authority	3.7000	.7663	5
Cooperation from workers	3.5200	.5643	11
Good work environment	3.4333	.6895	13

Satisfaction from work	3.4800	.6525	12
Taking part in decision	3.0933	.6790	15
Freedom at work	3.1667	1.0454	14
Overtime	2.8467	.9322	16

Table 1 presents the ranking of motivating factors influencing craftsmen in construction firms in Lagos, Nigeria. Compliance with safety ranked highest with a mean score of 3.94 and SD = 0.58. This was followed by good salary, with mean score of 3.89 and SD of 0.49, and bonus which ranked third with mean of 3.87 and SD of 0.62.

Table 2 shows the ranking of resistance factors on craftsmen. Discrimination was the highest ranked factor, mean score is 3.01 and SD is 0.84. Fear of job loss ranked

second, mean is 2.96 and SD of 0.79, while fear of loss of status ranked third with mean score of 2.83 and SD of 0.88.

It is noteworthy that job titles assigned to craftsmen are highly valued and serve as a source of motivation. Common titles observed on sites include Head Mason, Head of Concrete Production, Head Carpentry, Head Operator, and Head Steel Fixer. These titles confer respect among peers. Consequently, any threat to these positions is likely to be resisted.

Table 2 Ranking of Resistance Factors Influence on Craftsmen

Factors	Mean	Std. Dev.	Rank
Fear of job loss	2.9600	.7848	2
Discrimination	3.0067	.8394	1
Fear of loss of status	2.8267	.8804	3
Poor communication	2.5533	.7098	10
Desire to change job	2.6267	.7645	7
Desire to start business	2.6000	.7685	9
Uncertain goal	2.6200	.5870	8
Fear of loss of freedom	2.3333	.7479	15
Working experience	2.6733	.6185	5
Organisational culture	2.8267	.7750	3
Education level of workers	2.3267	.6903	16
Poor allocation of resources	2.3200	.6484	17
Ineffective leadership	2.6533	.6344	6
Low trust in leadership	2.2867	.7079	20
Environmental factors	2.4467	.7003	12
Financial limitation	2.4000	.6554	13
Hurried implementation of change	2.4330	.8414	11
Year of existence of company	2.2667	.6919	21
Age of worker to learn new thing	2.3133	.6669	18
Politics in organisation	1.9867	.6654	28
Repeating work	2.0133	.7507	26
Level of responsibility might diminish	2.2267	.5924	22
Lack of technical skill	2.1000	.6212	24
Environmental culture	2.3733	.7377	14
Family pressure	2.1200	.8348	23
Change order	1.9600	.5779	29
Reduction in independence	2.0400	.4899	25
Not consulted before effecting change	2.3133	.6769	18
Political pressure	1.7933	.6980	30
Availability of slack time might diminish	2.0067	.5850	27
Dislike for construction work	1.4000	.7235	31

Organisational culture equally ranked third among the factors causing resistance, with a mean score of 2.83 and a standard deviation of 0.76. The lowest ranked factor was 'detest for construction profession' with a mean of 1.4 and standard deviation of 0.72.

Productivity was measured through field ratings. The percentage of productive hours for each of the 16 companies, labelled CP1 to CP16, were as follows: 52.94%, 64.71%, 58.82%, 52.94%, 47.06%, 52.94%, 58.82%, 52.94%, 58.82%, 64.71%, 52.94%, 52.94%, 70.59%, 64.71%, 58.82%, and 64.71% respectively. Factor extraction was conducted prior to model development.

➤ Factor Analysis of Motivation

The mean of motivating variables in Table 1 were factorised. The results of KMO and Barlett's test of sphericity in Table 3 shows that KMO value is .567 and it is

significant at $p < .05$. From the result, it can be noted that the KMO value is larger than the cut off point of .5, this implies that it is suitable for EFA.

Table 3 KMO and Barlett' Test of Motivating Variables on Craftsmen

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.567
Barlett' Sphericity	Test of Approximate Chi-Square	888.604
	Df	120
	Significant	.000

Table 4 presents the total variance explained. Using Kaiser's criterion of retaining factors with eigenvalues greater than 1, six factors were initially extracted. These six factors collectively explained 58.04% of the total variance.

Consequently, only factors 1 to 4 were retained for further analysis.

Table 5 shows the rotated factor loadings. Following Yong and Pearce (2013), a factor is considered valid when it has at least three variables loading substantially on it. In line with this guideline, factor 5 and 6 were dropped because they had only two and one variables loading, respectively.

To create combined variables for regression, the items loading on each of the four factors were averaged. The mean score for each factor was computed by summing the scores of its constituent variables and dividing by the number of variables. These average factor scores were then used in the regression analysis to model the relationship among motivation, resistance, and productivity.

Table 4 Total Variance Explained for Motivation Factor Retention

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %
1	3.11	19.442	19.442	2.78	17.43	17.430	2.26	14.149	14.149
2	2.66	16.618	36.060	2.27	14.21	31.642	1.66	10.363	24.511
3	1.93	12.052	48.112	1.48	9.219	40.861	1.51	9.454	33.966
4	1.69	10.553	58.664	1.31	8.156	49.017	1.43	8.948	42.914
5	1.25	7.833	66.497	.859	5.369	54.386	1.40	8.734	51.648
6	1.01	6.318	72.815	.584	3.653	58.039	1.02	6.391	58.039
7	.787	4.921	77.736						
8	.681	4.257	81.994						
9	.672	4.201	86.195						
10	.538	3.363	89.558						
11	.392	2.452	92.010						
12	.388	2.423	94.433						
13	.310	1.941	96.374						
14	.269	1.683	98.057						
15	.179	1.120	99.177						
16	.132	.823	100.00						

The Factor loading Structure is as shown in Table 5, the rotated factor matrix revealed a four factor structure that were loaded and thereby extracted, their variances are also indicated.

- Factor 1 comprised: good supervision (.950), good work environment (.717), satisfaction at work (.508) and challenging work (.505).

- Factor 2 comprised: safety provision (.721), appreciation of efforts (.568), and job security (.433).
- Factor 3 comprised: opportunity for promotion (.756), participating in decision making (.594), and good salary (.530)
- Factor 4 comprised: skill development (.734), cooperation from others (.588), and freedom at work (.586).

Table 5 Rotated Factor Matrix for Motivation Variables

	Factor					
	1	2	3	4	5	6
Good supervision	.950					
Good work environment	.717				.385	
Satisfaction at work	.508	.397				
Challenging work	.505					
Safety provision		.721				

Appreciation of efforts		.568				
Job security		.433			.339	
Opportunity to be promoted			.756			
Taking part in decision			.594			.326
Good salary			.530			
Opportunity for skill development	.372			.734		
Cooperation from others				.588		
Freedom at work		-.543		.586	.310	
Bonus					.656	
Overtime					.646	
Recognition by authority						.848

• *Extraction Method: Principal Axis Factoring.*

The mean of variables loading in each factor were added and divided by the number of variables to get the average factor loading for each. This was used for the model. The average mean scores of factor loading for each group are indicated as follows: Factor 1 = 3.5483, Factor 2 = 3.7956, Factor 3 = 3.5422, and Factor 4 = 3.4556.

➤ *Factor Analysis of Resistance Variables*

The same procedure used in factor analysis for motivation was followed in factor analysis for resistance. The mean scores got in the ranking indicated in Table 2 were used. Table 6 indicates the KMO and Bartlett's test values.

Table 6 KMO and Bartlett's Test of Resistance Variables on Craftsmen

Kaiser Meyer- Olkin Measure of Sampling Adequacy (KMO)		.526
Bartlett' Test of Sphericity	Approximate Chi-Square	4529.988
	Df	465
	Significant	.000

The Kaiser Meyer- Olkin (KMO) value is .526, this number is greater than the cut off point of .5 and significant at $p=.000$ which is less than $P < .05$. This implies that it is suitable for factorisation. Table 7 is the truncated total variance explained from items 1-16. Eight factors that explained 68.95% of the variance were extracted based on minimum eigenvalues of 1. Table 8 contains the rotated

factor matrix. This reflects that factor five and eight do not have up to three variables as a result of this, it was deleted from the lists of factors the average factor score of variables in each was calculated. The outcome as indicated reflects the following mean values: Factor 1 = 2.4589, Factor 2 = 2.5389, Factor 3 = 2.0267, Factor 4 = 2.0050, Factor 6 = 2.4267, Factor 7 = 2.3244.

Table 7 Truncated Total Variance Explained for Resistance Factors

Factors	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %
1	6.319	20.38	20.38	6.017	19.41	19.410	4.194	13.53	13.53
2	4.735	15.27	35.66	4.414	14.24	33.650	3.641	11.75	25.28
3	3.858	12.45	48.10	3.613	11.66	45.305	3.041	9.809	35.08
4	2.660	8.581	56.68	2.415	7.790	53.095	2.784	8.982	44.07
5	2.108	6.799	63.48	1.814	5.853	58.948	2.100	6.773	50.84
6	1.623	5.236	68.72	1.382	4.459	63.407	2.088	6.737	57.58
7	1.317	4.249	72.97	.958	3.091	66.498	1.950	6.291	63.87
8	1.06	3.449	76.42	.761	2.456	68.954	1.577	5.087	68.95
9	.950	3.064	79.48						
10	.926	2.988	82.47						
11	.865	2.791	85.26						
12	.779	2.512	87.77						
13	.618	1.994	89.77						
14	.514	1.658	91.42						
15	.393	1.269	92.69						
16	.355	1.146	93.84						

Table 8 Rotated Factor Matrix for Resistance Factor Extraction

	Factor						7	8
	1	2	3	4	5	6		
Age of workers to learn new thing	.792							
Environmental Factor	.779							
Working experience	.777							
Year company exist	.629							
Organisational culture	.495					.329		.475
Level of responsibility diminish	.453			.443				
Uncertain goal	.420	.749						
Desire to change job	.352	-.740						
Fear of job loss		.698						
Desire to start business		-.616						
Lack of technical skill		-.583					.362	
Educational level		.512	.339					
Political pressure	-.356		.843					
Politics in organisation			.795					
Poor communication			.680					
Dislike for construction			.499					
Financial limitation		.455	.470		.338		-.365	
Change order		-.388		.781				
Reduction in the level of independence				.756				
Repeating work				.744				
Slack time over		.380		.621		.394		
Hurried implementation of change					.922			
Ineffective leadership			.358		.518			
Fear of loss of freedom						.854		
Family pressure						.595	-.361	
Fear of loss of status		.429			.429	.484		
Low trust in leadership					.366		.713	
Not consulted before taking decision							.482	
Environmental culture	.361						.429	.425
Discrimination								.663
Poor allocation of resources	.346							.614

➤ *Evaluation of the Relationship Between Motivation, Resistance and Productivity*

Regression analysis was conducted to examine the relationship among motivation, resistance and productivity.

The average factor scores derived from Exploratory Factor Analysis discussed earlier were used to develop the model. The results of the analysis are presented in Table 9 as the correlation matrix of these variables.

Table 9 Correlation of Motivation, Resistance and Productivity

		Productivity	Resistance Factors	Motivating Factors
Pearson Correlation	Productivity	1.000	.071	.897
	Resistance factors	.071	1.000	.765
	Motivating factors	.897	.765	1.000
Significant (1-tailed)	Productivity		.446	.051
	Resistance factors	.446		.117
	Motivating factors	.051	.117	
N	Productivity	16	6	4
	Resistance factors	6	6	4
	Motivating factors	4	4	4

The correlation results show a strong link between productivity and motivation with $r = .889$. Productivity and resistance, however, have only a weak positive link with $r = .071$. Table 10 presents the model summary. with an R^2 of 1.00, the model explains 100% of the variance in productivity. This means that motivation and resistance jointly account for all the variation in productivity levels.

The result confirms that motivation is key to improving productivity and reducing resistance. This is no longer debatable, as stakeholders in the industry are already aware of it. The focus should now shift from establishing its existence to determining how best to apply it in practice.

Table 10 Model Summary of Motivation, Resistance and Productivity

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	1.000 ^a	1.000	1.000	.0000000

a. Predictors: (Constant), Motivating Factors, Resistance Factors

b. Dependent Variable: Productivity

Table 11 presents the standardised beta coefficients, which indicate the contribution of each independent variable to the model. The beta value for motivation is 2.034 while that of resistance is -1.485.

This result shows that motivation makes the highest contribution to explaining productivity. The inference that can be drawn from the result is that if motivation is encouraged in work setting, it is sufficient to weaken the effect of resistance, thereby leading to increased productivity.

The un-standardized B coefficients from the same table show a constant of -1.694, 0.907 for motivation and -0.425 for resistance. This produces the regression equation:

$$\text{Productivity} = -1.694 + 0.907(b_1) - 0.425(b_2)$$

The equation further emphasizes the importance of motivation in driving productivity. If both motivation and resistance were zero, which is practically unlikely, the model predicts negative productivity. This aligns with existing literature which states that organizational change without motivation is not achievable.

It also suggests that in the absence of motivation, resistance is likely to increase, further compounding low productivity.

Table 11 Coefficient Values of Motivation and Resistance for Model Equation

Model		Unstandardized Coefficients		Standardized Coefficient	T	Sig.	95% Confidence Interval for B		Correlation			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound		Partial	Part	Tolerance	VIF
1	Constant	-1.694	.000		-	-	-1.694	-1.694					
	Resistance factors	-.425	.000	-1.485	-	-	-.425	-.425	.071	-1.000	-.956	.414	2.415
	Motivating Factors	.907	.000	2.034	-	-	.907	.907	.897	1.000	1.000	.414	2.415

a. Dependent Variable: Productivity

V. CONCLUSION

The regression model for the linkages between motivation, resistance and productivity as derived from this study is $Y = -1.694 + 0.907(b_1) - 0.425(b_2)$. This affirms that motivation exerts a high influence on productivity, while resistance has low influence. The study shows that resistance to change is not spontaneous, it is often triggered by authority. To reduce resistance during organizational change, workers' personal interests must be protected through adequate motivational incentives. The strong positive association between motivation and productivity also corresponds with Ohm's Law. Just as potential difference is proportional to current, productivity in this study is proportional to motivation. This supports the proposed model: Productivity = Motivation x Resistance, which predicts productivity based on levels of motivation and resistance.

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