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Impact of small and medium enterprises on employment generation in Kaduna State Nigeria

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Abstract

Aim/objectives: To examine the impact small and medium enterprises have on employment generation in Kaduna state, Nigeria and devise new ways in boosting employment generation by enterprises. **Methods/Statistical analysis:** Primary data is utilised with the help of a questionnaire; a survey is carried out from 5 selected SMEs having a sample size of 1,000 respondents with 200 respondents in each of the 5 selected SMEs. The variables in concerned were analysed using the Kaiser Varimax Rotation for factor analysis to show the correlation and level of significance exhibited. The SPSS software version 20 was used for this purpose. **Findings:** Findings in the study showed that there are disparities in the employment generation trends among the selected SMEs which are as a result of inequity in finance, policy discontinuity, insecurity, lack of awareness, ineffective market linkages, among others. The correlation matrix shows that the variables are seen to correlate at the minimum significance level thus proving our hypothesis of how significant the impact SMEs have on employment generation. Also the extraction values of all the variables are quite high indicating that they are good extraction values and as the acceptable cumulative % value is 60%, our eight variables used have been reduced to four factors which explain our total variance at a cumulative % of 69%; this clearly shown that 69% of the variance is explained by four (4) distinct factors. The result however showed that all the variables exhibit good relationship among each other which also implies that they have great impact on employment generation as their factor loading is very high. **Novelty/Applications:** Findings in the study will fill the gap in the literature of employment generation by small and medium enterprises and its outcome will pave way in facilitating new models in bolstering employment generation.

Keywords: Employment generation; Kaduna; Nigeria; small and medium enterprises

1 Introduction

Globally, it is evidently proven that the small and medium enterprise (SME) sector is an indispensable sector of economic growth and development. Most of the job opportunities, creation of new products and overall performance of an economy is said to be attributed to the SME sector. The challenges of SME development and employment generation are very important in today's government economic development efforts. The government of today has been making concerted efforts in ensuring the business environment is favourable for the private sector to create many jobs and this is one of the best medium in which dividends of democracy can be transferred to citizens as well reduce the challenges of insecurity and unemployment in the nation. The SMEs and entrepreneurs in general should be encouraged to drive the process of job creation as they are recognised globally as aggregate generators of employment. Entrepreneurship programmes or projects are undertaken by every government of a nation which assists its citizens to explore and achieve meaningful employment opportunities. For instance in America; the federal tax act in (1) was established to benefit mutually the domestic manufacturers, multinational corporations and also the agricultural and energy sectors. This was done to provide employment to its citizens. In Britain also, almost 70 percent of jobs created in the country are accounted for by small firms.

Employment generation as the name implies means jobs created to respond to some sort of situation. Conceptually, it's the proactive opposite of unemployment. In the practical aspect, industries and organisations employ more workers only when it's necessary for them to do so with the aim of satisfying the demand for their products or services or when they believe they can do the required work. Most importantly they strive to minimise cost in having the work done. However, government can stimulate employment generation when it invests in projects that improve or create new services.

In most economies, the small and medium enterprises (SMEs) are considered to be the aggregate generators of employment and this is very significant in achieving the goals and objectives of the economy which includes bridging the gap between the rural and urban areas, reducing poverty and creating jobs to the teeming youths. It was highlighted by Mukhtar in (2) that Entrepreneurship has been recognised as an important Economic activity that is involved in providing unique product and process of doing things. It is also referred to as an act of being an entrepreneur who has been playing the role of a poverty alleviation tool, wealth creation, employment generation among others. Chosniel et al. in their article (3) affirmed that both the developing and developed nations agree to the fact of the role and importance SMEs play and have in stimulating growth, generating employment, and creating social cohesion. Moreover, interest in SMEs seems to have been restored in the face of globalisation, which is increasingly becoming an influential force in world trade. As highlighted by Katua (4) that in most economies, SMEs occupy the greatest proportion of enterprises. Also in most economies there exist a total of over 90% of SMEs and are identified with accounting for a larger share of industrial production and exports as well generating the highest number of employments. Muritala et al. (5) were in the argument that the expansion of SMEs boosts employment generation much more than large firms because SMEs are more labour intensive thereby subsidising SMEs may depict a poverty alleviation tool. Kareem in (6) asserted that the fundamental idea behind engaging in entrepreneurship (or business) is to make profit, and at the same time provide employment opportunities to both the business operators and the public in general. It is a tool for sustainable economy when operating under a favourable environment which is to be provided by individuals and the government. However, today it is unfortunate to state that entrepreneurship which is meant to directly provide solution to employment problems end up generating more underemployment which is a hindrance to the attainment of a sustainable economic growth and development in Nigeria. Going by the scheme of best investment plans, Suresh in (7) stated that small business is where one can start with low investment and later it grows to a large one. He also stated that even though a business can be initiated and started up anywhere, some business ideas can be started only in towns and cities which results to employment generation. There are however some few small business ideas that can be initiated and executed in small villages and towns which are indeed very profitable too. This fact still remains obvious and true that with increasing expenditures and standard of living, people definitely need to be self employed so as to sustain their current standard of living and eventually grow the business.

In (8) Shettima asserted that a well nurtured and structured SME sector contributes significantly to employment generation, wealth creation, poverty reduction and sustainable economic growth and development. Various attempts have been made by successive Governments to stimulate employment generation which have later been neglected, and as a result of that the recent government has made some efforts by launching some Entrepreneurship programmes which is been monitored by some development agencies and it has taken the responsibility of facilitating, reviving and stimulating of employment generation which will lead to growth and development of the nation. Ajuwon, Ikhida & Akotey in (9) confirmed that the job creation ability of small firms actually lies in the young and start-up businesses. They also argued that not only job creation that matters to economic development but the quality of job being created by the SMEs.

This study is actually a new study as hypotheses have been formulated to test the significance level of small and medium enterprises on employment generation in Kaduna state of Nigeria. The hypotheses are stated as;

1. **H0:** SMEs have no significant impact on employment generation in Kaduna state.
2. **H1:** SMEs have significant impact on employment generation in Kaduna state.

In the course of the study some research gaps were identified which needs to be bridged so as to prove our alternate hypothesis which states that “SMEs have significant impact on employment generation in Kaduna state”. These research gaps included; examine the skills gap in SMEs on employment generation, slow performance of SMEs, sustainability of Job creation programmes, knowledge gap among the stakeholders and users, lack of updated Innovation and strategies used to boost employment generation and no usability of available solution to SME challenges. This present study aims at examining the correlation between the dependent and independent variables, ascertain the significance level of the variables in concern and identify new models in increasing employment generation by enterprises.

2 Methodology

This study utilised the primary method of data collection in which the analysis of results was solely based on such data. A survey was conducted on some 5 selected SMEs from the manufacturing sector of Kaduna state namely the Arts & crafts, Furniture, Textile, Plastics and Pharmaceutical industries. The study adopted the cluster area sampling method which is a special type of sampling whereby samples are grouped and clustered on the basis of geographical locations. It is usually adopted when the research focuses on the population within a specific geographical area, like country, State, county and city blocks. The reason for adopting this sampling method is that though the sampling frame for the various clusters of Kaduna state is available and was obtained from the National population commission office, there is no available frame containing the list of micro, small and medium enterprises in the state. Hence in this situation, area sampling is one of the most suitable techniques of data collection. As argued by various scholars, that the underlying practical motivation for using area sampling is the absence of complete and accurate list of the universal elements under study since it does not depend upon the population frame. Moreover, in the cluster sampling, the full list of clusters forms the sampling frame and not the list of individual elements within the population.

Sample sizes of 1,000 respondents whom are basically the owners and staff of the SMEs with 200 in each of the 5 selected SMEs were used. The primary data was obtained through information gotten from questionnaires distributed to the entrepreneurs in the selected SMEs and this informed the variables used for the analysis where the dependent variable is employment generation (EG), while the independent variables are; unemployment reduction (**unempreduc**), market expansion (**mktxp**), government intervention (**govtintv**), public-private effort (**ppeffort**), education (**edu**), unemployed (**unemploy**), capital source (**capsourc**), location (**loc**). The study used the Kaiser Varimax Rotation for factor analysis in the SPSS software to analyse the primary data obtained, which ascertains the correlation and level of significance between the variables concerned.

3 Results and Discussion

Out of the 1,000 copies of the questionnaire distributed, a total of 732 were correctly filled and returned from the different five SMEs selected which were used for the analysis. Using the Principal component analysis, what is done is simply to analyse the variables or items and see if they can be reduced into fewer components or factors which explains the relationship among the variables. However what is expected in running the factor analysis is that all these variables are correlated with each other and at the minimum significance level. If we look at the results below, where there is ‘**1.000**’ it means a variable correlate with each other forming a diagonal line. Specifically the left half diagonal shows how the different variables correlate with each other on the satisfaction life scale as correlation is said to be significant at the **0.01** level. Table 1 below shows the correlation matrix of the identified variables.

Table 1. Correlation Matrix:

	unempreduc	mktxp	govtintv	ppeffort	edu	nuemploy	capsourc	Loc
unempreduc	1.000	.794	.248	.097	-.089	-.076	.007	-.042
mktxp	.794	1.000	.329	.137	-.093	.011	.001	-.045
govtintv	.248	.329	1.000	.413	-.064	.013	-.005	.062
ppeffort	.097	.137	.413	1.000	.036	.068	.016	.080
edu	-.089	-.093	-.064	.036	1.000	.000	.141	-.056
nuemploy	-.076	.011	.013	.068	.000	1.000	-.008	.157
capsourc	.007	.001	-.005	.016	.141	-.008	1.000	-.055
loc	-.042	-.045	.062	.080	-.056	.157	-.055	1.000

Determinant = .247

3.1 Correlation Matrix

In the correlation matrix table above, figures with negative value are said to be weakly correlated while those with positive or high value are strongly correlated with each other. For instance market expansion (**mktexp**) is weakly correlated with education (**edu**) and location (**loc**), education (**edu**) is fairly correlated with **ppeffort** while **govtintv** correlates fine with **ppeffort**. However the most important thing is to look at our determinant value which is .247 and what is expected is that it should be greater than **0.00001** so with this we are very much safe.

Another important point the researcher looked into was the issue of “**multicollinearity**” where the shared variance of two variables is high and explaining the same thing. In factor analysis the cutoff in considering multicollinearity is **0.8**. Any value above 0.8 and below -0.8 is considered as multicollinearity and if found between two variables one should be eliminated or flagged off. And as we can see in our results we don’t have any value above 0.8 or below -0.8 so we are free from the problem of multicollinearity and our variables are said to correlate with each other.

3.2 Descriptive statistics

In this section we have the mean and standard deviation of all the variables and the sample size is 732. Normally the sample size is expected to be above 200 samples which is acceptable as our sample used is 732 and below that is said to be poor. Table 2 below exhibits the results.

Table 2. Descriptive Statistics

	Mean	Std. Deviation	Analysis N
unempreduc	1.11	.387	732
mktexp	1.18	.547	732
govtintv	1.16	.522	732
ppeffort	1.48	.693	732
edu	2.75	1.033	732
numemployee	2.15	.567	732
capsource	1.76	1.176	732
location	1.23	.421	732

3.3 KMO & Bartlett's test of Sphericity

The KMO is expected to be a value of 0.6 but if a value of 0.5 is obtained, it’s also acceptable.

Our result shows a value of **0.547** which is an acceptable value. And for the significance (p-value) it should be a value below 0.001. This is shown in Table 3 below;

Table 3. KMO & Bartlett’s test of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.547
Approx. Chi-Square	1017.706
Bartlett’s Test of Sphericity df	28
Sig.	0.00

As shown in Table 3 above, the Bartlett test result shows that the variables are statistically significant with a value of (0.00) as it is less than 0.001. This however implies that we therefore reject the null hypothesis (**H₀**) and accept the alternative hypothesis (**H₁**) and then conclude that **SMEs have significant impact on employment generation in Kaduna State**. What the Bartlett test does is that it actually tests if all the variables in the left half diagonal of the correlation matrix table are correlated significantly with each other.

3.4 Communalities

The communalities Table 4 below shows the extraction values which tells us the proportion of variance of which variable that can be explained by the factors. If the values are high it shows or means they are good extraction values.

Table 4. Communalities		
	Initial	Extraction
unempreduc	1.000	.875
Mktexp	1.000	.889
Govtintv	1.000	.690
Ppeffort	1.000	.758
Edu	1.000	.546
numemployee	1.000	.690
capsource	1.000	.593
Location	1.000	.528
Extraction Method: Principal Component Analysis.		

As shown in Table 4 above, the extraction values of all the variables are quite high indicating that they are good extraction values. The communalities table also shows or indicates the amount of variance each variable accounts for. For instance as we can see 87% of the variance is accounted for or explained by “**unempreduc**” and 52% of the variance is accounted for or explained by “**location**”.

3.5 Total Variance explained

This section determines or shows how many components to extract and which of the components to be retained using the Eigen value of 1. All factors with Eigen value greater than 1 are retained while those below Eigen value of 1 are removed. Table 5 below shows the total variance explained;

Table 5. Total Variance explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Vari- ance	Cumulative %	Total	% of Vari- ance	Cumulative %	Total	% of Vari- ance	Cumulative %
1	2.081	26.012	26.012	2.081	26.012	26.012	1.837	22.961	22.961
2	1.309	16.358	42.37	1.309	16.358	42.37	1.415	17.682	40.643
3	1.178	14.72	57.09	1.178	14.72	57.09	1.161	14.511	55.154
4	1.002	12.53	69.619	1.002	12.53	69.619	1.157	14.465	69.619
5	0.854	10.679	80.298						
6	0.826	10.327	90.626						
7	0.553	6.916	97.542						
8	0.197	2.458	100						

Extraction Method: Principal Component Analysis.

In this section (Table 5) above, we look at the cumulative percentage which shows the factors that explain the total variance. The acceptable cumulative % value is 60% and as we can see we have reduced our eight variables to four factors which explain our total variance at a cumulative % of 69%. It is also important to note that the sum of the Eigen values (1st total column) is equal to the number of variables we have. Also if we divide each of the Eigen value under (Extraction sum of squared loadings) by the number of variables, we will arrive at the % of variance and its total is actually the % of variance explained by the components. i.e from our results, it's clearly shown that 69% of the variance is explained by four (4) distinct factors.

3.6 Scree plot

This section shows the components that are extracted on the plot. Basically it shows the components which are above the Eigen value of 1 and all other potential factors below that. From our result we can see that there are four (4) components having Eigen

value greater than 1 and this indicates that there are four (4) distinct constructs instead of eight (8) items which explains 69% of the total variance. Figure 1 below depicts the result;

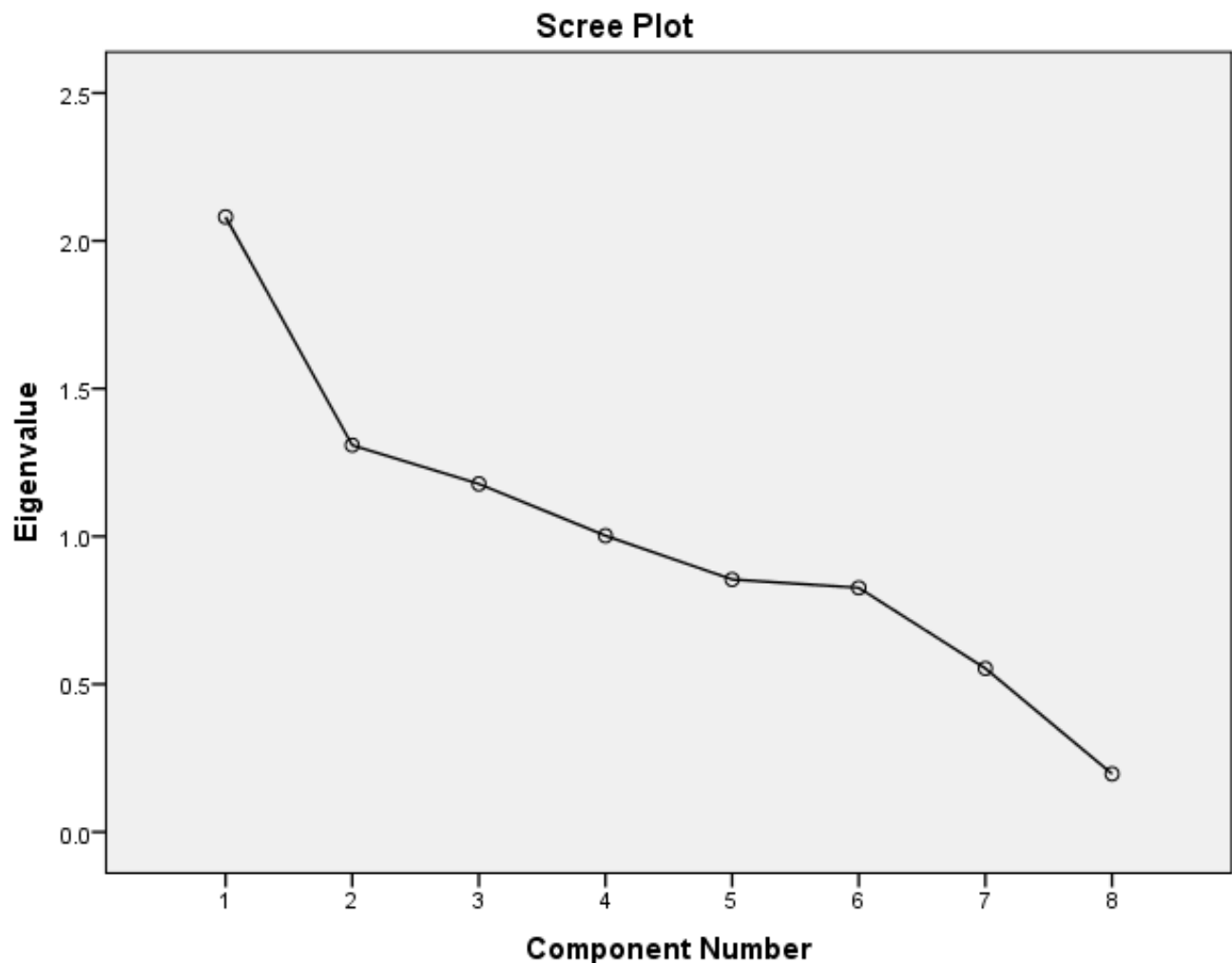


Fig 1. Scree Plot

3.7 Rotated Component matrix

As shown in Table 6 above, there are four constructs which factor analysis has identified. While running the factor analysis we made use of “sorted by size” and as we can see in the results, in the first component, **mktexp** and **unempreduc** load very well. In component two, **ppefort** and **govtintv** load very well also. In component three, **numemployee** loads very well with **loc** while in the fourth component **capsource** and **edu** load very well. It is important to note that in the course of running the factor analysis we started with the 8 variables we have, and as we run the factor analysis we keep making adjustments on the variables as the result shows. We remove the variables with low factor loadings until we arrive at a satisfactory result. This result however shows that all the variables exhibit good relationships among each other and it also implies that they have great impact on employment generation as their factor loading is very high.

Table 6. Rotated Component Matrix^a

	Component			
	1	2	3	4
Mktexp	.930			
unempreduc	.929			
Ppeffort		.864		
Govtintv		.785		
numemployee			.821	
location			.688	
capsource				.763
edu				.719

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

4 Conclusion

Based on our findings in the study that all the variables in concern are correlated with each other at the minimum significance level, and that all the variables exhibit good relationship among each other; with this we can reject the null hypothesis (H_0) and accept the alternate hypothesis (H_1) and then conclude that **SMEs have significant impact on employment generation in Kaduna State**. In this study to ensure the achievement of our current research objectives we have been able to identify and bridge some research and knowledge gaps that have been existing in previous studies and these gaps includes; knowledge gap on the significance of SMEs on employment generation, knowledge gap on job creation mechanisms by the stake holders (government & entrepreneurs), and research gap on effective models to create new jobs. As we conclude that the small and medium enterprises have significant impact on employment generation in Kaduna state and for it to boost employment generation, the study concludes with the following new models as recommendations;

4.1 Take out to the streets

An entrepreneur is known to be a risk taker and with that to identify new employment opportunities the entrepreneur is expected to take optimum advantage of his immediate environment. The entrepreneur needs to think of how to create a business venture from what is available in his close environment. Setting up a waste disposal firm or a firm which recycles waste such as plastics, scraps among others is a great way of generating employment. Other organisations that can be established to generate employment may include a cleaning services firm, online/e-commerce service firm, fruits processing factories, etc

4.2 Create new schemes and programmes

Creating a new program or scheme will essentially boost the employment opportunities in an enterprise. In point of fact, not anything triggers employment generation in a business than initiating new program or service. A lot of human resources are available with new skills and this will give them the opportunity of getting employed in the enterprise so as to display and make effective use of their new skills.

4.3 Industrialisation-led model

Most of the developing nations espouse this strategy by riveting the surplus labour in prolific employment in the modern industrial sector. This model tends to introduce more employment opportunities by increasing the level of investment and capital formation. Thus, the model considers capital and labour as complementary units of employment generation. The industrialisation-led model lays much prominence on capital goods as a source of generating employment where in the absence of some capital goods such as tools, equipments and machineries it will be very difficult to generate productive employment in enterprises.

4.4 Develop inbound recruitment model

Developing inbound recruitment model simply implies that an enterprise should identify and take advantage of the proficiency of its existing personnel. Once an employee's value proposition has been identified and is known to have a very good skill, this will give room for more employment opportunities for those outside the enterprises which have acquired the same skills. The employee value proposition has to recount with what's unique about the enterprise and the employee needs to articulate who you are, what you do and why you do it.

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