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Women Entrepreneurship, Employment and Income nexus: A Study on Women Entrepreneurs in Dutsin-Ma Town, Katsina State

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Abstract

Women have been participating in economic activities informally through ownership of Small and Medium Enterprises (SMES) with less recognition in the society. This study intends to examine the link among women enterpreneurship, employment and income nexus in Dutsin-Ma town of Katsina State. The data used in the study were collected among 100 women entrepreneurs in Dutsin-Ma through self-designed questionnaire based on systematic probability sampling. ANCOVA regression is applied based on the Keynesian theory of income, output and employment. Based on the regression results, it reveals that women entrepreneurs in Dutsin-Ma town of Katsina State are dominantly married and Muslim, possessing non-formal education with more than 10 person family size. The result indicated that the mean daily earning of average woman entrepreneur in Dutsin-Ma town is ₦50 increases daily by ₦10 with employment of an additional worker. Also, daily earning of average woman entrepreneur increases by ₦0.25 as entrepreneurial skills increases with an additional training. Lastly, the study recommends for the government commitment to motivate women entrepreneurs on more employment of women workers by relieving their cost of production via tax reduction.

Keywords: Employment, Entrepreneurship, Income and Women Entrepreneurs.

1. Introduction

Empowering women is one of the cardinal goals of the current Sustainable Development Goals (SDGs), and over the years women have been participating in informal economic activities by ownership of Small and Medium Enterprises (SMES). Many stakeholders, researchers and individuals have developed interest towards development of entrepreneurship due to major roles it plays in job creation, financial opportunity, job security and innovation among women (Elam, Hughes, Guerrero, Hill & Nawangpalupi, 2021). Therefore, giving women entrepreneurs access to stable capital, education, political will and social relevance will help them grow and realize their potentials which will definitely promote their level of confidence and possibility of success (Martino, 2020).

In the period of unrest, women entrepreneurs have over the years confirm themselves being firm and unfailing. They have been shouldering the largest share of family burden and pains particularly on matters affecting themselves or children. They equally, encourage other women to join enterprenuership and employ some in their efforts to impact the economy positively (Elam, Hughes, Guerrero, Hill & Nawangpalupi, 2021). Looking at the significance of women entrepreneurs, the United Nations' promise of "leave no one behind" is being fulfilled with its recent struggles of promoting the welfare of women by upgrading their entire status-quo (Vanita & Jeemol, 2016).

Initially, male-based businesses were regarded as common business model globally until late 18th century when women-centered businesses were recognized on small or sole basis (Vanita & Jeemol, 2016). They further revealed that entrepreneurship is a gender issue rooted in family and that women have certain roles to perform in establishing and running enterprises. Organization for Economic Co-operation and Development [OECD] (2004), argued that based on the fact that women enterprises secure their owners and others with jobs amidst the periods of vulnerability, they are worth investigating and supporting.

Though in Africa particularly the West Africa, women business initiative is seen as inherent naturally. Carranza, Dhaka and Love (2018), posited that women naturally prefer salary-based job than self-employment but pushed into entrepreneurship by necessities like unemployment or poor family income. Globally, there exists a close to 300 million active women businesses whose figure has been reported of being increased on daily basis (Elam *et al*., 2020; Martino, 2020). In America, it has been raising at more than double rate. In fact, 40% of the enterprises are women-owned operate on small scale basis with about 4 per cent revenue rate to the governments (Martino, 2020).

Distributions of women entrepreneurship globally vary across continents and nations. In Europe, women possess the least rate of enterprise ownership at 5.7 per cent against its world average of 11%. This poor figure is due to the job availability and state welfare package of unemployment (Elam et al., 2021). In Latin America and Caribbean, female entrepreneurship is larger and most effective. In fact, women enterprises participate among the male-dominating enterprises but with fewer jobs provision capacity (Elam et al., 2021; Chavern & Mckernan Jnr, n.d.). Gomes, Santana, Aroujo and Martins (2014), reported that in Brazil in particular, the rate of female-based businesses was at 52.2% exceeds that of male counterparts at

47.8%. In Central and East Asia, particularly in Kazakhstan 1 in each 5 female businesses is in its early stage, while in India female business ownership is at 2.6 per cent which is far below the rate in Europe. Middle East and Africa, recorded greatest ownership and development of female owned entrepreneurship globally. With highest in Africa, particularly Angola where over half of business enterprises are owned and ran by female (Elam et al., 2021). Morocco, Saudi Arabia, Oman and UAE recorded the least rate of female enterprise ownership in the region.

With all the progresses of female business ownership and development in Africa, Nigerian women enterprises are not given formal recognitions by the authority with respect to their roles in the provision of revenues and employment as well as injections to the circular flow of income. Also, Brush and Cooper (2012) reported that studies on women entrepreneurship carries only 10% of the entire researches in the area. Empirical researches were conducted on women entrepreneurship in different places and location using divergent variables (Birsan et al., 2022; Bullough et al., 2022; Edman & Punkari, 2021; Gomes et al., 2014). With the good effort of the previous studies in Nigeria, none of them to the knowledge of this study investigated the contribution of women entrepreneurship on employment. Against this back drop, this study is undertaken to investigate the link between women entrepreneurship, employment and income among women entrepreneurs in Dutsin-Ma town, Katsina State. The study is a survey designed in four sections i.e beside section one, section two is literature review, section three is methodology, section four is result and discussions while section five is conclusion and policy recommendations.

2. Literature Review

2.1 Conceptual Framework

Business establishment and its growth are good for industrial leadership, personal wealth creation as well as genesis of employment generation, creativity and growth (Elam et al., 2021). The larger the number of women enterprises, the higher they are empowered, the higher they will participate actively on matters related to themselves and their children both from economic and social aspects (Bathily, Nowak, Sprechmann & Bidinich, 2022). Entrepreneurship and empowerment are twin social system that guarantees power to the people on matters attached to them (Mandal, 2013). The idea of entrepreneurship as the most important and co-coordinating agent of all other factors of production is credited to the work of Leon Walras in his publication titled the “Theory of General Equilibrium” which was later popularized by Schumpeter after attaching some special features to it in his work titled "Theory of Innovation and economic Development". According to Pandey (2016), entrepreneurship is seen as an economic growth propeller that helps in transforming the nation to promising state of development.

Women entrepreneurs are female business owners, who choose for their own account, carry out organizational and managerial tasks on their resources and take all the financial risks in it, hoping to be successful by making profit (Huis, Hansen, Otten & Lensink, 2017; Morshed & Haque, 2015). Women entrepreneurship can equally be conceptualized as an activity that involves women engagement in income generation venture in order to make themselves relevant, take responsibility of their children, employ other women workers and facilitate the growth of modern economy (Bathily *et al*., 2022.). Pandey (2016) further identified the following forms of women enterpreneurs: (a) Natural Entrepreneurs consider business engagement as a profession that requires some skills and confidence in its practice independently. (b) General entrepreneurs consider business engagement as a passion that required certain degree of motivation via special training. (c) Forced entrepreneurs consider doing business as a do-or-die affair that is being compelled by hard situations like death of father, husband or guidance which shifts responsibility on women. (d) Lastly, Benami entrepreneurs consider acting in business as façade for venture of husbands and brothers.

Based on the circular flow hypothesis, when GDP is produced, income is equally created and one man's production is another person's income (Jhingan, 2009; O'Sullivan, Sheffrin & Perez, 2008). Income remains the flip face of our macroeconomic coin. Income is viewed as money received in form of wages or salary, rents, interests and profits. It can also be seen as money collected by individual owners of factors regularly for their factor services, as a means of living. Therefore, all forms of money received by individual women entrepreneurs from their daily business operation are income. Income based on its level is generally classified into the following three types:

(a) National Income is conceptualized as the total money generated and earned by a nation's residents both internally or outside through their contribution in the production process (O'Sullivan et al., 2008). It can also be defined as all income received by factors owners including wages for labour, rents for land, interest for capital and profit for enterpreneurship (Tucker, 2008). Anyanwuocha (2013) conceptualized national income as the monetary value of all goods and services produced in the nation by both residents and non-residents during a specified time, usually a year.

(b) Personal Income is conceptualized as all the money income received directly by households in exchange of their services in the production process (O'Sullivan, Sheffrin& Perez, 2008). Personal income may include all the income received both earned and unearned (Anne Arundel Community College, [AACC], 2012). According to Tucker (2008), Personal Income is the money taken by households from their services available for their consumption, savings and payment of personal income taxes. Also, earnings of people in money term for their partaking in the production of goods or services by themselves or their properties (Anyanwuocha, 2013).

(c) Disposable Income is the residual income retained by the households after settling for their income taxes (O'Sullivan et al., 2008). While (AACC, 2012) defined disposable income as residual income left to the households after personal income taxes. Tucker (2008) defined disposable income as the amount of money currently available at the disposal of households for consumption and savings after settling their income taxes. It can also be seen as the total earnings left to the earners after payment of their personal taxes (Anyanwuocha, 2013).

Employment on the other hand is defined as the number of able and capable individual workers who hold full-time paid job (Lipsey, Steiner, Purvis & Courant, 1990). It can also be defined as a condition in which factors of production particularly the labour is actively engaged in the production process to earn its means of living.

2.2 Theoretical Framework

The Keynesian theory of employment is also called theory of income and output (Garba, Ahmad, Dauda & Mijinyawa, 2022). John Maynard Keynes was the first economist to come up with a systematic explanation of employment, interest and money around 1936. According to this theory, employment and spending i.e effective demand are directly related. Effective demand reflects spending of income or flow of public expenditure which do determines income flows because one's spending reflects another's earning. And same point of effective demand as it reflects equilibrium level of employment also reflects the equilibrium level of national income and output (Jhingan, 2009).

According to Keynes, spending, employment, income and output equals each other. Lastly, he considered employment to be a function of income. Thus:

$$Employment = f(Income) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2.1)$$

Since Keynes assumes spending, employment, income and output equals each other, the above equation may be rewritten thus:

$$Income = f(Employment) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2.2)$$

Also, above equation may encompass addition of spending and other relevant regressors, women empowerment, and financial inclusion (proxied by ownership of bank account) to depict relationship in the context of this study as below:

$$Income = f(Employment, Spending, Women\ Empowerment, Financial\ Inclusion) .. (2.3)$$

2.3 Empirical Literature Review

A number of studies were carried out on women entrepreneurship in relation to income, employment and other variables; Birsan, Ghinea, Vintila and State (2022), studied female entrepreneurship model: A sustainable solution for crisis resilience. Specifically, it measured the effect of Covid-19 on the growth of entrepreneurial businesses of women. The study utilized primary data collected using questionnaire administered among 320 respondents with above 65% female entrepreneurs. Based on its findings, it revealed that dominantly, 85% of the respondents conducted adjustments during their pre-pandemic periods.

Bullough, Guelich, Monolova and Schjoedt (2022), carried out a review study on women entrepreneurship and culture. The study specifically reviewed studies carried out on issues related to aspects connected with gender and culture. Based on its findings, it arranged studies interconnected with the subject matter i.e gender role expectations and identities, societal cultural dimensions and entrepreneurial environment are strongly linked among one another.

Huang, Li, Wang and Li (2022), conducted a study on innovativeness and entrepreneurial performance of female entrepreneurs. Specifically, to examine the link existing between women entrepreneurs' innovativeness and entrepreneurial performance at lower level. The study utilized primary data collected among a sample of 558 female Chinese enterprises. Based on the findings, it reveals that women entrepreneurial innovativeness has positive and significant link to their performance. Also, recognition of opportunity and development, and development of psychological capital spur positive effects with women entrepreneurial innovativeness and entrepreneurs' performance. Lastly, gender spurs negative effect on opportunity recognition and development.

Edman and Punkari (2021) studied the role of female entrepreneurs in changing society. The study utilized primary data collected via an interview among the respondents. The study revealed that in the past those women engaged in such businesses experienced serious hardships and rejection. Also, their businesses in relation to social swings do determined by forces like government institutions, attitude and wealth. Lastly, the study inferred that the role of digital technology eases hardships for women businesses. Therefore, doing their businesses along their house chaos is no longer an issue today.

Elam, Hughes, Guerrero, Hill and Nawangpalupi (2021) carried out an empirical survey on women entrepreneurship. The study is purely primary in nature and applied descriptive statistical tools for data analysis. Based on its findings, it reveals that female entrepreneurs are 20% likelihood to close down business operation in the period of economic down turns and pandemic. Also, women entrepreneurs indicated greater resilience and ability to cope with challenges than their male counterparts.

Carranza, Dhaka and Love (2018), investigated the role of female entrepreneurship and how they look different based on economic and non-economic turn out, explanation on the major drivers of the differences as well as policies that can effectively resolves the differences. Lastly, the study discussed existing gaps in the literature and way forward. The study found out that women entrepreneurship especially small and micro business helped the women to address under family financial difficulty and suggested for government effort to establish enabling environment can facilitate women businesses.

Gomes, Santana, Aroujo and Martins (2014), studied female entrepreneurship based on quantitative and empirical data collected among women entrepreneurs' profile, the study surveyed the available literature on female-owned enterprises to logically find out the degree of theoretical deepens achieved in the area. Based on its findings, it reveals that literature merely points out little segments of the women-based enterprise population and failed to propose and apply workable theories to establish interconnections of the variables.

3. Methodology

The study on women entrepreneurship, employment and income nexus is a survey which systematically sampled respondents among the women entrepreneurs in Dutsin-Ma town, Katsina State. The study covers 150 women entrepreneurs, 100 businesses are sampled according to Yamane (1967) and self-designed questionnaire is administered according to Cluster sampling technique.

Model specification

To achieve the goal of this study, Analysis of Covariance (ANCOVA) model is proposed. ANCOVA model being is an extension of ANOVA provides a framework for statistically manipulating the effects of dummy variables known as covariates in a model comprising numerical and non-numerical regressors (Gujarati, 2013). Thus; based on the Keynesian theory of Income, Output and Employment, the model is thus specified:

$$Y_i = \beta_0 + \beta_2 D_{2i} + \beta_3 D_{3i} + \beta_4 D_{4i} + \beta_4 X_{1i} + \beta_5 X_{2i} + \mu_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.1)$$

Where; Y_i = Average daily earning of individual women entrepreneur,

X_{1i}= Daily spending of individual women entrepreneur,

X_{2i} = Number of workers employs by individual women entrepreneur per operation,

X_{3i}= Number of years women spent in operation,

D_{2i} = 1, if women acquired entrepreneurial skills,

0, if otherwise,

D_{3i} = 1, if women possess a bank account,

0, if otherwise,

D_{4i} = 1, if women acquired a formal education,

0, if otherwise,

The above model can be empirically re-specified, thus;

$$Income_i = \beta_0 + \beta_2 D_{2i} + \beta_3 D_{3i} + \beta_4 \mathrm{NForm}_{1i} + \beta_4 \mathrm{Spend}_{2i} + \beta_5 \mathrm{Employ}_{3i} + \mu_i \ldots (3.2)$$

4. Result and Discussions

Table 1. Socio-economic Characteristics of Women Entrepreneurs

S/n	Item	frequency	Percentage	Cum. Percentage
1	Age			
	<18	01	01.00	01.00
	18-60	99	99.00	99.00
	>60	00	00.00	100.00
	Total	100	100.00	
2	Edu			
	Nform	96	96.00	96.00
	O Level	04	04.00	100.00
	A Level	00	00.00	100.00
	Others	00	00.00	100.00
	Total	100	100.00	
3	Religion			
	Islam	100	100.00	100.00
	Christianity	00	00.00	100.00
	Other	00	00.00	100.00
	Total	100	100.00	
4	M. Status			
	Married	69	69.00	69.00
	Divorce	17	17.00	86.00
	Widow	12	12.00	98.00
	Single	02	02.00	100.00
	Total	100	100.00	
5	Hsize			
	<5	01	01.19	01.19
	5-10	36	42.86	44.05
	>10	47	55.95	100.00
	Total	84	100.00	
6	Location			
	Y/Dole	24	24.00	24.00
	Tsamiya	16	16.00	40.00
	D/Karfe	32	32.00	72.00
	H/Gada	28	28.00	100.00
	Total	100	100.00	
7	Business Type			

Masa	16	16.00	16.00
Fried S/Potato	28	28.00	44.00
Fura	32	32.00	76.00
White Rice &	16	16.00	92.00
Beans	01	01.00	93.00
Suya Milk & Zobo	01	01.00	94.00
Groundnut Oil	01	01.00	95.00
Millet Drink	01	01.00	96.00
Beans Cake	01	01.00	97.00
Moi_Moi	01	01.00	98.00
Grinding	01	01.00	99.00
Kayan Miya	01	01.00	100.00
Awara	100	100.00	
Total			

Source: Researchers' Field Survey, 2022.

Table 1 reveals the socio-economic profile of women entrepreneurs in Dutsin-Ma town of Katsina State. From the table, it can be seen that among the women entrepreneurs participated in the survey, 96% do not possess formal education, only 4 per cent of the respondents possess secondary education, one of the participated women entrepreneurs have qualification above secondary level and other education. With respect to the religion, all the women entrepreneurs participated are Muslim. The distribution of marital status shows that 69% of the women entrepreneurs participated are married, 17% are divorcee, 12% are widow with only 2 per cent who are single. With regard to household size, it portrays that 1 per cent has family of less than 5, while 47% have a family size above 10. The distribution of location shows that 24% of the women entrepreneurs participated are in Yaron Dole, 16% are in Tsamiya, 32% are in Dogon Karfe while 28% are in Hayin Gada. Lastly, 16% of the participated women entrepreneurs sell *Masa*, 28% sell fried sweet potato, 32% sell *Fura*, 16% sell white rice and beans while those who sell soya milk & zobo, groundnut oil, millet drink, beans cake, *moi-moi*, grinding, *kayan miya* and *Awara*, each assumes 1 per cent.

Table 2: Descriptive Statistics Result

Variable	Obs.	Mean	Std. Dev.	Min	Max
NFORM	100	1.04	0.196	1	2
BEXPER	100	2.98	0.141	2	3
INCOME	100	2.09	1.215	1	4
NOWORK	63	1.71	0.851	1	3
SPENDING	63	2.25	0.439	2	3
FINANCE	100	0.69	0.465	0	1
ENTSKILLS	100	0.54	0.501	0	1

Source: Researchers' Estimation Using STATA 14.0, 2023.

Table 2 reveals the descriptive statistics of variables used in the model. The table indicates that all variables with exception of employment and spending have 100 observations. The mean value of average woman year of formal education is 1, deviation of 0.196 with minimum and maximum values of 1 and 2; The mean value of business experience is 2.98 years, deviation of 0.141 with minimum and maximum values of 2 and 3; The mean value of average woman earning is ₦2.09, deviation of 1.215 with minimum and maximum values of 1 and 4; The mean value of woman employment is 1.71 workers, deviation of 0.851 with minimum and maximum values of 1 and 3; The mean value of average woman spending is ₦2.25, deviation of 0.439 with minimum and maximum values of 2 and 3; The mean value of average women being financially inclusive is 0.69, deviation of 0.465 with minimum and maximum values of 0 and 1. Lastly, the mean value of average woman acquisition of entrepreneurial training is 0.54, deviation of 0.501 with minimum and maximum values of 0 and 1.

Table 3: Correlation Matrix of Variables

	INCOME	NOWORK	ENTSKILLS	FINANCE	NFORM	SPENDING
INCOME	1.0000					
NOWORK	0.7648	1.0000				
ENTSKILLS	-0.2338	-0.3985	1.0000			
FINANCE	-0.3187	-0.4367	0.2141	1.0000		
NFORM	-0.1877	-0.1075	-.01515	0.1065	1.0000	
SPENDING	0.6752	0.8890	-0.3997	-0.4738	-0.0741	1.0000

Source: Researchers' Estimation Using STATA 14.0, 2023.

Table 3 reveals correlation between earning and all the explanatory variables used in the study. From the correlation matrix, it can be seen that only employment and spending have a positive and strong relationship with woman earning at 0.7648 and 0.6752 respectively. This of course supports the Apriori expectation. Financial inclusion on the other hand, has the weakest relationship with a value of -0.3187 which is contrary to the theoretical postulation may be due to the fact that majority of the woman entrepreneurs in Dutsin-Ma do not possess commercial bank accounts. The result also, infers that the model does not suffer from Multicolinearity because none of the explanatory variables has a value up to 1.000.

Table 4: ANCOVA Result

Source	Partial SS	d.f	MS	F	Prob>F
Model	48.9717	5	9.7943	17.08	0.0000
SPENDING	33.2252	1	33.2252	57.95	0.0000
NOWORK	10.1662	1	10.1662	17.73	0.0001
ENSKILLS	0.2456	1	0.2456	0.43	0.5154
FINANCE	0.0361	1	0.0361	0.06	0.8028
NFORM	0.7084	1	0.7084	1.24	0.2710
Residual	32.6791	57	0.5733		
TOTAL	81.6508	62	1.3169		
R-Squared = 0.5998			Adj R-Squared = 0.5647		

Source: Researchers' Estimation Using STATA 14.0, 2023.

Table 4 reveals ANCOVA estimated result which shows that 60% variation in the average woman entrepreneurs' daily earning in Dutsin-Ma is explained by changes in spending, employment, business experience, entrepreneurial skills and financial inclusion. Also, only spending and employment are found to be significant each at 1 per cent level.

As the results suggest, the mean daily earning of average woman entrepreneur in Dutsin-Ma town is ₦49.97. All things being equal, as spending of woman entrepreneur increased by ₦1, daily earning goes up by ₦33.22; With increase in employment by 1 additional worker, daily earning goes up by ₦10.17. Also, as entrepreneurial skills of average woman entrepreneur increased by additional training, daily earning goes up by ₦0.25; with opening of a commercial bank account, daily earning goes up by ₦0.04. Lastly, daily earning of average woman entrepreneur goes up by ₦1 with 1 year ownership of additional formal education.

5. Conclusion and Recommendations

The study is a survey that examined the link among women entrepreneurship, employment and income in Dutsin-Ma town of Katsina State. ANCOVA model is applied based on the Keynesian theory of income, output and employment. Based on the empirical findings, it reveals that women enterpreneurs in Dutsin-Ma town of Katsina State are dominantly married and Muslim, possessing non-formal education with more than 10 person family size. From the ANCOVA result indicated that the mean daily earning of average woman entrepreneur in Dutsin-Ma town is ₦49.97 increases daily by ₦10.17 with employment of an additional worker. Also, daily earning of average woman entrepreneur increases by ₦0.25 as women acquired an additional entrepreneurial skills. This finding of the study contradicts the findings of Brush and Cooper (2012).

This study recommends for government commitment towards motivation of women entrepreneurs on more employment of women workers by relieving their cost of production through tax. Carranza, Dhaka and Love (2018) opined that tax reduction may promote women entrepreneurship by reducing the cost of production and increasing women earnings thereby employing more workers.

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