**Can Equalising Educational Endowments Between Men and Women Create More Female Self-Employed Value in Nigeria?**

**Abstract**

This paper empirically investigates if women would be able to create more self-employed value if they had the same educational endowments as men in the unique gender disparity context of Nigeria. The paper uses probit and Blinder-Oaxaca multivariate decomposition models to empirically conduct this analysis in a developing country taking advantage of two rounds of survey data. The analysis confirms that women would be able to create more self-employed value, particularly higher education self-employed value, if they had the same educational endowments as men. The paper also highlights why gender parity does not exist in Nigeria and emphasizes the benefits of gender parity in this context.

**Keywords:** Value Creation, Gender, Education, Self-Employment, Africa, Nigeria

**Introduction**

Value creation entails a plethora of activities that increase the worth of goods, services, and businessness and improve the well-being and worth of individuals and organisations. The creation of value has been defined as the core purpose and central process of economic exchange and should not be equated with limited understandings and historic notions of the differential between labour cost and profit (Kabadayi & Stokes, 2017; Mahajan, 2017; Vargo, Maglio, & Akaka, 2008). The link between value creation and education is integral because education does not just improve output, productivity, efficiency and innovation, it can also lead to healthier and happier lives. Education improves overall wellbeing, a central theme in the value creation literature (Davidow, 2018; Lepak, Smith, & Taylor, 2007). It is for this reason that it has been contended that value creation is the main aim of education (Amit & Han, 2017; Gebert & Joffee, 2007).

Theoretically, both self-employed individuals and paid employees, agents who create value, benefit from education because education reduces the time needed to create and sometimes enjoy value (Paswan & Guzmán, 2017). However some families in developing countries send males into education but not females thus limiting the type of value that females can create (Hannum, Kong, & Zhang, 2009; Kleven & Landais, 2017). The central aim of this paper is to determine if it would be possible to create more self-employed value if educational endowments were equalised between genders in such a context.

**Employment Status and Value Creation**

Paid employees create value by being part of the global civil society and performing all the tasks this entails such as being productive, innovative, efficient and law obeying members of the society (Salamon, Sokolowski, & List, 2004). The self-employed also create employment, productive and innovative value. However, Earle and Sakova (2000) argue that on the one hand, a self-employed worker may be a successful business owner exploiting new opportunities and inventing new products, production processes, and distribution methods. On the other hand, the self-employment status may result from the forced recourse to a residual sector in which the individual's activities and income differ little from those in unemployment.

Society’s needs are large and growing, and contemporary society is increasingly asking businesses to step up. Specifically, there is currently a call for self-employed individuals and paid employees to fulfil business functions while simultaneously advancing the economic and social conditions in the communities that they operate in (Porter & Kramer, 2019). In these contexts, both the self-employed and paid employees have their part to play in creating societal value, especially in times when shared values are increasingly being called for (Jonker, O’Riordan, & Marsh, 2015). The research objectives for this paper flow from such current issues and form the central aim of this paper. Since self-employed individuals and paid-employees create unique forms of societal value and the extant literature proposes that educational endowments significantly affect the probability of being either in self-employment or paid employment (Parker, 2004; Van der Sluis, Van Praag, & Vijverberg, 2005), it would be of empirical benefit to determine if it would be possible to create more of one type of value if educational endowments were equalised between two groups, the central aim of this paper is to determine if it would be possible to create more self-employed value if educational endowments were equalised between genders in the developing country context of Nigeria.

**Education, Self-Employment and Paid Employment**

Educational human capital has especially been a crucial factor influencing the occupational decision because although there are clearly exceptions, individuals should typically seek to maximise their returns on educational investment (Psacharopoulos, 1994). Education also serves as a prerequisite for most paid sector jobs and a signal to prospective employers in the job market, in addition to acting as a sorting mechanism both for job seekers and employers (Kucel, Róbert, Buil, & Masferrer, 2016; Livingstone, 2018).

According to the extant literature, economic theory would expect formal education and paid work to have a positive relationship (Fields & Pfeffermann, 2003; Gereffi & Fernandez-Stark, 2016). Since educational attainment is an affirmative sign of human capital endowments, prospective employers are likely to sort through potential candidates and employ individuals with relevant educational skill sets that are needed for the wage-earning job. Thus, educational qualifications have been identified as essential employment criteria across a wide range of studies (Fields, 1974; Parker, 2018). However, it is also argued that formal education and self-employment should have a positive relationship. This is because education should, theoretically, endow business owners with the needed expertise for success (Casson, 2005; Parker, 2018).

**Gender Differences in Self-Employment**

The literature has long recognized that gender differences might exist in the nature of employment status. Boden (1996) reports that  women are more likely than men to shoulder family-related obligations, especially child rearing: and there is evidence that this affects the female propensity to become self-employed. In addition, women might experience some discrimination in paid employment jobs, commonly called a “glass ceiling” (Fernandez & Campero, 2017; Ng & Sears, 2017), and a gender inequality in terms of earnings has also been documented in the employment status literature (Huffman, King, & Reichelt, 2017; Hughes, 2003). Hence while the value that women create in familial environments cannot be ignored, they still face a bias in the work place.

Related to this inquiry, Hundley (2000) reported that women tended to choose self-employment to facilitate household production while men choose to be self-employed to achieve higher earnings (probably to enable family provisions because males were traditionally viewed as breadwinners). Interestingly, Allen et al. (2007) in a study that sampled a collection of developed and developing countries, found that in a majority of countries participation rates of women in entrepreneurship were substantially lower than those of men. Indeed, researchers have reported that some countries have up to twice as many self-employed males as females (Bullough, Moore, & Kalafatoglu, 2017; Parker, 2018). Futhermore, numerous studies imply lower participation rates for women in business ownership compared to men (Bullough, Renko, & Abdelzaher, 2017; Meunier, Krylova, & Ramalho, 2017). These gender differences in self-employment imply that women are not creating the same self-employment value in such contexts as men and highlight the importance of the research carried out by this paper.

**Education, Gender and Employment Status in Nigeria**

In developing countries, there might be some perceived gender roles for women, and peharps, a cultural bias against women in formal paid employment which might ‘push’ females into self-employment (Klasen & Lamanna, 2009). For example in Nigeria (the focus of this paper), it is reported that one third of its labour force are women, and although women occupy about 30 percent of all posts in the public sector, they only occupy 17 percent of senior positions. Women at every educational level also earn less than their male counterparts, which is evidence of a bias (NBS, 2016). Some families also send males into education but not females and women are also five times less likely to own land despite accounting for 70 percent of the rural labour force (NBS, 2016). Nigeria also has large gender gaps in education, economic empowerment, income, and political participation (Branisa et al., 2014; Olarewaju, 2016).

**Why Haven't Women in Nigeria Been Given Equal Opportunities?**

The federal constitution of Nigeria prohibits discrimination on the grounds of gender. However, some customary and religious laws in Nigeria restrict women’s rights. Furthermore, certain states in the North of Nigeria follow Islamic (Sharia) law, although not exclusively and only in instances where muslims make use of Islamic courts. Adherence to Islamic and customary law reinforces practices that are unfavourable to women, including those relating to freedom of movement, marriage, and inheritance.

The Social Institutions and Gender Index (SIGI) groups countries into four categories based on levels of percieved discriminatory social institutions against women; the latest round of data was conducted in 2014 and included 108 countries. Nigeria was categoriesed as having very high discriminatory social institutions preventing women from having equal opportunities (Branisa et al., 2014). Given these gender disparities in this context, this paper will undertake empirical analysis to determine if women would be able to create more self-employed value in Nigeria if they had the same educational endowments as men.

**Methodology**

The central research question answered by the empirical investigations carried out by this paper is: “Would women be able to create more self-employed value if they had the same educational endowments as men in Nigeria?” The methodology makes use of the probability of the incidence of self-employment using gender, education and control variables as a means of evaluation. A probit model specification and Blinder-Oaxaca multivariate decomposition for binary models proposed by Yun (2000) and expanded by Powers et al. (2011) form the econometric analysis. The probit model specification is given by:

[1.1]

Where *Selfemp* is a binary indicator of employment status that takes the value one (1) for self employed individuals and zero (0) for individuals in paid work/wage employment. *E* is the vector that includes the different levels of education, *X* is a vector of control variables, and *e* is the error term. The foundation of the Blinder-Oaxaca specification occurs where the dependent variable is a function of a linear combination of predictors and the regression coefficients:

Where denotes the dependent variable vector (in this case gender), is an matrix of independent variables, and is a vector of coefficients. is any once-differentiable function mapping a linear combination of to . The mean difference in between groups A and B for binary choice models such as the probit model can be decomposed as:

Endowments Coefficients

[1.2]

The groups A and B in this case are male and female. This econometric research design is the best way to answer the central research question because the endowments effect will reveal the explained variation in self-employment incidence due to endowments between genders, while the coefficient effects will reveal the unexplained variation which might be due to discrimination, a bias or other unknown reasons.

**Data**

The database used for this analysis is from the Nigerian Living Standards Survey (NLSS) otherwise known as the Living Standards Measurement Survey (LSMS) for the years 2004 and 2009. The NLSS is an extensive micro-level household survey detailed in its coverage of various topics; it provides a solid basis for an in-depth analysis of individuals in the country. The survey was conducted by the Nigerian Bureau of Statistics (NBS), a body that has received support from the World Bank. The data covers the entirety of Nigeria (NBS, 2016; WorldBank, 2016).

To encourage full disclosure, respondents were assured that their responses would be used for research, planning and statistical purposes alone and not for taxation. In line with the extant literature, the final sample is restricted to working individuals between the ages of 16 and 65, representing the legal working age within the country and individuals employed in the agricultural sector are removed from the sample (Gindling & Newhouse, 2014; Olarewaju, 2017; Parker, 2018). Tables 1 and 2 provide detailed descriptions of the data and define all the variables used in the empirical analysis. The nature of the data used in this study however does not allow for causality tests.

Table 1. Variables Used in Empirical Estimations: Descriptive Statistics are presented in Table 2

|  |  |  |
| --- | --- | --- |
| Variable | What it Measures | Methodology |
| Employment Status | Employment Status | Self-Employed =1  Paid Employee = 2 |
| Gender | Man or Woman | Dummy (1/0)  [Man = 1]  [Woman = 0] |
| Age in Years | Age in years | Age in Years |
| Age Square | Age Squared | Age Squared |
| Residence | Urban or Rural Residence | Dummy (1/0)  [Urban = 1]  [Rural = 0] |
| Educational Attainment | Educational attainment | Dummy (1/0) for 5 categories:  [Lo Ed = Low Education (primary to junior secondary)]  [Mid Ed = Medium Education (senior secondary to ‘O’ level)]  [High Ed = High Education (BSc and equivalent)]  [Very High Ed = Very High Education (Masters to Doctorate)] |
| House or Land | A proxy for source of collateral for bank loan | Dummy (1/0) measuring if the Individual owns a Plot of Land or House:  [Owns = 1]  [Does not own = 0] |
| Local Language | Ability to speak or/and write a Nigerian Language | Dummy (1/0) measuring if the Individual can speak/write a Nigerian Language:  [Can Speak/Write = 1]  [Cannot Speak/Write = 0] |
| Region | Region of the country | Dummy (1/0) for 4 regions:  [South-East = South East]  [Mid-Belt = Middle Belt]  [South-West = South West]  [North = North] |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Total Sample | | Men | | Women | |
| Variable | 2004 | 2009 | 2004 | 2009 | 2004 | 2009 |
|  | N | N | N | N | N | N |
| Self-Employed | 7,163 | 49,537 | 4,650 | 27,378 | 2,513 | 22,159 |
| Paid Employee | 3,669 | 27,791 | 2,624 | 18,741 | 1,045 | 9,050 |
|  | Mean | Mean | Mean | Mean | Mean | Mean |
|  | (Std Dev) | (Std Dev) | (Std Dev) | (Std Dev) | (Std Dev) | (Std Dev) |
| Age in years | 34.32 | 33.81 | 35.14 | 34.6 | 33.3 | 32.81 |
|  | (13.165) | (12.064) | (13.114) | (12.085) | (13.159) | (11.963) |
| Urban Residence | .428 | .615 | .453 | .615 | .397 | .616 |
|  | (.4948) | (.4865) | (.4978) | (.4866) | (.4893) | (.4864) |
| Rural Residence | .572 | .384 | .547 | .385 | .603 | .384 |
|  | (.4948) | (.4865) | (.4978) | (.4866) | (.4893) | (.4864) |
| Low Education | .315 | .308 | .335 | 0.271 | .291 | .354 |
|  | (.4646) | (.4615) | (.4718) | (.4444) | (.4543) | (.4783) |
| Medium Education | .324 | .502 | .375 | 0.518 | .260 | .482 |
|  | (.4682) | (.4999) | (.4843) | (.4997) | (.4388) | (.4997) |
| High Education | .068 | .119 | .086 | 0.142 | .047 | .09 |
|  | (.2528) | (.3239) | (.2804) | (.3489) | (.2114) | (.2867) |
| Very High Education | .01467 | .022 | .0204 | 0.030 | .007 | .013 |
|  | (.1203) | (.1471) | (.1416) | (.1695) | (.0860) | (.1119) |
| House or Land | .101 | .045 | .089 | .044 | .118 | .048 |
|  | (.3022) | (.2085) | (0.2846) | (.2043) | (. 3221) | (.2137) |
| Local Language | .675 | .908 | .745 | .939 | .590 | .871 |
|  | (.468) | (.2878) | (.0.435) | (.2393) | (.4919) | (.3355) |
| South East | .342 | .277 | .350 | .281 | .332 | .273 |
|  | (.4743) | (.4477) | (.4768) | (.4495) | (.4709) | (.4454) |
| South West | .248 | .403 | .259 | .388 | .234 | .423 |
|  | (.4319) | (.4905) | (.4384) | (.4872) | (.4234) | (.4940) |
| Middle Belt | .185 | .16 | .186 | .167 | .184 | .152 |
|  | (.3885) | (.367) | (.389) | (.3728) | (.3874) | (.3594) |
| North | .224 | .158 | .205 | .164 | .25 | .152 |
|  | (.4175) | (.3656) | (.403) | (.3707) | (4331) | (.359) |
|  |  |  |  |  |  |  |

Table 2. Descriptive Statistics

**Results**

Table 3 presents the results of simple probit estimation [1.1] on both the 2004 and 2009 survey data. The Wald chi-square statistics, which are significant at the 1 percent level, indicate that the regression specification is meaningful and the Pseudo R-squared shows that the regression gives a good fit. The results indicate that the probability of being in self-employment falls as educational attainment increases, especially for women. These regression estimates and standard errors are robust and consistent with different variations of the estimation.

Table 3. Self-Employment Vs Paid Employment; Simple Probit Analysis [Marginal Effects]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Independent Variable | Men  2004 | Women  2004 | Men  2009 | Women  2009 |
| Age in years | -0.0324\*\*\* | -0.0439\*\*\* | -0.0115 | -0.00780 |
|  | (0.0122) | (0.0130) | (0.00718) | (0.00640) |
| Age squared | 0.000313\*\* | 0.000496\*\*\* | 0.00009 | 0.00009 |
|  | (0.000141) | (0.000162) | (0.00008) | (0.00008) |
| Urban Residence | -0.0187 | 0.0375 | 0.0549\*\* | -0.0341\* |
|  | (0.0287) | (0.0395) | (0.0236) | (0.0205) |
| Low Education | -0.190\*\* | -0.206\*\* | 0.0713 | 0.0536 |
|  | (0.0807) | (0.104) | (0.0471) | (0.0373) |
| Medium Education | -0.348\*\*\* | -0.512\*\*\* | -0.155\*\*\* | -0.212\*\*\* |
|  | (0.0772) | (0.0908) | (0.0437) | (0.0421) |
| High Education | -0.546\*\*\* | -0.682\*\*\* | -0.461\*\*\* | -0.684\*\*\* |
|  | (0.0356) | (0.0490) | (0.0406) | (0.0313) |
| Very High Education | -0.524\*\*\* | -0.706\*\*\* | -0.423\*\*\* | -0.661\*\*\* |
|  | (0.0240) | (0.0193) | (0.0560) | (0.0355) |
| House or land | 0.0377 | -0.0127 | 0.00542 | 0.0101 |
|  | (0.0341) | (0.0476) | (0.0166) | (0.0226) |
| Local Language | 0.0206 | -0.0114 | -0.0397 | -0.191\*\*\* |
|  | (0.0413) | (0.0531) | (0.0412) | (0.0190) |
| South East | 0.135\*\*\* | 0.0442 | 0.120\*\*\* | 0.0161 |
|  | (0.0445) | (0.0551) | (0.0418) | (0.0310) |
| South West | 0.120\*\*\* | 0.0671 | 0.0777\*\* | 0.126\*\*\* |
|  | (0.0376) | (0.0598) | (0.0396) | (0.0336) |
| North | -0.0766\* | -0.183\*\* | -0.0508 | -0.0913\*\* |
|  | (0.0444) | (0.0929) | (0.0419) | (0.0416) |
| N | 7,274 | 3,558 | 46,119 | 31,209 |
| Log-pseudo likelihood | -28860396 | -14908950 | -17654502 | -9935626.1 |
| Pseudo R2 | 0.15 | 0.22 | 0.11 | 0.22 |
| Wald x2 | 440.47\*\*\* | 306.24\*\*\* | 377.77\*\*\* | 798.18\*\*\* |

\* *p*<0.1; \*\* *p*<0.05; \*\*\* *p*<0.01: Standard Errors in Parentheses.

The regression results indicate the following. First, in both years and across genders, educational attainments are the most consistently significant factors that influence the probability of being in either self-employed or paid employment. In agreement with other authors that have evaluated the link between employment and education in developing countries, the results indicate that the probability of being self-employed tends to fall as educational attainment increases (Maloney, 2004; Van der Sluis et al., 2005). The empirical results in Table 3 indicate that men in 2004 who possess a low degree of education are 19 percent less likely to be in self-employment, and those who have a medium level of education are 34.8 percent less likely to be in self-employment. For the highly educated, the probability of being self-employed drops to 54.6 percent and for the very highly educated it is lower by 52.4 percent. The empirical results in Table 3 also indicate that for men in 2009, the same pattern is observed generally, apart from the low education variable, which becomes positive but insignificant in this survey.

For women in both years surveyed the same pattern is repeated. The empirical results in Table 3 indicate that women with low, medium, high and very high educational attainments are 20.6 percent, 51.2 percent, 68.2 percent and 70.6 percent less likely to be in self-employment respectively. The pattern is repeated for 2009, with medium, highly and very highly educated women being 21.2 percent, 68.4 percent and 66.1 percent less likely to be in self-employment respectively. Crucially, for women, the effects of education are more pronounced especially as educational levels increase. Women who are highly and very highly educated are the most probable not to be self-employed for both years. As the central aim of this paper is to contribute to the value creation literature by determining if women would be able to create more self-employed value if they had the same educational endowments as men in the context of Nigeria, the next methodology uses a statistical method that explains the difference in the mean gender incidence of self-employment through a Blinder-Oaxaca Multivariate decomposition for binary models. The endowment differences results for the endowment differences of the Blinder-Oaxaca Multivariate decomposition estimation [1.2] for both surveys are presented in Table 4.

Table 4. Results of Blinder-Oaxaca Decomposition; Endowment Differences

|  |  |  |  |
| --- | --- | --- | --- |
| Endowment Differences | Variables | Men/Women 2004 | Men/Women 2009 |
|  | Low Education | 0.001\*\*\* | -0.006\*\*\* |
|  |  | (0.000) | (0.001) |
|  | Medium Education | 0.020\*\*\* | -0.004\*\*\* |
|  |  | (0.002) | (0.000) |
|  | High Education | 0.017\*\*\* | -0.025\*\*\* |
|  |  | (0.001) | (0.001) |
|  | Very High Education | 0.009\*\*\* | -0.011\*\*\* |
|  |  | (0.001) | (0.000) |
|  | Age in years | 0.001\*\*\* | -0.018\*\*\* |
|  |  | (0.000) | (0.002) |
|  | Age squared | 0.003\*\*\* | 0.010\*\*\* |
|  |  | (0.000) | (0.002) |
|  | Urban Residence | -0.001 | -0.000\*\*\* |
|  |  | (0.001) | (0.000) |
|  | House or land | -0.001\*\* | -0.000 |
|  |  | (0.000) | (0.000) |
|  | Local Language | -0.001 | -0.005\*\*\* |
|  |  | (0.001) | (0.001) |
|  | South East | 0.004\*\* | 0.001\*\*\* |
|  |  | (0.002) | (0.000) |
|  | South West | 0.007\*\*\* | -0.006\*\*\* |
|  |  | (0.002) | (0.001) |
|  | North | 0.018\*\*\* | -0.005\*\*\* |
|  |  | (0.004) | (0.000) |

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01: Standard Errors in Parentheses.

Table 4 reports the endowment results of the Blinder-Oaxaca decomposition estimation [1.2]; these results explain the sources of difference in the likelihood of being self-employed between the men and women samples. Note that the endowments effect tells us the explained variation in self-employment incidence due to endowments, while the coefficient effects tell us the unexplained variation which might be due to biases or other unknown reasons. The results indicate that for both 2004 and 2009, the endowment differences in education between men and women explain the dissimilarity in the likelihood of being self-employed to a large extent as can be seen by the constant significance of the educational endowment independent variables at the one percent level.

For the sake of clarity, the estimates will be expressed as percentages. Overall, educational endowments account for about 47 percent of the difference in self-employment probability between men and women in 2004. Specifically, if men and women had the same endowments in low, medium, high and very high education; the dissimilarity in the self-employment status would fall by 1 percent , 20 percent, 17 percent, and 9 percent respectively. The results indicate that if men and women had the same endowments in education in 2009, the dissimilarity in self-employment would rise by about 46 percent. Specifically, if men and women had the same endowments in low, medium, high and very high education; the dissimilarity in the self-employment occupational status would rise by 6 percent , 4 percent, 25 percent, and 11 percent respectively. The coefficient results of the gender based Blinder-Oaxaca decomposition estimation [1.2] are presented in Table 5.

**Table 5.** Results of Blinder-Oaxaca Decomposition; Coefficient Differences

|  |  |  |  |
| --- | --- | --- | --- |
| Coefficient Differences | Variables | Men/Women 2004 | Men/Women 2009 |
|  | Low Education | -0.028\* | 0.002 |
|  |  | (0.015) | (0.005) |
|  | Medium Education | -0.074\*\*\* | 0.041\*\*\* |
|  |  | (0.022) | (0.007) |
|  | High Education | -0.019\*\*\* | 0.015\*\*\* |
|  |  | (0.007) | (0.002) |
|  | Very High Education | -0.011\*\* | 0.002\*\*\* |
|  |  | (0.004) | (0.000) |
|  | Age in years | -0.830\*\*\* | -0.046 |
|  |  | (0.267) | (0.065) |
|  | Age squared | 0.479\*\*\* | -0.012 |
|  |  | (0.147) | (0.032) |
|  | Urban Residence | 0.002 | 0.031\*\*\* |
|  |  | (0.008) | (0.004) |
|  | House o rland | -0.000 | -0.000 |
|  |  | (0.003) | (0.001) |
|  | Local Language | 0.018 | 0.092\*\*\* |
|  |  | (0.016) | (0.010) |
|  | South East | -0.018\* | 0.016\*\*\* |
|  |  | (0.010) | (0.002) |
|  | South West | 0.001 | -0.021\*\*\* |
|  |  | (0.007) | (0.004) |
|  | North | -0.008 | 0.001 |
|  |  | (0.007) | (0.001) |
| Summary | Endowments | 0.075\*\*\* | -0.069\*\*\* |
|  |  | (0.004) | (0.001) |
|  | Coefficients | 0.011 | -0.091\*\*\* |
|  |  | (0.010) | (0.003) |
| *N* |  | 10,832 | 77,328 |

\* p<0.1; \*\* p<0.05; \*\*\* p<0.01: Standard Errors in Parentheses.

Table 5 shows the coefficient results of the gender based Blinder-Oaxaca decomposition estimation [1.2]. They indicate that for 2004, educational coefficients account for 28 percent, 74 percent, 19 percent, and 11 percent of the gender disparity from low, medium, high and very high educational attainments respectively. For 2009, the gender coefficient disparity for medium, high and very high educational attainment are 41 percent, 15 percent, and 2 percent respectively, confirming that women have lower educational endowments than men and these correlate with a higher proportion of women engaged in lower and medium education self-employment.

**Is Gender Parity A Shrewd Policy Goal For Nigeria and Other Similar Countries?**

The analysis conducted by this paper has confirmed that gender parity in high education self-employment can be improved in Nigeria if educational endowments are equalised between Nigerian men and women. Sadly, Nigeria is not alone in exhibiting such gender inequalities (Huffman et al., 2017; Klasen, 2002). Would it be a useful policy goal for the Nigerian government and governments in similar countries to address the gender disparity found by this paper?

Research indicates that raising female employment to be equal to male employment levels could increase GDP significantly in African countries. In addition, when women have more control over family resources, spending patterns tend to benefit children better and this improves the overall quality of life within the country (Borgen, 2017; Klasen & Lamanna, 2009). Empowering women boosts productivity, a benefit that could help countries rise out of poverty and related research reveals that placing more women in top jobs is a key ingredient for economic growth (Branisa et al., 2014; Elomäki, 2015). Higher education self-employed gender parity can introduce much needed skills into the workforce, boost creativity and productivity, improve competitiveness and result in positive externalities.

## 

## Summary and Conclusions

The paper has aimed to empirically investigate if women would be able to create more self-employed value if they had the same educational endowments as men in the unique context of Nigeria. Through the empirical analysis conducted in this paper, it has been determined that if educational endowments were equalised between men and women in Nigeria, women would be able to create more self-employed value, particularly higher education self-employed value. The analysis carried out by this paper is easily replicable with similar data and, in the future, it might be useful to conduct further research using other methodology in different contexts.

The paper has also highlighted why gender parity does not exist in Nigeria and has further emphasised some implications for gender parity in the country. This paper does not try to imply that the value created by self-employment is better than the value created by paid-employees but reveals the gender bias that exists in the context. The findings have a number of significant implications as they confirm the importance of education in eliminating gender disparities in self-employment.

**References**

Allen, I. E., Elam, A., Langowitz, N., & Dean, M. (2007). Global entrepreneurship monitor. *2006 Report on Women and Entrepreneurship*.

Boden, R. J. (1996). Gender and self-employment selection: An empirical assessment. *The Journal of Socio-Economics*, *25*(6), 671–682.

Borgen. (2017). Four Reasons Gender Equality Benefits Everyone. Retrieved June 16, 2018, from https://borgenproject.org/gender-equality-benefits-everyone/

Branisa, B., Klasen, S., Ziegler, M., Drechsler, D., & Jütting, J. (2014). The institutional basis of gender inequality: The Social Institutions and Gender Index (SIGI). *Feminist Economics*, *20*(2), 29–64.

Bullough, A., Moore, F., & Kalafatoglu, T. (2017). Research on women in international business and management: then, now, and next. *Cross Cultural & Strategic Management*, *24*(2), 211–230.

Bullough, A., Renko, M., & Abdelzaher, D. (2017). Women’s business ownership: Operating within the context of institutional and in-group collectivism. *Journal of Management*, *43*(7), 2037–2064.

Casson, M. (2005). Entrepreneurship and the theory of the firm. *Journal of Economic Behavior & Organization*, *58*(2), 327–348.

Davidow, M. (2018). Value Creation and Efficiency: Incompatible or Inseparable? *Journal of Creating Value*, 2394964318768904.

Earle, J. S., & Sakova, Z. (2000). Business start-ups or disguised unemployment? Evidence on the character of self-employment from transition economies. *Labour Economics*, *7*(5), 575–601.

Elomäki, A. (2015). The economic case for gender equality in the European Union: Selling gender equality to decision-makers and neoliberalism to women’s organizations. *European Journal of Women’s Studies*, *22*(3), 288–302.

Fernandez, R. M., & Campero, S. (2017). Gender sorting and the glass ceiling in high-tech firms. *ILR Review*, *70*(1), 73–104.

Fields, G. S. (1974). The private demand for education in relation to labour market conditions in less-developed countries. *The Economic Journal*, *84*(336), 906–925.

Fields, G. S., & Pfeffermann, G. P. (2003). *Pathways out of poverty: private firms and economic mobility in developing countries* (Vol. 296). World Bank Publications.

Gereffi, G., & Fernandez-Stark, K. (2016). Global value chain analysis: a primer.

Gindling, T. H., & Newhouse, D. (2014). Self-employment in the developing world. *World Development*, *56*, 313–331.

Hannum, E., Kong, P., & Zhang, Y. (2009). Family sources of educational gender inequality in rural China: A critical assessment. *International Journal of Educational Development*, *29*(5), 474–486.

Huffman, M. L., King, J., & Reichelt, M. (2017). Equality for whom? Organizational policies and the gender gap across the German earnings distribution. *ILR Review*, *70*(1), 16–41.

Hughes, K. D. (2003). Pushed or pulled? Women’s entry into self‐employment and small business ownership. *Gender, Work & Organization*, *10*(4), 433–454.

Hundley, G. (2000). Male/female earnings differences in self-employment: The effects of marriage, children, and the household division of labor. *ILR Review*, *54*(1), 95–114.

Jonker, J., O’Riordan, L., & Marsh, N. (2015). The art of balancing: Enabling the realisation of multiple and shared values through a new generation of business models. In *New Perspectives on Corporate Social Responsibility* (pp. 229–246). Springer.

Kabadayi, S., & Stokes, P. (2017). Comments by Guest Editors. SAGE Publications Sage India: New Delhi, India.

Klasen, S. (2002). Low schooling for girls, slower growth for all? Cross‐country evidence on the effect of gender inequality in education on economic development. *The World Bank Economic Review*, *16*(3), 345–373.

Klasen, S., & Lamanna, F. (2009). The impact of gender inequality in education and employment on economic growth: new evidence for a panel of countries. *Feminist Economics*, *15*(3), 91–132.

Kleven, H., & Landais, C. (2017). Gender inequality and economic development: fertility, education and norms. *Economica*, *84*(334), 180–209.

Kucel, A., Róbert, P., Buil, M., & Masferrer, N. (2016). Entrepreneurial Skills and Education‐Job Matching of Higher Education Graduates. *European Journal of Education*, *51*(1), 73–89.

Lepak, D. P., Smith, K. G., & Taylor, M. S. (2007). Value creation and value capture: a multilevel perspective. *Academy of Management Review*, *32*(1), 180–194.

Livingstone, D. W. (2018). *The Education-Jobs Gap: Underemployment or Economic Democracy?* Routledge.

Mahajan, G. (2017). Value Dominant Logic. *Journal of Creating Value*, *3*(2), 217–235.

Maloney, W. F. (2004). Informality revisited. *World Development*, *32*(7), 1159–1178.

Meunier, F., Krylova, Y., & Ramalho, R. (2017). Women’s Entrepreneurship.

NBS. (2016). Nigerian National Bureau of Statistics Webpage. Retrieved from http://www.nigerianstat.gov.ng/

Ng, E. S., & Sears, G. J. (2017). The glass ceiling in context: the influence of CEO gender, recruitment practices and firm internationalisation on the representation of women in management. *Human Resource Management Journal*, *27*(1), 133–151.

Olarewaju, T. (2016). Linking labour force participation, education, labour wages and household consumption in developing countries: push and pull effects in self-employment-evidence from Nigeria. *(Doctoral dissertation, Aston University)*

Olarewaju, T. I. A. (2017). Organising household consumption and occupational proportions: evidence from Nigeria. *International Journal of Organizational Analysis*, DOI (10.1108/IJOA-03-2017-1141).

Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*. Cambridge University Press.

Parker, S. C. (2018). *The economics of entrepreneurship*. Cambridge University Press.

Paswan, A. K., & Guzmán, F. (2017). Consumer Value and Time. *Journal of Creating Value*, *3*(2), 157–161.

Porter, M. E., & Kramer, M. R. (2019). Creating shared value. In *Managing Sustainable Business* (pp. 327–350). Springer.

Powers, D. A., Yoshioka, H., & Yun, M.-S. (2011). mvdcmp: Multivariate decomposition for nonlinear response models. *Stata Journal*, *11*(4), 556–576.

Psacharopoulos, G. (1994). Returns to investment in education: A global update. *World Development*, *22*(9), 1325–1343.

Salamon, L. M., Sokolowski, S. W., & List, R. (2004). *Global civil society* (Vol. 2). Kumarian Bloomfield, CT.

Van der Sluis, J., Van Praag, M., & Vijverberg, W. (2005). Entrepreneurship selection and performance: A meta-analysis of the impact of education in developing economies. *The World Bank Economic Review*, *19*(2), 225–261.

Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, *26*(3), 145–152.

WorldBank. (2016). Nigeria Overview. Retrieved May 15, 2016, from http://www.worldbank.org/en/country/nigeria/overview

Yun, M.-S. (2000). Decomposition analysis for a binary choice model. *Economics letters*, *82*(2), 275-280.