Intergenerational Education Mobility and Globalization: Evidence from Ghana

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Authors' contributions

This work was carried out in collaboration between both authors. Author JAB designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author JE managed the analyses of the study and managed the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

The issue of economic mobility among generations continues to be one of the understudied areas, especially in developing countries. Economic mobility usually referred to as Intergenerational Mobility (IM) studies the movement of individuals along the economic ladder. This paper relied on intergenerational education mobility to study into economic mobility in the Ghanaian setting. The paper, therefore, contributes to rarer existing literature on IGM in Ghana. Relying on random and fixed effect regression models, the study reveals that, economic mobility in Ghana is one of the lowest in the world far below economic mobility in countries like Turkey and Italy and far below economic mobility in developed countries like the US. The paper further reveals the significant role of globalization on IGM, highlighting a very important role of globalization in the lives of people. It is therefore recommended that to bolster the welfare of individuals, policymakers need to consider policies that are also aimed at expanding globalization. Moreover, the paper reveals that FDI and expansionary fiscal policy plays crucial roles in the economic mobility of individuals while unemployment has an exactly opposite effect on IGM.

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1. INTRODUCTION

Globalization is a term generally applied to the developments in trade and information technology that have made it easier for goods and services to flow back and forth across national boundaries. It has the potential to heavily influence patterns of economic mobility in Ghana. It is possible by allowing businesses to look internationally for efficient solutions. Globalization may raise overall productivity and allow for widespread increases in living standards. However, critics have observed that globalization can be detrimental to economic mobility in the less developed economies. It often pushes less-skilled workers into damaging competition with lower-paid foreign substitutes, reducing their bargaining power and making it more difficult for them to share in globalization's benefits. In other words, globalization seems likely to lead to income growth (i.e., upward absolute mobility) at the high end of the skill spectrum but may decrease rates of upward mobility among less-skilled workers both in absolute terms and in comparison to their higher-skilled peers.

Economic mobility across generations, also known as intergenerational mobility (IGM) in the economic literature, is a proponent for human progress. All over the world, parents would like to see their children have a higher living standard—and with it a better life—than they have had themselves. According to Narayan et al. [1] in most societies, parents would like to see their children have better lives than they had themselves. And most individuals would like the opportunity to move up to a higher place on the economic ladder than the point on it where they happened to be born. For sustainable and inclusive growth, public policy must help give scope to such aspirations. But evidence suggests that, in too many parts of the world, mobility poses a challenge. This concern is especially acute for developing countries such as Ghana: in most of them, it is harder than in wealthier countries to move from the bottom to the top of the economic ladder. Solon [2] posits that IGM investigates how a measure of children's outcomes (social status) correlate with that of their parent's outcomes (social status). Social status has been measured extensively by indicators including income, education, earning and employment. Because education is a key

dimension of human progress, educational mobility is important in its own right and is an essential element of economic mobility, when economic mobility is understood in terms of well-being rather than income alone. Moreover, because education tends to be a strong predictor of lifetime earnings, mobility in education is a key factor influencing income mobility.

This study will focus primarily on intergenerational education persistence, which measures the extent to which the educational status of children in their later life is influenced by their parents' educational level. That is, the study will estimate the effects of the educational level of parents on the educational status of their offsprings. Most existing literature on intergenerational mobility (IGM) has focused on the advanced economies especially the United States with very few focusing on the developing economies. This study will be the first study to measure the extent of intergenerational persistence focusing on Ghana alone as a country. This is because there have been several studies on IGM that involves Ghana but all in the form of panel studies of several other countries. By this, the study will measure the countrywide and within-Ghana across regions extent of intergenerational persistence. This paper takes a new dimension by estimating the effect of age share on intergenerational education mobility in the country. Often in Ghana, several parents go-ahead to have children even at their retirement stage or close to the period. These children are often called "pension children" in Ghana. However, this stage is characterized by relatively less cash income flows. This paper, therefore, estimates the impact of age shares on IGM purposely to investigate the extent to which individuals can move along the economic ladder as their parents reach retirement age. Finally, the effect of globalization on educational mobility will be measured.

2. LITERATURE REVIEW

2.1 Theoretical Underpinning

This paper adopts the model of Becker and Tomes [3] that has been widely adopted by several studies on intergenerational mobility. The model explains that parents are altruists who seek the welfare of their offspring and thus invest in education. To begin with, the study outlines

some of the basic assumptions of the model. Assuming that, there is N number of children who lives for two time periods and a parent who only lives once. Assume again that a parent is endowed with a **K*** human capital which is hired by a perfectly competitive firm to produce a homogenous good (Y) at a constant rate of return. The production function of the firm is;

$$Y = zK$$

Where K in the production equation above is the total amount of human capital hired by the firm from all parents in the economy and z is a constant scale factor.

According to the model, an adult supplies his/her human capital (**K***) for a price known as wage, which is equal to the value of their marginal product. That is,

$$w(\boldsymbol{K} *) = z\boldsymbol{K} *$$

This wage equation exhibits positive returns to education according to (Mincer, 1974). This theory posits that parents' utility level is dependent upon the consumption of goods and the utility of their offspring. That is,

$$U(c, v) = U(c) + Nv$$

Where, $v = f(e, \gamma, k)$, where v denotes the human capital of children in adult life. And Nv, is the number of children N multiplied by the human capital of children in adult life v , which is a function of , e , which is the investment in offspring education by their parents, γ includes all other factors including both environmental and community-wide factors and k is the parental human capital. The community-wide factors such as changes in labor demand patterns due to changes in economic activities.

The model, therefore, assumes that, in a perfect capital market, an altruist parent spends more of his/her wage on consumption and the education of their offspring if the two goods are normal. Parents can also borrow to invest in the education of their offspring. Thus, in this model, education persists across generations due to both heritable monetary and nonmonetary endowments including the education level of parents. The implication is that there will be some level of intergenerational education persistence in unequal societies even if parents cannot borrow to invest in the education of their children.

2.2 Globalization and Intergenerational Mobility

Available research does not directly address the impacts of globalization on economic mobility. However, a large body of literature discusses the implications that globalization has for unemployment and inequality. Together, these measures provide a reasonable proxy for intra-generational mobility instead of intergenerational mobility. If globalization causes job or earnings losses for low skilled individuals at a given point in time, it may slow income growth over time for this group as well. In one important empirical study, Borjas, Katz, and Freeman [4] found that trade with less-developed countries accounted for only 10 percent of high school dropouts' wage losses between 1980 and 1995, while immigration accounted for between 27 and 55 percent. On the other hand over the long term, the mobility consequences of international trade are likely more positive. By allowing countries to specialize in what they do best, trade may increase real income, at least at the aggregate level. Frankel and Romer [5], for instance, estimate that, ceteris paribus, a one-percentage-point increase in the ratio of trade to GDP increases a country's average per capita income by at least half a percent. Bradford, Grieco, and Hufbauer [6]; as cited in Orszag and Deich [7] conduct a meta-analysis using methods from four different studies and find that, in 2003, trade added roughly $1 trillion to the U.S. economy. Freeman [8] provides a tongue-in cheek summary of the delicate balance in the trade debate, writing that "some will gain and some will lose… but the gainers will make more than the losers will lose… and neither the gains nor losses will be big enough to measure afterwards." In this light, the effects of changes in trade policy on economic mobility in the country as a whole will likely prove to be quite muted. It must be indicated that findings regarding the effects of globalization on intergenerational mobility will necessarily be more speculative since globalization itself is a relatively new phenomenon. However, to the extent that globalization promotes economic growth over the long run, it's likely to lead to upward absolute mobility as well, provided that any associated increases in inequality are not too large.

2.3 Empirical Review of Intergenerational Educational Mobility

Checchi, Fiorio and Leonardi [9], employed the correlation coefficient of education to measure

intergenerational persistence in education in Italy. The results confirmed a high intergenerational educational persistence in education in Italy because, offspring of highly educated parents faced an increased probability of obtaining college degree. In Malaysia, Lillard and Willis [10] studied the spread of education by focusing on 1910 to 1980 birth cohorts. Relying on the Second Malaysian Family Life Survey (MFLS-2), which contains information on the education of as many as four generations within a given family, the study explored the link that exists between the education of parents and their children. In this study, the sequential discrete-time hazard model was used to measure the effect of parental education on the progress of their offspring education through elementary, secondary and post-secondary schools. Intergenerational education mobility has been studied in Latin America as well. In this study by Neidhofer, Serrano, and Gasparini [11], 18 countries in Latin America were studied and for over 50 years. To study into intergenerational education mobility, several indexes of both relative and absolute mobility were constructed. The study reveals that intergenerational mobility has been on the rise, on the average. According to Neidhofer, Serrano, and Gasparini [11], this increased IGM is due to the high upward mobility of children from low educated parents or families. In 2007, an estimation of a 50-year trend in intergenerational education persistence by Hertz, Jayasundera, Piraino, Selcuk, Smith and Verashchagina [12] covering a sample of 42 countries around the globe revealed that Latin America displayed the highest intergenerational education correlations while the Nordic countries recorded the lowest. The study also revealed that, over the past 50 years, there was a global average of correlation that existed between parents and their offspring that was held steady for about 0.4. This study also relied on the regression coefficients and the correlation coefficients in the estimation process. Employing the regression coefficient, correlation coefficient and the transitional probability as intergenerational persistence and absolute mobility measures, Aydemir and Yazici [13] found that, relative to developed economies, Turkey has significantly lower education mobility. The study also revealed that females who grow up in more developed regions faced lower intergenerational education persistence. However, the same cannot be said for males, in which the study observed mixed findings. Additionally, the study done by Zimmerman [14] in the United States of America measured

estimates of lifetime earnings between fathers and sons. Using the National Longitudinal Survey, the study corrected for measurement error and found an intergenerational correlation of income at 0.4. This paper has been influential since the study corrected for the error-contaminated measures of earnings that affected previous studies. The study revealed less intergenerational mobility than previously believed. Intergenerational mobility has been extensively studied in Asia too to include several Asian economies such as India and China. In 2012, Azam and Bhatt [15] estimated the intergenerational education mobility using a nationally representative father-son matched data for India. The study revealed that, for the 1940 to 1985 birth cohorts, there was a decline in cohort trend in intergenerational education elasticity in India, at the aggregate level, for major castes and states. The study also found a direct relation between intergenerational education elasticity measure and per capita public spending in education. A work is done by Azomahou and Yitbarek [16] analyzed the intergenerational education transmission across 9 sub-Saharan African countries which provide intergenerational education persistence over 50 years. The study revealed that intergenerational education persistence reduced among the birth cohorts in all countries, particularly after the 1960s. The study suggested that this decline in IGP in education was due to the huge investment in human capital following independence and drastic changes in the educational systems. Even in the light of declining intergenerational education persistence in the region, countries such as Ghana, Guinea, Nigeria, and Uganda experienced higher intergenerational mobility while Comoros and Madagascar had the lowest. Also, intergenerational persistence in education was found to be stronger from mothers to their children. Additionally, Alesina, Hohmann, Michalopoulos, and Papaioannou [17] also employed measures of absolute mobility to estimate intergenerational education mobility in Africa since independence using census data from 26 countries. The study found that colonial investments in the transportation network and missionary activities were associated with upward mobility. Intergenerational mobility was also higher in regions close to the coast and national capitals as well as in rugged areas without malaria. Upward mobility is higher and downward mobility is lower in regions that were more developed at independence, with higher urbanization and employment in services and manufacturing. In 2007, Nimubona &

Vencatachellum [18] found that the intergenerational education mobility of whites was higher than that of blacks. The study revealed that among blacks, females have higher intergenerational education mobility than males, while the poorest have the lowest intergenerational education mobility. The study suggests that the lower education mobility of blacks relative to that of whites indicated that factors such as access to the credit market, as well as the availability and quality of schools, were essential determinants of educational attainment.

3. DATA AND METHODOLOGY

The paper aims to estimate the degree to which the past generation's (parents) educational level influences the educational status of the current generation (their parents). This paper relied on the Ghana Living Standards Survey (GLSS)(GSS, 2005/2006, 2012/2013, 2016/2017) which is a nationally representative household survey providing reliable, disaggregated and internationally comparable welfare and living conditions statistics in Ghana. It is an important tool in the welfare monitoring system. Some of the living condition statistics include detailed information on demographic characteristics of the population, education, health, employment and time use, migration, housing conditions and household agriculture. The study relied on the GLSS data from round 5 to 7 conducted in 2005/2006, 2012/13 and 2016/17. The survey spreads over 12 months in order to ensure a continuous recording of all relevant living condition statistics and has been conducted by the Ghana Statistical Service (GSS). Additionally, the study also relied on other variables including globalization index, unemployment rate, FDI and government spending derived from The Global Economy database.

In order to estimate the intergenerational persistence in education in Ghana, the study employed the regression model below;

$$Ed_{ir}^{ch} = \beta_0 + \beta_1 Ed_{ir}^{p} + \beta_{k+1} V_{ir} + \pi_i + \varepsilon_{ir}$$

Ed_{ir}^{ch}, denotes the years of schooling of child i in region r, Ed_{ir}^{p} denotes years of schooling of parent i in region r, V_{ir}, denote a vector of controls including the squared of parents formal years of schooling, household size, parents marital status and age of parents of individual i in region r and the ε_{ic} is the zero-mean error

term. β_1, measures intergenerational persistence which reflects the influence on the years of education of children of an additional increase in the years of schooling of their parents. A higher value of this coefficient implies lower mobility and vice versa. π_i, reflects all other unobserved variables that affect Ed_{ic}^{ch}, but varies from one child to the other. Note however that, the study will not rely on time-fixed effect regression since years of schooling is almost constant in the later life of an individual.

The other measure of intergenerational persistence used in this study is the correlation coefficient which has also been extensively applied in economic literature. This coefficient reflects the link between a parent's rank in the education distribution of parents and that of the child's rank in their education distribution as well. To estimate this coefficient, the study adjusted both parents and children's years of education by dividing the years of education of each generation by their corresponding standard deviations. The study therefore regressed adjusted years of education distribution of the current generation (offspring) on the adjusted years of education of their parents. The model is specified below;

$$Ed_{ir}^{ch(a)} = \delta_0 + \delta_1 Ed_{ir}^{P(a)} + \varepsilon_{ir}$$

$Ed_{ir}^{ch(a)}$ denotes the adjusted years of schooling of child i in region r, $Ed_{ir}^{P(a)}$ denotes adjusted years of schooling of parent i in region r and the ε_{ir} is the zero mean error term. δ_1 measures intergenerational persistence which reflects the effect of a unit change in parents education rank on their off springs rank in their education distribution.δ_1 and β_1 are related by the equation below;

$$\delta_1 = \beta_1 \frac{\sigma_p}{\sigma_c}$$

Where σ_p and σ_c denotes the standard deviations of parents and off springs years of schooling respectively. The correlation is different from the regression coefficient due to its usefulness of allowing for cross country comparisons of intergenerational mobility.

Lastly, to estimate the impact of age share and globalization on IGM, the method below was relied upon. It is worthy to note that, the study relied on relative IGM (1- β), as a measure of social mobility in this study.

$$IGM_{ir} = \beta_0 + \beta_1 Globalization + \gamma_{j+1} X + \partial$$
$$+ \varepsilon_{ic}; j = 1, \ldots, 5$$

IGM_{ir}, denotes economic mobility for individuals across the various regions, $Globalization$ is measured by globalization index, X is a vector of controls encompassing unemployment rate, FDI as a percent of GDP, government spending as a percent of GDP and household size. ∂, controls for fixed effects. β_1, is expected to be positive, in light that, individuals are more likely to move up the economic ladder relative to the position they were born into, given that globalization affects to lead to increased economic growth.

4. RESULTS AND DISCUSSION

Panel A summarizes the demographics and the educational backgrounds of respondents captured by the Ghana Living Standards Survey (GLSS) used in this study. Individual's level of education ranges from 0 (representing individuals with no educational level) to 19 years of education which is the highest recorded by the GLSS. The mean years of schooling for children is approximately 9.5 years, which is greater than the mean years of education of parents indicating an increase in educational attainments across generation. A similar finding has been found by Aydemir and Yazici [13] in Turkey as well. It is worthy to note that, the average education years of mothers are approximately 8 years while the figure is about 9 years among their children.

Marital status, on the other hand, is an indicator variable which equals 1 for individuals who are still married but otherwise equal 0 for people who are not married. With regards to household size, the study corroborates the fact that African countries have large household sizes. It is shown that the largest household as recorded by the GLSS from 2005 to the 2017 period has 23 family members while the least household size has just one member. Over the period, the mean household size is approximately 9 family members. With respect to parents' age, the study sampled parents aged between 30 to 80 years. The mean age of parents over the periods is approximately 48 years.

In panel B, the study summarizes some selected macroeconomic indicators that affect intergenerational education mobility in Ghana. The study shows that from 2005 to 2017, the Ghanaian economy has seen a substantial expansion in terms of political, economic and social interactions with the rest of the world. It is revealed that the KOF globalization index has expanded approximately from 53 to 61 with an average of 58. However, the country's rate of unemployment has expanded from 4.64% to 6.77% with an average rate of of6.27%. Moreover, the study reveals that there has been a substantial increase in the flow of investment into the country from as low as 1.35% FDI (% of GDP) to an appreciable 6.34%. Over the selected periods, FDI (% of GDP) averaged

Table 1. Description of variables used in the study

Variables	Definition
Education level	This has been measured by the formal years of schooling of individuals.
Globalization	The study measures globalization using the KOF globalization index which measures globalization based on three (3) dimensions including economic, social and political dimensions. The index was first measured by Dreher [19] and later updated by Dreher, Gaston, Martens [20]. Gygli, Haelg, Potrafke, Sturm [21] defines globalization as the network creating process existing among actors at intra- or multi-continental distances, mediated through a variety of flows that include people, ideas and information, goods and capital. According to them, globalization erodes national boundaries, integrates national economies, cultures, technologies and governance and produces complex relations of mutual interdependence.
Unemployment rate	This is a rate that expresses the ratio of unemployed to the total labor force. It is expressed as a percentage.
FDI (% of GDP)	FDI (% of GDP) measures the foreign ownership of production facilities.
Government spending	The ratio of total government spending to the GDP of the country.
Marital status	Dummy variable that distinguishes married respondents from the unmarried respondents.
Household Size	This also refers to the number of members in a household.
Age	This reflects the age of respondents in completed years.

Source 1: Authors' own computation based on data from glss and the global economy

Table 2. Panel A: Summary statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Children's years of schooling	12,317	9.4864	3.289227	0	19
Father's years of schooling	12,616	9.4463	3.378	0	19
Mother's years of schooling	18,778	8.322	3.91	0	19
Marital Status	18,044	.7103	.4537	0	1
Household Size	18,840	8.8473	4.726	1	23
Parents' Age	17,413	47.85069	12.1414	30	80

Source 2: Authors' own computation based on data from glss and the global economy

Table 3. Panel B: Summary statistics

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
Unemployment rate	18,840	6.2651	.6527	4.64	6.77
FDI (% of GDP)	18,840	4.854	1.3205	1.35	6.34
Government Spending (% of GDP)	18,840	10.0327	1.8442	8.8	15.31
Globalization	18,840	58.2463	3.0426	53.41	61.46

Source 3: Authors' own computation based on data from glss and the global economy

Table 4. Regression coefficients of intergenerational mobility at the national level by random effect model

Variables	(1) Years of schooling (Child)	(2) Years of schooling (Child)	(3) Years of Schooling (Child)
Father's education	0.691 (0.557)		0.682 (0.541)
Father's education squared	-0.0339 (0.0284)		-0.0335 (0.0276)
Marital status	-2.292 (1.812)	-1.479*** (0.473)	-2.257 (1.764)
Household size	0.0452 (0.0604)	0.0646** (0.0267)	0.0447 (0.0570)
Parents' Age	-0.00813 (0.0186)	-0.0221* (0.0129)	-0.00854 (0.0184)
Mother's education		0.119 (0.184)	0.201* (0.110)
Mother's education squared		-0.00785 (0.00943)	-0.0130* (0.00679)
Constant	6.633*** (2.112)	9.815*** (1.149)	5.922*** (2.283)
Observations	6,445	11,585	6,445
Number of respondents	13	16	13

Source 4: Authors' own computation based on data from glss and the global economy
Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$*

Table 5. Regression coefficients of intergenerational mobility at the national level by fixed effect model

Variables	(1) Years of schooling (Child)	(2) Years of schooling (Child)	(3) Years of Schooling (Child)
Father's education	0.691***		0.678***
	(0.0495)		(0.0494)
Father's education squared	-0.0338***		-0.0332***
	(0.00258)		(0.00257)
Marital status	-2.293***	-1.481***	-2.257***
	(0.119)	(0.0659)	(0.119)
Household size	0.0449***	0.0646***	0.0424***
	(0.00935)	(0.00620)	(0.00932)
Parents' Age	-0.00801**	-0.0221***	-0.00805**
	(0.00393)	(0.00248)	(0.00391)
Mother's education		0.120***	0.198***
		(0.0246)	(0.0317)
Mother's education squared		-0.00789***	-0.0129***
		(0.00147)	(0.00186)
Constant	7.903***	10.56***	7.412***
	(0.314)	(0.148)	(0.333)
Observations	6,445	11,585	6,445
Number of respondents	0.114	0.067	0.121
Father's education	13	16	13

Source 5: Authors' own computation based on data from glss and the global economy
standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1*

4.85%. Lastly, various governments have paid critical attention to the expansion of fiscal policy as a measure to enhance growth and development. This is due to the fact that government spending (% of GDP) has increased substantially from 8.8% to 15.31% with a mean of 10.03% from 2005 to 2017.

Relying on the nonlinear regression model, the study regressed the formal years of education of children on the years of education of their parents. Column 3 of Table 4 reveals the positive impact of mother's education on the education of their children. The random effect regression of children's years of education on both parent's education confirms the positive effect of mother's education on their off spring education. The model shows that, children's years of education increases approximately by .2 year for every 1 year increase in the years of education of mothers. This is also confirmed by the fixed effects regression model shown in Table 5. Column 1 of the table shows that, for every 1 year increase in the father's years of education, there's an approximately .7 year increase in children's years of education. A similar finding was observed by Aydemir and Yazici [13]. This

coefficient is highly significant. However, children's years of education deteriorates beyond an increased level of father's education. Column 2 reports a similar finding where the children's years of education is regressed on that of their parent's. The fixed effects regression predicts a coefficient of .115 and is highly significant. The implication is that, for every 1 year increase in mother's education, children's education expands by .115 year. Moreover, the column 3 of Table 5, regressed the years of education of children on both parent's education. The model confirms the positive impact of both parents education on the education of their children. The estimated coefficients are .678 for the father-children regression and .198 for the mother-children regression. This finding is supported by the Becker and Tomes [3] theory, which explains that education persists across generations due to both heritable monetary and nonmonetary endowments including the education level of parents. This implies that, even if parents cannot borrow to invest in the education of their children, there will be some level of intergenerational education persistence in unequal societies. Empirically, Aydemir and Yazici [13] found similar evidence in Turkey.

Table 6. Correlation coefficients of intergenerational mobility at the national level by random effect model

Variables	(1) Years of schooling (Child)	(2) Years of schooling (Child)	(3) Years of schooling (Child)
Father's education	0.0639		0.0640
	(0.0719)		(0.0718)
Mother's education		-0.00933	-0.0132***
		(0.0453)	(0.00368)
Constant	2.184***	2.661***	2.210***
	(0.270)	(0.183)	(0.272)
Observations	6,445	12,261	6,445
Number of respondents	13	16	13

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source 6: Authors' own computation based on data from glss and the global economy
robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.

Table 7. Correlation coefficients of intergenerational mobility at the national level by fixed effect model

Variables	(1) Years of schooling (Child)	(2) Years of schooling (Child)	(3) Years of schooling (Child)
Father's education	0.0642***		0.0642***
	(0.0134)		(0.0134)
Mother's education		-0.00931	-0.0135
		(0.00859)	(0.0117)
Constant	-0.0731***	-0.00305	-0.0736***
	(0.0114)	(0.00869)	(0.0114)
Observations	6,445	12,261	6,445
R-squared	0.004	0.000	0.004
Number of respondents	13	16	13

Source 7: Authors' own computation based on data from glss and the global economy
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Other controls such as parentage and marital status have negative impacts on the years of education of parents while household size has a positive impact. The implication is that children whose parents are aged are less likely to have increased education level relative to those whose parent is not aged.

To be able to compare Ghana's intergenerational mobility with other countries IGM, it is misleading to rely on the regression coefficients estimated above. Thus, the correlation coefficient approach was relied on for this purpose. Relying on a linear regression model, the study regressed the standardized years of schooling of children on that of their parent. While the coefficient from the father-child regression supports the positive effect of parent education on their child's education with a correlation coefficient of .0642,

the mother-child regression fails to support this assertion with a correlation coefficient of -0.0132 from the random model. These coefficients reveal important findings of the Ghanaian economy which shows that Ghana remains one of the countries with the lowest education mobility in the world. The United States has an estimate of 0.46; Turkey has an estimate ranging from .532 to .564. Aydemir and Yazici [13], reports that the figure is about 0.4 in Western Europe except Italy with a coefficient of 0.46. This finding confirms the case that, intergenerational mobility is acute especially in developing countries as in the case of Ghana.

To estimate the impact of globalization on IGM, the study relied on regional estimates of IGM as well as the KOF globalization index. The study reveals an important finding that; increased

Table 8. Random and fixed effects model of intergenerational mobility and globalization

Variables	(1) IGM	(2) IGM
Globalization Index	0.188***	0.194***
	(0.0358)	(0.0407)
Unemployment Rate	-1.658***	-1.712***
	(0.377)	(0.442)
Foreign Direct Investment	0.866***	0.892***
	(0.195)	(0.227)
Government Spending (% of GDP)	0.445***	0.459***
	(0.0941)	(0.108)
Household size	0.00136	0.00183**
	(0.00108)	(0.000905)
Parents' Age	0.00112	0.00121*
	(0.000702)	(0.000719)
Constant	-8.293***	-8.556***
	(1.628)	(1.817)
Observations	18,779	18,779
R-squared		0.571
Number of respondents	153	153

Source 8: Authors' own computation based on data from glss and the global economy robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

globalization has the impact of enhancing IGM. Thus, increased globalization has the impact of raising individuals from a point on the economic ladder relative to the position they were born into. The random effect produces a coefficient of .186 which implies that, for every unit expansion in the index, the ordinary Ghanaian has the chance to move up from a lower education level (economic level) to a point above. The result is highly significant. The implication is that increased globalization leads to enhanced economic growth which results in an expansion in the human capital of economies. The fixed effect regression reports a similar finding but with a coefficient slightly greater than that produced by the random effect model. This implies that the random effect underestimate the impact of globalization on IGM. It also implies that individual differences, regional differences such as quality of education and varying regional developments contributes significantly towards the economic mobility of individuals. The model reports a highly significant coefficient of .19 implying that individuals have the opportunity to move up economically by .19 units due to a unit expansion in the globalization of the Ghanaian economy.

The study moreover reveals that age of parent, household size, FDI and government spending have positive impacts on IGM. It is indeed not surprising that increased inflows of investment into the Ghanaian economy have a significant effect on increasing IGM. The study reveals that, for every 1% increase in FDI (% of GDP), IGM

consequently expands within a range of .86 to .90. Thus, for every 1% expansion in FDI, the ordinary Ghanaian faces an opportunity to move up economically in life. Moreover, the study also finds that, expansionary fiscal policy has the effect of increasing IGM. Thus, for every 1% increase in government spending, IGM expands by about .44 to about .46 units. This is however not the case with increased unemployment. It is revealed that IGM is crippled by increased unemployment, showing that, for every 1% increase in unemployment rate, IGM reduces by about 1.65 to 1.72 units approximately. Thus, economic welfare of individuals deteriorates for every job less. This model has an R squared of 57.1% which explains how crucial fluctuations in the included independent variables explain fluctuations in economic mobility.

5. CONCLUSIONS AND RECOMMENDATIONS

To contribute to a rarer existing literature on IGM in Ghana, this paper reveals that, economic mobility in Ghana is one of the lowest in the world far below economic mobility in countries like Turkey and Italy and far below economic mobility in developed countries like the US. The paper further reveals the significant role of globalization on IGM, highlighting a very important role of globalization in the lives of people. It is therefore recommended that to bolster the welfare of individuals, policymakers need to consider policies that are also aimed at

expanding globalization. Moreover, the paper reveals that FDI and expansionary fiscal policy plays crucial roles in the economic mobility of individuals while unemployment has an exactly opposite effect on IGM.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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