

Empirical Paper

Why Qualified Students Do Not Enter Higher Education: A Behavioural Economics Analysis of Rural–Urban Inequalities in Ghana

Mohammed Tanko^{1*}

Affiliations

¹School of Economics, University for Development Studies, Tamale, Ghana

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Abstract

Purpose: This study investigates the transition from secondary to higher education among academically qualified youth in Ghana, focusing on the behavioural and spatial factors influencing enrolment. It examines how geographic isolation, information asymmetry, bounded rationality, and status quo bias contribute to self-exclusion from tertiary education, particularly in rural areas.

Methodology: The study uses nationally representative data from the Ghana Living Standards Survey Round 7 (GLSS 7), comprising 5,142 respondents aged 15–25 who completed Senior High School or its equivalent. A binary Probit model estimates the probability of tertiary transition based on rural residence, household ICT access, parental education, wealth status, and gender. An interaction term tests whether ICT access reduces the disadvantages associated with rural residence.

Results: A significant rural–urban disparity exists, with tertiary transition rates of 6.1% in rural areas compared with 34.2% in urban areas. Rural residence reduces the probability of transition by 14.5 percentage points, while household ICT access increases it by 9.8 percentage points. ICT access significantly mitigates the negative effects of geographic isolation. Parental higher education has a modest positive influence, whereas gender is not statistically significant.

Novelty and Contribution: The study extends human capital theory by showing that behavioural and informational barriers, alongside financial constraints, shape tertiary education transitions.

Practical and Social Implications: Expanding digital connectivity and providing school-based application support can reduce cognitive barriers, overcome status quo bias, and promote more equitable access to higher education.

Keywords: Behavioural Economics; Status Quo Bias; Spatial Inertia; Higher Education Transition; Rural–Urban Inequality.

*Corresponding author

E-mail address: motanko@uds.edu.gh

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1 Introduction

Spatial geography and economic development converge in the educational transition from the secondary to tertiary sector — one of the most important structural transitions in human capital accumulation in Sub-Saharan Africa (Gu, 2016; Ibouk & Raoui, 2025). In the last 20 years, Ghana has made remarkable progress in increasing mass secondary school attendance, which was driven by concerted efforts on the supply side through policy interventions. There is, however, a sharp macroeconomic paradox as the vast majority of institutions reach near-universal attainment in secondary school but a serious institutional failure at the tertiary transition point. Although thousands of young people manage to pass out of Senior High School (SHS) every year, the overall performance in terms of their conversion to universities, polytechnics or specialised colleges is still very low and skewed by age and region (Fuseini, 2025; Mensah, 2025).

Based on descriptive baselines from Ghana Living Standards Survey Round 7 (GLSS 7), there is a deep spatial and socioeconomic divide in attainment at higher educational levels in Ghana. Gross enrolment ratios in tertiary education are around 16% across the country, but there are significant regional variations. The percentage of SHS graduates who go to higher institutions is over 45% in the richest 20% of urban households. In rural groups, however, fewer than 5% of the young people who complete secondary school can attend tertiary institutions, especially in the northern savanna eco-regions (Mensah, 2025; Nkansah, 2026). Conventional neoclassical economic models of the human capital view of the economy tend to explain this systemic tension almost entirely by hard budget constraints and physical geography. From this classical perspective, rural-urban differences are seen solely through the prism of the immediate direct financial consequences of tuition, high transport margins, and the explicit opportunity cost of giving up rural wages.

However, financial and physical infrastructure constraints are not without their limitations; classical partial equilibrium models have a major analytical deficiency because they do not account for the internal cognitive conflicts, choice overloads, or informational asymmetries that affect decision-making under uncertainty in households. Rural households face an imperfect and costly environment of information both in the real world and about distant urban labour markets and tricky college admissions procedures (Banerjee & Sequeira, 2023; Ramage, 2024). Rather, human choice is ultimately limited by what Herbert Simon called “Bounded Rationality”. The process of compiling, processing, and validating the net value of a higher education degree is cognitively labour-intensive and often very ambiguous for a rural student, who is hundreds of kilometres distant from major national university hubs. When confronted with a vast and unrecognisable set of alternatives, economic agents are not calculating infinite optimisation equations, but using cognitive shortcuts that are more likely to appeal to the immediate, the visible, and the familiar (Singh, 2026; Zappia, 2025).

This informational friction, therefore, creates a strong psychological ‘default’ or status quo bias. When options are highly uncertain, people tend to be psychologically attached to what they have and exhibit asymmetric fear of losses (Rabaa et al., 2022; Singh, 2026). The rural youth cohort finds that staying in the local agricultural, artisanal or informal retail economy is a relatively safe and socially embedded choice, a status quo. Leaving a traditional rural safety net and entering the urban higher education setting is a significant behavioural change, and a leap against geographic and psychological inertia. Spatial inertia is reinforced by status quo bias when information on the long-term returns of tertiary education is not salient and when the costs of tertiary education are not immediately apparent (Kuzmanov, 2025; Simay, 2025).

This paper seeks to bridge this important gap in the literature empirically and theoretically by shifting the focus from a purely macroeconomic supply-side explanation to a behavioural economics approach at the microeconomic level of household-level data. This is an investigation of how bounded rationality and status quo bias work to operationalise and drive educational self-exclusion at the tertiary level in Ghana using the rich cross-sectional multi-modular data from the GLSS 7. More specifically, the probability of enrolment in higher education is modelled as a function of psychological and informational anchors, such as parental higher education reference, salience of information communication technology (ICT) in the home, and distance frictions in the region. This study seeks to offer actionable, structurally sound lessons for the education policy agenda, while revealing hidden household behavioural dynamics that drive investments in education, and to show how digital information architecture and carefully designed behavioural nudges can break spatial inertia and unleash equitable human capital transitions throughout Ghana.

2 Theoretical Framework & Literature Review

Neoclassical Human Capital vs. Behavioural Critiques

There is a long-standing tradition in the theory of education economics that has been dominated by the neoclassical human capital theory developed by Gary Becker and Theodore Schultz (Burnett, 2023; Teixeira, 2023). In this traditional view, school-to-work transitions are seen as a rational, future-oriented investment decision made by rational economic actors seeking to maximise wealth. The net present value of higher education is assumed to be computed by calculating the discounted stream of expected future earnings against the direct costs (tuition fees, materials, housing, etc.) of higher education as well as the opportunity cost (the wages of the local labour market) of foregone wages. In the neoclassical models, if the long-term financial returns are supposed to be greater than these structural costs, a rational student will easily get into tertiary institutions. If systemic bottlenecks and/or regional differences emerge, classical theory imputes the friction solely to hard budget constraints, capital market imperfections or explicit supply-side deficits (Marchionatti, 2026).

Financial resource constraints and physical infrastructure availability are undoubtedly constraining factors in developing economies such as Ghana, but this classical framework has a big analytical blind spot. Neoclassical theory's assumptions of perfect information, infinite computational powers and time-invariant preferences are problematic because they do not account for the fact that some academically qualified young adults refuse to attend college even if, according to the theory, the potential benefits are objectively worthwhile (Femminis, 2026; Montañez Jacquez et al., 2026). Behavioural economics disrupts that hyper-rational approach by adding in the nature of human psychology, cognitive capacity, and institutional speed bumps. Households are not economically isolated from the information-optimising component of costless, frictionless information. Rather, the decision to make the transition to tertiary education is a complex, high-stakes choice and enveloped in profound macroeconomic uncertainty, where cognitive biases and mental shortcuts are often more powerful than the pure mathematical utility calculations.

Bounded Rationality in Educational Choices

The hidden mechanisms that underlie educational self-exclusion at the tertiary level of education require a shift in the theoretical paradigm to that of Herbert Simon's bounded rationality (Cristofaro, 2017; Simon, 2000). Simon (2000) suggested that there are cognitive limits, high levels of informational asymmetry, and limited time in human decision-making. For a secondary school graduate living in a remote, rural area of Ghana, collecting, collating and analysing the complex demands of tertiary-level studies is a very high-friction process. Students face intricate and complex university admission processes, learn to interpret different credit requirements, compare competing institutions' quality indicators, and must assess the likelihood of employment in distant urban labour markets (Kulkarni et al., 2024).

The collection and processing of this abstract information consume a great amount of cognitive and financial energy, so that rural households are unable to really optimise. Rather, they tend to engage in "satisficing" behaviour, making decisions based upon local heuristics, or mental shortcuts, perceived as satisfactory within their environment. If information about the university deadline, scholarship opportunities and the true wage differential between a degree and no degree is not salient or easily discoverable, the perceived risk of college increases significantly. Thus, bounded rationality shows that education exclusion is not just caused by empty wallets, but also by empty information pipelines. As the complexity of the decision gets too high because of information asymmetry and systemic complexity, the rational calculation becomes too complex to make, and the human mind naturally considers the alternative that requires the least cognitive effort (Mohammed et al., 2026).

Status Quo Bias and Spatial Anchor Points

If the person cannot find a mathematically optimal way to reach a goal, an agent's choice architecture will significantly influence the current baseline. This behavioural resistance is codified in the status quo bias, a concept that is central to Daniel Kahneman and Amos Tversky's prospect theory (Eisenstadt & Haugh, 2024). Prospect theory shows that people consider gains and losses not in terms of their absolute wealth, but rather in terms of the change from a psychological reference point, and reveals a significant mental phenomenon known as loss aversion. Losing

something certain and known is a lot more painful than gaining something speculative and further off (Harrison & Swarthout, 2023; Leites & Ramos, 2022; Meunier & Ohadi, 2023).

The status quo is a powerful anchor point, as a social space, in the Ghanaian context of the rural-urban tertiary education transition. The cognitive default option is to stay in the localised rural food system, either by being absorbed into smallholder farming, local artisanal apprenticeships, or informal retail trading (Barrett et al., 2022). This route provides immediate and real economic benefits, social endorsement at the local level, and a sense of the social safety nets that are in place. By contrast, a rural youth has to leave his or her spatial context behind when starting to pursue an urban university education, move to an unfamiliar metropolitan environment, and take significant, up-front psychological and financial risks — for a return that may or may not take place years in the future (Ahmad et al., 2023; Zappia, 2025).

Without a guiding choice architecture, the status quo bias becomes an invisible and self-reinforcing form of behavioural barrier. With the cognitive tendency to remain in rural settings, even when a student may meet all academic qualifications, the inertia to stay in rural communities can be strong. It is always obvious and salient that people are employed informally in the local context, and this future utility is heavily discounted and abstract because of an urban tertiary degree. This results in a psychological 'baseline preference,' such that capable students are 'excluded' at the institutional level because the 'baseline route' is the easiest one to take cognitively.

Rural-Urban Higher Education Transitions in Ghana

The empirical literature on the transition from secondary school to higher education in Ghana shows that structural inequalities are very manifestly spatially located and follow specific geographic and socio-economic pathways. The broad educational expansion, particularly the Free Senior High School (Free SHS) policy, has significantly narrowed the gap for secondary school registration and enrolment into schools nationwide — there is an acute systemic constraint at tertiary school (Akuffo, 2025). Empirically, one of the strongest determinants of the success of an academically eligible student in making the transition to higher education is geographic location. There is a substantial gap between the likelihood of enrolment in tertiary institutions for students from rural and urban areas, especially between the northern and savanna ecological zones.

Existing studies on this cleavage between rural and urban areas tend to concentrate on macro-structural, supply-side factors and on a strict liquidity constraint. The high concentration of higher education institutions is a major issue in respect of structures in Ghana. Many of the country's best public universities, polytechnics, and colleges of special training are particularly concentrated in the major metropolitan and southern training centres, including the Greater Accra, Ashanti, and Central regions. From a rural student's point of view, this spatial imbalance becomes a complex migration issue when considering the choice to pursue higher education (Onyina, 2026). The empirical evidence indicates that rural households need to be attuned to the fact that they cannot rely on regular tuition rates and must consider the high transaction costs associated with relocating long distances, the premium for housing in urban areas, and the increased cost of living for urban households. Moreover, rural households are typically unable to adjust their consumption or enter formal credit to resolve the initial financial constraints facing them, due to credit market failures that constrain the ability of rural families to easily sell or trade assets with high liquidity, which would otherwise clear these initial financial constraints (Agyeibea Amo et al., 2026).

Yet, a substantial and emerging critical educational literature makes it very clear that these physical and financial restrictions, although all-encompassing, are not the sole story; they are shaped by and reinforced by deep informational and social networks (Agyapong, 2026). Rural areas lack the same level of information about university admission requirements, how to apply online and available financial aid programmes. Academic counselling systems in secondary schools are generally not established in rural schools, and end-to-end self-navigation of the complex institutional portals is required. Behaviourally, the inability to see information means there's a huge cognitive dissonance. The longer-term wage advantages of an urban degree are not readily apparent to a student's social network; the greater the perceived risks of relocating are. The current literature has therefore emphasised that the informational gap, or lack thereof, and the lack of local "social proof" (i.e., desire to see immediate peers successfully make the transition to higher education) create a powerful barrier that leads to capable rural youth downscaling their higher education aspirations and choosing not to pursue them (Ayanwale, 2025).

3 Methodology and Data Specification

Data Source and Sample Selection Criteria

The empirical support for this study is based on the secondary data of the cross-sectional micro-level data collected for the Ghana Living Standards Survey (GLSS 7), which is a nationally representative household survey conducted by the Ghana Statistical Service (GSS). The GLSS 7 contains a wealth of multi-modular socioeconomic indicators, with detailed individual and household-level data for each administrative region and ecological zone of Ghana. In this paper, the data extraction is heavily weighted on Section 2, which collects information on schooling histories at a fine level of detail, as well as literacy levels and educational expenditures, and Section 4, which provides detailed information on individual migration profiles, and Section 10, which assesses household access to information and communication technology (ICT).

A rigorous sample selection protocol is employed for the raw microdata to thoroughly test the behavioural mechanics of the tertiary transition threshold. The target analytical sample is obtained by filtering the agents in the youth age group, aged 15 to 25 years. This age group represents the main life period where all of Ghana's young people are likely to undertake secondary education and to make the decision to pursue further education. The sample is also limited to only the youth who have finished the Senior High School (SHS) completion certificate or vocational equivalent to remove any structural noise or noise within individuals who have not achieved it. Given this explicit criterion, the final estimation sample size for the GLSS 7 master data set is exactly 5,142 (qualified youth individuals). This type of selection strategy allows for every person in the final sample in the estimation to have passed the required academic standards, thus making the dependent variable a true measure of revealed behavioural preference and self-exclusion instead of an index of academic eligibility.

Econometric Model Specification

Traditional linear regression models are statistically inappropriate because the outcome of interest is a binary choice: whether an academically eligible individual moves into tertiary education or not, which means that it is discrete, rather than continuous. The OLS estimation of the LPM can have nonsensical predicted probabilities outside the logical range of 0 and 1 and may exhibit inherent heteroskedasticity. This study therefore adopts a non-linear Binary Probit regression approach to the modelling of the structural transmission channels of bounded rationality and spatial inertia (Suwannadi et al., 2026). The Probit model also assumes that the binary outcome is not directly observed, but rather the result of an unobserved latent variable that represents the net utility of the transition to higher education of a particular individual (Wang et al., 2025).

The mathematical formulation of the empirical model uses the probability that a qualified young person will attend a tertiary-level educational institution as a conditional function of geographic friction, information salience, and household reference points. The formal econometric baseline is set on a separate line as:

$$\Pr(\text{Tertiary}_i = 1 | X_i) = \Phi(\beta_0 + \beta_1 \text{Distance}_i + \beta_2 \text{ICT}_i + \beta_3 (\text{Distance}_i \times \text{ICT}_i) + \beta_4 \text{ParentEdu}_i + \gamma Z_i)$$

Within this structural equation, the notation Φ represents the standard normal cumulative distribution function, ensuring that all estimated probabilities are strictly bounded within a meaningful probabilistic range. The parameter Distance_i captures physical and cognitive spatial friction, proxied by the geographic classification of the household relative to major urban educational hubs. The variable ICT_i represents information salience and connectivity, operationalised to measure the household's interaction with digital communication channels. Crucially, the model introduces a multiplicative interaction term, denoted as $\text{Distance}_i \times \text{ICT}_i$, which serves as the core behavioural test of the paper, evaluating whether high information salience statistically flattens or mitigates the negative cognitive drag associated with geographic isolation. The parameter ParentEdu_i captures the psychological reference-point anchor, while the vector Z_i encompasses a comprehensive set of household socio-economic control variables, including household asset quintiles and the gender of the individual, to isolate the behavioural coefficients from compounding wealth effects.

Behavioural Variable Operationalisation

Specific modules in the GLSS 7 are systematically operationalised to give empirical indicators of the abstract tenets of bounded rationality and status quo bias. The dependent variable Tertiary Transition is created as a binary indicator (1 or 0) where 1 means an individual aged 15 to 25 has been enrolled at or completed a university degree, polytechnic diploma, or teacher training certificate, and 0 means he/she stopped his/her studies at the secondary threshold. This zero state virtually separates the behavioural option of maintaining the localised status quo.

Independent variables are carefully designed to reflect cognitive instead of merely financial aspects of choice architecture. The spatial friction of geography is operationalised as a binary rurality status dividing between those who are firmly attached to rural locality clusters and those who live in urban metropolitan areas. Information salience is determined by a composite index of indicators from survey Section 10, which indicates that the household has an active functional smartphone and regularly has access to the internet. This proxy directly assesses the structural channel in which information asymmetry is reduced. The psychological reference point is operationalised by measuring parental educational attainment, that is, whether a parent's head of the household has attained post-secondary education or not (Weston, 2025). This variable is the social proof or behavioural anchor point in the immediate domestic unit. Lastly, the model adds objective monetary controls by creating a matrix of the household consumption expenditure function for each of the five quintiles of household wealth, and by including individual gender controls, which ensure that the estimated behavioural coefficients are not influenced by any implicit constraints on the wealth of consumers or by the demographic barriers to participation in the market (Oyserman et al., 2025).

4 Empirical Results and Discussion

Descriptive Statistics and Spatial Cleavages

Table 1 shows that there are significant rural–urban differences for the 5,142 academically qualified youth in tertiary education transitions and in access to information and communication technologies. Overall, just under a fifth (18.4%) of young people who have finished secondary education go on to tertiary education. But this national average conceals a significant geographical gap. The tertiary transition rate for urban young people is 34.2%, and among rural young people it is 6.1%, giving a rural-urban gap of 28.1 percentage points. This is the largest difference in the table and indicates that there is no uniform access to HE between geographical areas based on academic qualifications.

There is also a large gap in the proportion of household ICT equipment. There is a 51.4 percentage-point gap between 72.8% of urban youth and 21.4% of rural youth having access to household ICT resources. This is relevant to the behavioural part of the study, as poor internet access could limit access to information on tertiary admission criteria, application processes, scholarships and deadlines, as well as possible tertiary education benefits. The large disparity in ICT therefore offers a possible avenue of information whereby spatial isolation in rural areas can be reinforced.

The spatial divide also exists for parental higher education reference points. The gap between the proportion of urban and rural youth who have a parent or household head who has higher education experience is 16.2 percentage points, with 19.8% of all urban youth having a parent or household head with higher education experience and 3.6% of all rural youth having a parent or household head with higher education experience. This implies that the young people in rural areas are less likely to have ready access to information, advice, and social proof regarding tertiary education, from immediate family members or from their social network.

Table 1 Descriptive Baselines by Locality Cluster (N = 5,142)

Indicator Variable	Full Sample (N = 5,142)	Urban Cohort (N = 2,828)	Rural Cohort (N = 2,314)	Spatial Gap (Δ)
Tertiary Transition Rate (%)	18.4%	34.2%	6.1%	28.1%
Household ICT Access (%)	49.7%	72.8%	21.4%	51.4%
Parental Higher Ed Reference (%)	12.5%	19.8%	3.6%	16.2%
Female Demographic Split (%)	47.2%	48.1%	46.1%	2.0%

Source Author's computations, 2026

The gender distribution of the two groups is fairly equal, on the other hand. The difference between the female and male populations of urban and rural areas is small, with urban females accounting for 48.1% and rural females making up 46.1%. This relative gender balance indicates that the high level of difference in tertiary transition between the rural and urban location groups is unlikely to be due to differences in the proportion of males and females within the two groups.

Overall, Table 1 shows high spatial inequality, with rural youth being less likely to make the transition into tertiary education, less likely to report having access to household ICT resources, and less likely to report having a higher-education reference point from their parents. These descriptive patterns align with the study's theorising that geographic isolation might interfere with informational and social-reference constraints to affect higher education transitions. The independent and interactive effects of these factors, however, need to be examined with the results of the Probit regression presented in Table 2, since the associations presented in Table 1 are descriptive only.

Probit Regression Estimates and Multi-Level Statistical Significance

Empirically, it is crucial to explore the descriptive picture of our sample before we analyse the non-linear behavioural parameter estimates. Table 1 shows the socio-economic and informational characteristics that were measured for the 5,142 qualified secondary school graduates in the GLSS 7 data, broken down exactly by geographic locality.

Table 2's econometric results are multi-layered in terms of statistical significance, and directly support our behavioural thesis over the traditional neoclassical assumptions. Geographic Spatial Friction (Rural) is a large, statistically significant inhibitor of enrolment, significant at the 1% level ($\beta = -0.742$, $p < 0.01$). The marginal effect suggests that, while keeping all the other wealth factors fully fixed, just moving to within a rural cluster will reduce the probability of higher education transition by 14.5 percentage points. Physical distance is a transportation cost, and it is also a baseline cognitive barrier.

Table 2 Binary Probit Model Estimation Results

Independent Variables	Coefficient (β)	Robust Standard Error	Marginal Effect (dy/dx)	Statistical Significance
Geographic Spatial Friction (Rural)	-0.742	0.081	-0.145	*** ($p < 0.01$)
Information Salience (Household ICT)	0.516	0.064	0.098	*** ($p < 0.01$)
Interaction Term (Rurality $\times$ ICT)	0.284	0.112	0.054	** ($p < 0.05$)
Parental Higher Ed Reference	0.165	0.089	0.031	* ($p < 0.10$)
Individual Gender Control (Female)	-0.024	0.038	-0.005	($p > 0.10$)
Socio-Economic Controls (Wealth Quintiles)	Included	—	—	Controls
Log-Likelihood	-2,144.62			
Pseudo R^2	0.248			

***Note** ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Source Author's Computations, 2026

Concurrently, Table 2 shows that the level of Information Salience (Household ICT) is significant at 1% ($\beta=0.516$, $p<0.01$), and is a very progressive catalyst. This supports the finding that the presence of active digital communication channels is important in the increase of the probability of enrolment, where they contribute 9.8 percentage points to the probability of transition.

The main empirical test of our framework focuses on the Interaction Term ("Rurality" $\times$ "ICT") in Table 2. There is statistical significance at 5%, $\beta=0.284$, $p<0.05$. The positive interaction coefficient indicates that geographic isolation has a negative, dampening effect, which is greatly reduced with increased information salience. An active digital information pipeline serves as a cognitive buffer, which lessens the impact of spatial inertia even if physical distance from the centres of universities is the same.

The behavioural anchor for Parental Higher Ed Reference, on the other hand, is too weak to even exceed the 10% threshold ($\beta=0.165$, $p<0.10$). The theory also implies that a conspicuous domestic benchmark can have some "social proof" effect to reduce choice anxiety, but does not prove to have such a powerful effect when directly compared to the lived experience of physical isolation and digital connectivity.

Finally, the individual Gender Control Variable (Female) was not statistically significant ($\beta=-0.024$, $p>0.10$) as shown in Table 2. The marginal effect of the same is negligible (-0.5%). The important finding here is that after achieving the secondary completion mark and graduating with an SHS certificate, there is no statistically significant difference between the probability of a female student transitioning to higher education and that of their male counterparts. Gendered entry barriers are completely outweighed by cognitive, spatial and information-related frictions at the very threshold of transition.

Unpacking the Behavioural Dynamics: Discussion of Bounded Rationality

Table 2 shows a strong correspondence between the significance levels and a behavioural interpretation of educational self-exclusion. The classical human capital theories state that education is decided almost entirely based on financial considerations. Yet, the results in our model explicitly include household asset wealth as an asset wealth quintile listed in Table 2, so our findings demonstrate that there are significant unexplained behavioural differences that remain when controlling for the spatial and informational vectors alone.

The findings of the rurality coefficient in Table 2 are overwhelmingly significant (1%), and the interaction term is significant (5%); this confirms the existence of Bounded Rationality. Rural youth are not "mathematically irrational" for not investing in higher education. Instead, they are constrained by a very limited type of cognition in a restricted way.

But when a student is not geographically close to the university hubs and does not have digital connectivity (which is common among the majority of rural students in Table 1), there is complex and fragmented information, much of which is unstructured, that must be navigated to apply to higher education institutions. Dealing with intricate admissions processes and understanding the differences in admission requirements is highly cognitively demanding. In the face of such complexity, boundedly rational agents are forced to rely on mental shortcuts that privilege near rather than far abstraction.

How the status quo bias and spatial inertia work

The psychological effect of loss aversion results in a strong status quo bias when the road to a college degree in an urban university is very unclear due to unequal information. The statistical significance of the spatial friction variable in Table 2 demonstrates that sticking to the home district is a cognitive "default setting."

Access to the local informal sector is a low-friction lifecycle path for a rural SHS graduate, and the benefits of local informal employment are guaranteed, public, and without any disruption of geography or social fabric. On the other hand, the other option, which is to move to an unknown metropolitan area to attend a multi-year tertiary degree, has a great psychological burden (Bernabeu et al., 2024). Up front, the costs are very real; the promise of a future reward is significant, but far less concrete and uncertain in a crowded urban environment.

The psychology behind man, however, causes one to consider the potential risk of abandoning the "community safety net" as being twice as great as the abstract possibility of "speculative gain" in the form of a college degree (Zou et al.,

2022). This behavioural inertia reinforces itself, establishing a systemic trend of educational self-exclusion: If these young people are able and qualified, they will opt out of the educational system because the path of least cognitive resistance is the Status Quo. The fact that parental education did achieve significance at the 10% level in Table 2 further supports this finding that if there is no immediate, domestic reference point to break this perception, the localised status quo is unaffected.

The Interaction Channel as a Behavioural De-Biasing Mechanism

The empirical validation of the interaction term ($p\text{-value} < 0.05$) in Table 2 clearly provides educational policy guidance and direction to focus on. It shows that information salience can structure an individual's psychological reference point.

Active digital connectivity, as defined in the 51.4% digital gap in Table 1, is what rural households need in order to make the physical distance to university networks behaviourally shorter. Access to information in real-time makes the dates and procedures for admission highly visible and salient. It transforms higher education from a faraway and abstract risk-taking to a near and structured reality.

Digital connectivity not only removes noise, but also minimises the cognitive effort required to access data, which reduces the friction of transactions for boundedly rational agents. This empirical evidence demonstrates that human capital disparities between rural and urban areas do not need to be fully resolved, and the physical capacity of universities cannot be expanded extensively before they can be addressed by policy. Rather, specific measures that can make information salient can be used to effectively break spatial inertia, de-bias the default setting, and enable capable rural youth to cross the tertiary threshold with success.

5 Policy Implications and Behavioural Interventions

The results of the econometric analyses presented in Table 2 clearly provide empirical evidence that points to a need for a change in education policies in Ghana. The econometric results presented in Table 2 also provide an empirical mandate for the need to overhaul education policy in Ghana. The mere construction of additional physical infrastructure or the sole modification of tuition fee structures is not enough to eliminate the 28.1 percentage point enrolment imbalance between rural and urban areas illustrated in Table 1, thus underscoring the need for a holistic approach to closing the disparity. Spatial inertia and educational self-exclusion are strongly influenced by bounded rationality and the status quo bias, thereby necessitating interventions to influence the cognitive and informational architecture of choice. This section describes scalable behavioural interventions to reduce the cognitive load of the tertiary application process and to de-bias the default choice environment of rural youth, based on the 5% statistical significance of our interaction term.

Overcoming Bounded Rationality through Salient Digital Nudges

There is a need to reduce the high level of choice anxiety and cognitive overload that rural students face during the tertiary transition if a decentralised and nationwide digital information infrastructure is to be established by the Ministry of Education in collaboration with the Ghana Education Service. In our model, there is a high degree of effectiveness when it comes to breaking information asymmetries: the 1% statistical significance of access to ICTs in households makes them effective tools. But instead of providing a passive, online portal that students need to find and look up complex information, policymakers should provide an automated, active information system.

A particular method is to implement targeted SMS and WhatsApp nudge streams. The centralised platform can leverage the ubiquity of mobile connectivity to connect information about Senior High School students' registration with national databases used to manage applications to the universities. Eligible rural students would then be alerted to complex institutional timelines in real time via their mobile devices, which would be personalised and broken down into micro-tasks. These alerts would cover specific deadlines for applications, localised cut-off points, and step-by-step guides on how to acquire the voucher.

Also, the salience of information needs to be optimised in these digital channels. Mobile messages should use specific, highly local examples of benefits of higher education, rather than abstract, long-term wage statistics. There needs to

be a strong emphasis on public funding opportunities, like the Ghana Students Loan Trust scheme, as well as clear messaging that the loan application process can be done entirely digitally. This intervention makes these processes highly visible and digestible, thus directly lowering the cognitive load of boundedly rational agents that would otherwise have to process a highly complicated bureaucratic process, breaking it down into a series of steps.

De-Biasing the Status Quo Default: Choice Architecture in Rural SHSs

Table 2's rurality coefficient serves as a huge psychological threshold, so interventions should seek to break the "status quo default" to stay in the informal economy. Where the choice environment is unguided, and loss aversion is operating locally, certain advantages of agricultural or artisanal work will always outweigh the more distant and uncertain advantages of a university degree. The status quo bias needs to be overcome by redesigning the choice architecture of the rural secondary school.

One of the most effective structural mechanisms is to build in "default" institutional "matching" via "guided choice architecture". High schools should replace the current laissez-faire application model with structured in-school transition workshops in the last term of the Senior High School academic year. School officials should implement application clinics as a standard part of the school curriculum where every student who is academically qualified is taken through the digital application system. The application process is integrated into the current school system, and its application process becomes the easiest way to do it, so that the process of applying is a passive state of default of the school system, rather than passive self-exclusion.

Conclusively, policy must help overcome the absence of immediate familial models, as indicated by the low 10% significance of parental education in Table 2, through the use of social proof and peer networks. The Ghana Education Service can do this on a localised and decentralised basis by recruiting young graduates from tertiary education institutions in rural areas and sending them back to their home districts where they will serve as visible transition facilitators. The psychological risk of leaving the community is reduced when rural youth observe other students who are from the same socioeconomic and geographic context successfully making the transition to the urban university. This structural shift in reference point decreases the anxiety of losing, lessens spatial inertia and gives qualified students the confidence to cross the tertiary threshold.

Practical and Social Implication of the Study

The results of this study have more practical and social implications, which can be applied in governance, regional planning, climate resilience and inclusive rural–urban development in the Volta Delta Region and other environmentally challenged delta regions. The study indicates that behaviours like institutional trust, social norms, and access to information are more important in driving citizens' participation than some of the socio-demographic factors; this suggests the need to combine behavioural aspects with traditional governance actions (administration and infrastructure) in the design of governance systems.

Practically speaking, the study offers policymakers evidence that building up institutional trust should be a key component of local governance reform. There is a need for transparent decision-making, accountability, and sustained community engagement to boost citizens' trust in public institutions by the District Assemblies, the Metropolitan, Municipal and District Chief Executives (MMDCEs), traditional authorities, and development partners. Investing in the credibility of the institutions might be more effective for developmental outcomes than costly awareness campaigns without trust-building activities or mechanisms.

The results also show that behavioural policy interventions are relatively cheap interventions with very high impact. Social norm messages, information framing, community awareness campaigns, and locally relevant communication are strategies with the potential to significantly increase the uptake of governance and development programmes. These interventions can easily be integrated into climate adaptation projects, environmental conservation projects, disaster risk reduction programmes, sanitation campaigns, and local development planning without significant financial resources. This renders behavioural governance especially appealing to local governments in the developing world with limited resources.

The study further has important implications for regional and spatial planning. The various governance issues in the Volta Delta cannot be handled in the same way, and a one-size-fits-all governance policy approach is not appropriate,

so behavioural interventions need to be adapted to the local environmental and socioeconomic situation. Engagement strategies for coastal communities that are flood-prone and coastal erosion are different to engagement strategies for communities that are inland with infrastructure deficits. Thus, there is a need to complement place-based planning processes with behavioural governance for enhanced resilience and policy effectiveness.

In the social dimension, the results highlight the importance of building collective action and social cohesion for sustainable development. The positive impact on social norms means that trusted community-based organisations, youth groups, women's associations, religious groups, and respected and influential community leaders can act as behavioural intermediaries who can spur community involvement and drive community-led development. This enhances social capital and builds cooperation between citizens and government institutions.

The research also makes a contribution to climate resilience as it shows that behavioural governance can enhance community involvement in climate-related environmental management, mangrove restoration, preparedness for floods, and adaptation programmes for climate change effects. In addition to engineering solutions, policies should include behavioural interventions to enable long-term community ownership of adaptation measures. This holistic approach not only promotes environmental sustainability but also enhances the livelihood security of delta ecosystems.

Moreover, the study holds relevance for inclusive governance and democratic participation. Better communication, such as community meetings, local radio, mobile platforms, and regular feedback loops, can minimise information asymmetries, make it more transparent, and help marginalised communities to be more active in governance processes. Increased citizen involvement leads to greater policy legitimacy and more accountability and better public development programme implementation.

Lastly, the study directly supports sustainable development by making recommendations for governance models that foster resilient communities, climate action, robust institutions, and effective partnerships. By incorporating BE into public policy, governments can have an evidence-based tool to create citizen-oriented governance systems that can solve the complex challenges of rural–urban transformation issues in Ghana and other delta countries in Sub-Saharan Africa.

6 Conclusion, Limitations, and Future Research

Synthesis of Behavioural Dynamics

The paper has taken a different approach from the conventional neoclassical models of human capital to focus on structural and psychological constraints affecting the transition from secondary to tertiary education in Ghana. The empirical analysis uses a behavioural economics approach to micro-level household data from the Ghana Living Standards Survey Round 7 (GLSS 7) to show that the rural-urban tertiary education enrolment gap of 28.1 percentage points is not solely the result of a lack of financial credit. The econometric findings support the notion that bounded rationality and the status quo bias are strong and hidden constraints on human capital accumulation.

Given that the rural residence coefficient is so statistically significant ($p < 0.001$), it is clear that physical isolation is a fundamental cognitive barrier that creates a "choice anxiety" and locks away qualified youth on the paths of familiar local economies. The interaction between distance and digital connectivity, however, is statistically significant at 5%, providing a promising avenue for policy. It demonstrates that the salience of information is a viable means of effectively reducing the negative psychological pull of geographic isolation, without the need for massively scaling up physical university facilities. What is clearer is that the tertiary entry barrier is critical, given that there is no gender difference in our qualified youth sample, meaning that cognitive and informational entry barriers clearly dominate choice architecture.

Empirical and Methodological Limitations

These strong empirical findings highlight data limitations that must be noted. First, the GLSS 7 is cross-sectional data; that is, it takes a "snapshot" of household characteristics, rather than time-series choice logs for individuals. The Probit model therefore creates good correlative channels and behavioural proxies but cannot fully capture the "real

time" process of student thinking or the transient shocks that reduce a student to the default "settling in" configuration.

Second, the baseline indicators in the survey are not psychologically or psychometrically measurable. Consequently, this approach relies on proxy indicators, such as geographical location and the possession of ICTs in the household, to infer the influence of bounded rationality and choice overload rather than using direct measures of cognitive fatigue, risk aversion, or perceived ambiguity. These proxy indicators are useful and well anchored in the context, but they are indirect approximations of the mental heuristics. Last, ICT ownership is closely related to household income, parental education, infrastructure, and other unobserved characteristics that also influence tertiary enrolment decisions; robustness checks or alternative model specifications would strengthen the credibility of the results.

Avenues for Future Research

Going forward, there is a need for targeted field experiments and Randomised Controlled Trials (RCTs) to be conducted in rural Senior High Schools in Ghana in order to fill these gaps in the empirical literature. The key mechanisms identified in our policy framework can be directly tested by staggering the delivery of structured digital nudges, default institutional application clinics, and peer mentorship networks across school districts.

These students could be followed over time, enabling a more accurate, causal analysis of the impact of micro-adjustments in choice design on actual educational choices made in the moment. Moreover, the use of qualitative behavioural diaries and psychometric tests in future versions of the national household survey would supplement the quantitative data. This behavioural exploration is important and will help in tackling spatial inertia, de-biasing structural defaults, and shaping a more equitable and inclusive higher education landscape in Ghana.

Data Availability

Data is available at <https://microdata.statsghana.gov.gh/index.php/catalog/97>

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