

IMPACT OF URBAN – RURAL DISPARITY IN SCHOOL ATTENDANCE ON MULTIDIMENSIONAL POVERTY IN NIGERIA

*¹ADEBAYO, Adekunle Ademayowa (Ph.D.), ²ADEYEYE, Biliamin Adekunle & ³ODUNAYO, Henry Adewale (Ph.D.)

^{1,2}Department of Economics Education, Lagos State University of Education, Oto/Ijanikin.

³Department of Educational Management, Lagos State University of Education, Oto/Ijanikin

*Corresponding Author: adebayoaa@lasued.edu.ng

ABSTRACT

This study examined the issue of urban-rural disparities in education in Nigeria, specifically in terms of attendance at school and its effects on development outcomes. It attempts to empirically affirm the existence of urban - rural bias in school attendance at the primary, junior secondary and senior secondary levels, and the implications of such a bias for multidimensional poverty. The study made use of descriptive research design involving cross sectional (state based) data on relevant variables of the study compiled by reputable national/international bodies. These include the MICS data on the Nigerian education sector by UNICEF-Nigeria and the Nigerian Multidimensional Poverty Index by the National Bureau of Statistics. Collected data were analysed using descriptive statistics, independent samples t test, and ordinary least squares regression technique. The results reveal that there is significant difference in urban – rural school attendance at all levels of the educational system considered while urban – rural disparity in school attendance has significant effect on multidimensional poverty at both the junior secondary and senior secondary levels but not at the primary school level. While disparity in attendance at the junior secondary level increases poverty, it decreases poverty at the senior secondary level. Appropriate recommendations were offered based on the findings.

Keywords: School attendance, Rural-urban disparity, Multidimensional poverty, Nigeria

INTRODUCTION

Globally, improving the quality of educational systems in order to achieve quality outcomes has always been a major concern of the key actors in the educational system. However, achieving quality education in developing countries is faced with several economic, social, political and security challenges. These include poor school governance system, poor policy implementation, poor quality assurance control, inadequate education funding, poor quality of staff, poor infrastructures, dilapidated buildings, lack of educational materials, less qualified and insufficient competent teachers, incessant closure of schools due to labour strike, inadequate human resources training, poor pedagogy content and curriculum, unavailability of ICT facilities, insecurity, rural-urban disparity and marginalization of the rural areas in terms of resource provision and government support, among others (Teboho, 2000; FME, 2004; Aluede, 2006; Nworgu & Nworgu, 2013, Abass, 2012; Olawale, 2016 and Amrevurayire & Ojeh, 2016).

As a developing country, Nigeria is yet to fully harness the full range of advantages associated with education. Although there has been a quantitative increase in the number of schools since independence in 1960, attrition rates remain high and many children continue to leave school with limited or non-existent literacy skills (UNICEF, 2013). Nigeria has the highest number of dropouts and out-of-school children in the World; as at 2013 there are 10.5 million children without formal education and one in every five of the world's uneducated children reside in Nigeria (UNICEF, 2013). In addition, only 61 percent of 6 -11 year-old children regularly attend primary school while only 35.6 percent of children aged 36-59 months receive early childhood education. This situation is even worse in the Northern region of the country and for the girl child with a net attendance rate of 53 percent. States in the North-east and North-west have female primary net attendance rates of 47.7 percent and 47.3 percent, respectively, meaning that more than half of the girls in these areas are not in school (UNICEF, 2024).

Several authors have highlighted the importance of regular school attendance. Epstein and Sheldon (2002) noted that schooling requires commitment to classroom time and activities throughout the entire academic program while Fleming (2008) advises that learners need regular attendance to be highly engaged in classroom activities.

Sekiwu, Sempala, and Frances (2020) asserted that school attendance is a significant factor in academic performance. That is, regular school attendance is linked to higher educational attainment (Watters, 2012). Roby's (2004) School Attendance hypothesis suggests that regular attendance can help learners achieve academic excellence. According to the School of Education, American University, Washington DC, (2024), school attendance is a powerful predictor of not only student outcomes but also the probability of students dropping out of school. Petty (2024) aver that pupils with higher attendance not only perform better in examinations and formal assessments, but, regular attendance also develop the social skill of learners, and creates opportunities for students to access extra-curricular activities including building friendships.

Disparities in enrolment have a long history in the Nigerian educational system, between the regions (the North and the South), gender (boys and girls), location/area (rural and urban) and institution (federal and state) (Teboho, 2000). Cumulatively such disparities engender variation in the degree of achievement in learning outcomes and competencies among the different groups. It also brings about high rate of rural poverty, increased social vices (e.g. armed conflict, drugs and alcohol) and other socio-economic problems such as unemployment, population explosion and food insecurity (Anazia, 2020).

Educational access faces various constraints that could be attributed to rurality. These constraints include the impact of rural location on distance of home from school (which tends to be longer in rural areas), socio-economic status of parents (poverty is more prevalent in rural areas), cultural and religious practices (tends to be more in favour of boys in rural settings), parental level of education (rural parents tend to be less educated than their urban counterpart), expectations regarding returns to education and access to the formal labour market (generally higher in urban areas), quality of schools and adequacy of learning facilities (lower/fewer in rural schools), household attitude towards human capital accumulation (more favourable for urban dwellers) and the nature of human capital provided by the education system (Al-Samarrai and Reilly, 2000; Makintami and Badia, 2023). Thus, in Sub-Saharan Africa for example, several research findings suggest that children who live in urban areas have higher levels of schooling than children in rural areas (Kazeem et. Al. (2010).

Given the above background, this study examined the issues of urban-rural disparities in school attendance in Nigeria. It attempts to empirically validate the existence of such disparity and discussed the consequence for educational outcomes and multidimensional poverty in the country. The study tested two null hypotheses viz: (i) there is no significant difference in school attendance rates for rural and urban areas of Nigeria, and (ii) rural-urban disparity in school attendance, if any, has no significant impact on educational outcomes and multidimensional poverty in Nigeria.

LITERATURE REVIEW

Conceptual Review

School Attendance and Children Out-of-School Rates

School attendance refers to the regular and consistent presence of students at school during scheduled instructional days. Collins Dictionary (2024) define it as "a measure of the number of children who attend school and the amount of time they are present". School attendance is typically measured by attendance record. However, in the absence of such records, other measures such as enrolment rates and children out-of-school rates can be used as proxy. However, while out-of-school rates provides a good measure of educational access, it may not fully reflect actual school attendance among students due to its inability to detect patterns such as punctuality and absenteeism. It is thus a rough measure of school attendance. UNICEF (2023) defines Out-of-School children as "children and young people in the official age range for a given level of education who are not attending either pre-primary, primary, secondary or higher levels of education".

Concept of Multidimensional Poverty

The concept of multidimensional poverty is an attempt to go beyond income-based measures of poverty by capturing the multiple deprivations that people face in their daily lives. It incorporates factors such as health, education and living standards into the determination of poverty. For example, the Nigeria MPI (2022) has four dimensions: health, education, living standards, and work & shocks. There are three measures of multidimensional poverty (MP) namely: incidence, intensity and index of multidimensional poverty. MP incidence (or MP headcount ratio) refers to the percentage of the population who are multidimensionally poor. The value ranges from 0 to 100%. The intensity of multidimensional poverty refers to the average percentage of dimensions in which poor people are deprived or, equivalently, the average deprivation score of poor people. It ranges from 0 to 100%. The

Multidimensional Poverty Index (MPI) is the share of all possible deprivations that poor people experience. It combines both the incidence and intensity of poverty. The MPI value ranges from 0 to 1, with 0 reflecting zero poverty and 1 universal poverty and deprivation.

Theoretical Review

Issues of disparity in school attendance can be analysed from different economic perspectives. One of such perspective is the framework of household economics anchored on the household production framework. Household economics refers to a theoretical framework where households are considered as productive sectors engaging in activities to produce commodities that satisfy various needs such as thirst, hunger, warmth, and shelter ([International Encyclopedia of the Social &](#)). Within this framework, children are seen as economic agents who contribute to family income through their labour services. Hence, schooling of rural children lags behind their urban counterparts due to many factors. Firstly, rural parents may not see how children's education is useful in their local labour market; secondly, in rural areas of developing societies where agriculture is the dominant employment sector, parents may not seek education for their children because prevailing employment opportunities do not require it; thirdly, rural parents in developing nations might worry that formal schooling may lead to the out-migration of their children; and lastly, the cost of traveling to school may seem too burdensome to rural parents who tend to be poorer than their urban counterpart.

In their model of economics of school attendance, Pipergias Analytis, Ramachandran, Rauh and Willis (2008) applied the theory of the allocation of time to examine students' decision to attend or not attend school. In its simplest form, they noted that a significant part of the interactions (direct or indirect) involved in education takes place inside the classroom, where individuals with a high level of knowledge and information attempt to transmit this knowledge to those with less. However, these interactions are guided by various rules as to the level of attendance which individuals must satisfy which are generally either free attendance or mandatory attendance. The student is seen as a utility maximizing agent and in a world of perfect and complete information with no externalities, individual students allocate time among three probable activities with regard to schooling: attendance, self-study, and leisure, in order to maximise their utility with regard to time with a view to building up their human and social capital.

However, allocating time to schooling have consequences or opportunity costs. The decision to attend school therefore is a function of the opportunity cost of not attending. The greater the opportunity cost of school attendance, the lower the time allocated to school attendance. Such opportunity cost is influenced by a wide array of factors including extant rules on schooling, incentives available, type of students concerned, nature of externalities involved, irrationalities and asymmetric information (i.e. disparity in available knowledge about schools and the labour market).

Stylised Facts

School-aged children constitute 27.3% of Nigeria's 220 million population but a shocking 28.7 percent of this age group were not attending school as at 2022. This consists of 26 per cent of primary school age children (8.9 million), 25 per cent of children of junior secondary school age children (3.9 million) and 34 per cent of senior secondary age children (4.9 million) (UNICEF, 2023).

Table 1: Overview of Out-of-School Rates in Nigeria by Location, 2022

Table 1: Overview of Out -of-School Rates in Nigeria by Location, 2022

Area	Out-of-School Rates (%)			Headcount of Children Out-of-School		
	Pry	JSS	SSS	Pry	JSS	SSS
Rural	35	36	44	7,429,600	3,249,700	3,564,000
Urban	11	10	21	1,548,300	667,300	1,347,300
Total	26	25	34	8,977,900	3,917,000	4,911,300

Source: UNICEF (2023) Nigeria Education Fact Sheets, 2023 - Analyses for learning and equity using MICS data

Viewed by states, a wide disparity in out-of-school rates is observed with the rate being generally higher for Northern states irrespective of the level of education (See Appendix 1). Table 2 reveals that there is a wide disparity in school attendance between rural and urban areas in Nigeria and this persists over time. Between 1990 and 2020, the school attendance ratio for urban areas consistently outperforms that of rural areas for both primary and secondary levels of education.

Table 2: Rural - Urban School Attendance Ratio in Nigeria, Selected Years 1990 - 2020

Year	Primary School Attendance Ratio		Secondary School Attendance Ratio	
	Rural	Urban	Rural	Urban
1990	49	98	30	35
2003	56	70	29	46
2008	55	74	41	64
2015	59	81	46	70
2018	N/A	N/A	37	65
2020	67	85	55	73

Source: National Population Commission and RTI International

Also, it has been suggested that observed disparity in urban – rural school attendance correlates with disparities in educational and socioeconomic outcomes. States with higher deprivation in school attendance also tend to have higher deprivations in education and multidimensional poverty. In total, 29% of all school-aged children in Nigeria are not attending school and this aligns closely with multidimensional poverty: 94% of all out-of-school children are also poor (MPI, 2022). In Nigeria, multidimensional poverty is higher in rural areas, where 72% of people are poor, compared to 42% of people in urban areas. The intensity of rural poverty is also higher: 42% in rural areas compared to 37% in urban areas.

Empirical Literature

Various studies have established that there is significant difference in school attendance between urban and rural areas. This difference, which is usually in favour of urban areas, also remains stable across various demographic and socio-cultural influences.

Al-Samarrai and Reilly () compared the attendance rates for primary schools in rural and urban areas in Tanzania for a number of different age groups for the early 1990s. They found a statistically significant difference in primary school attendance rates between urban and rural areas for the age groups examined. Reviewing data from 130 household surveys in 43 developing countries in Asia, Africa and Latin America for the period 1990 - 2006, the Education Policy and Data Center (2008) concluded that urban and rural attendance disparities is significant in many countries while most out-of-school children come from rural areas. Kazeem, Jensen and Stokes (2010) tested the hypotheses that there is no significant difference in school attendance between rural and urban areas of Nigeria using descriptive and multivariate analysis of data from the 2004 Nigeria EdData Survey (NDES). They used the logistic regression analysis to estimate the impact of the explanatory variables on current school attendance. Among others, they found that location affects school attendance of children; the odds that urban children would attend school are 65 percent greater than rural children's.

Bhattarai, Bernasek and Pena (2018) assessed whether there is a significant urban-rural gap in attendance rates in Nepal using data obtained from both survey and school-provided attendance records of students. They found that there is a significant urban-rural gap in attendance rates across urban and rural settings and this is more pronounced for female students. Babangida (2016) examined whether the Boko Haram insurgency in Nigeria has had effects on primary school attendance in Nigeria and the extent to which gender disparity in school attendance exists as a result of the crisis. The study employed a Linear Probability Model and the Oaxaca Blinder Decomposition technique to identify causal differences in attendance rates between Boko Haram affected and unaffected areas. They found that following the Boko Haram insurgency, attendance rates increased rather than reduced in both Boko Haram affected and unaffected states. In addition, the study finds no statistically significant gender differences in attendance rates following the insurgency.

Rafique, Shaukat and Bhatti (2020) investigated the socio-economic determinants of school attendance of primary aged children (5-9 years) at Punjab, India. The study used MICS (Multiple Indicator Cluster Survey) 2014 conducted by Punjab Bureau of Statistics with the selected sample of 31,466 children as a data set. The results of logistic regression suggest that area of residence (rural vs urban), among other factors, determine school attendance.

RESEARCH METHODOLOGY

The study adopted the ex post facto design. It makes use of data from cross sectional survey carried out on the education sector in Nigeria by UNICEF (Nigeria Education sector survey) as well as data from the report of the Nigeria Multidimensional Poverty Index (2022) constructed by the National Bureau of Statistics which was also a cross-sectional survey of all states of the Federation. Due to the data availability factors, especially the absence of nation-wide comprehensive school attendance record, the proxy used to measure school attendance is children out-of-school rate (by level of education i.e. primary, junior secondary and senior secondary school levels) for both the urban and rural areas while multidimensional poverty was measured by the Multidimensional Poverty Index.

The data for the study was analyzed using both descriptive (frequency counts, ratio, mean and index) and inferential statistics. The t-test of independence of means was used to examine whether there is significant difference in school attendance across the educational levels while the classical linear regression technique, ordinary least squares method was used to examine the effect of school attendance on multidimensional poverty. To examine the effect of disparity in school attendance on poverty, three measures of urban – rural disparity in school attendance were constructed in line with the literature using data from the UNICEF survey (Appendix 1). These are: (i) *extent of disparity* in school attendance calculated for each level of education by subtracting rural out of school rate from urban rate; (ii) the *school attendance disparity ratio* which was calculated as urban out of school rate divided by the rural rate. This reveals how well off the urban areas are in school attendance relative to the rural areas, and (iii) *school attendance disparity index* calculated as disparity extent (i.e. urban minus rural rates) divided by the urban rate. The dataset so generated is presented in Appendix

2. States with incomplete data were removed from the dataset used for regression analysis, hence, only 30 of the 37 states and FCT were included for the regression.

The empirical model estimated was formulated in econometric form as follows:

where M is multidimensional poverty index and U , J and S are primary, junior secondary and senior secondary urban – rural school attendance disparity ratios respectively and ϵ is the classical error term.

RESULTS AND DISCUSSION

Two hypotheses were tested in the study. Hypothesis 1 which states that there is no significant difference in Children's school attendance for urban and rural areas of Nigeria was tested using the independent samples t – test while hypothesis 2 which states that Children's school attendance has no significant effect on multidimensional poverty in Nigeria was tested using the multiple regression technique, ordinary least squares method. The results of the tests of hypotheses are presented in Tables 3 and 4 below.

Table 3: Independent Sample T-Test Result for Urban – Rural Disparity in Attendance by School Level.

Variable	Region	N	X	SD	DF	T-value	Sig
Primary School	Urban	30	14.20	23.126	58	3.239	0.002
	Rural	30	30.00	13.387			
Junior Secondary School	Urban	30	13.77	11.371	58	3.907	0.001
	Rural	30	31.63	22.320			
Senior Secondary School	Urban	30	24.80	10.091	58	3.707	0.001
	Rural	30	41.07	21.813			

Source: Authors' computation, 2024

N.B: N is number of samples, X is mean, SD is standard deviation and DF is degrees of freedom

The calculated t values are significant at the 5% level of significance for all levels of educational system considered i.e. primary ($t_{58, 0.05} = 3.239$), junior secondary ($t_{58, 0.05} = 3.907$) and senior secondary ($t_{58, 0.05} = 3.707$) school levels. It could therefore be concluded that there is significant urban-rural disparity in school attendance in Nigeria and this disparity exist at all levels of pre- tertiary education i.e. primary, junior secondary and senior secondary school levels.

Table 4: Regression results of the relationship between school attendance and multidimensional poverty

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.335	.034		9.955	<.001
	PRY	-.009	.042	-.064	-.210	.835
	JSS	.098	.046	.506	2.138	.042
	SSS	-.168	.067	-.712	-2.519	.018

a. Dependent Variable: MPI

$R^2 = 0.320$, Adjusted $R^2 = 0.242$, DW = 1.581, F = 4.087

Source: Authors' computation, 2024

Table 4 reveals that primary school disparity in school attendance has negative but insignificant effect on multidimensional poverty while the disparity at the Junior secondary level had positive and significant effect on multidimensional poverty. In other words, the higher the level of urban – rural disparity in school attendance at the junior secondary level, the higher the level of multidimensional poverty. At the senior secondary school level urban – rural disparity in school attendance has significant negative effect on multidimensional poverty at the 5% level of significance. This implies that an increase in disparity in attendance at this level will lead to a reduction in multidimensional poverty. This may not be unexpected as the children at this level are at an age that they can actively participate in the labour market for blue collar jobs. The impact of such labour supply on employment and income may act to cause at least a temporary reduction in poverty.

1. CONCLUSION AND RECOMMENDATIONS

This study attempts to empirically affirm the existence of urban - rural bias in school attendance in Nigeria at the primary, junior secondary and senior secondary levels, and the implications of such a bias for multidimensional poverty. The results confirm the existence of an urban – rural disparity in school attendance at all levels of the educational system while urban – rural disparity in school attendance has significant effect on multidimensional poverty at both the junior secondary and senior secondary levels but not at the primary school level.

Hence, the study suggests the need for the formulation of policy measures that can raise rural school attendance. Such measures include the introduction of bursary awards and scholarship for rural school children, free rural school feeding programme as well as mass enlightenment programme for rural dwellers on school attendance.

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Appendix 1: Children Out-of-School Rates in Nigeria by State and Location (%)

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State	Primary		JSS		SSS	
	Rural	Urban	Rural	Urban	Rural	Urban
Kebbi	74	16	74	11	78	26
Zamfara	59	25	67	18	72	32
Bauchi	68	17	68	18	82	24
Yobe	57	59	56	50	61	60
Gombe	64	17	62	25	62	26
Sokoto	56	42	51	31	65	32
Borno	55	41	61	39	62	43
Jigawa	48	10	59	10	80	22
Niger	50	8	46	13	49	28
Katsina	35	28	40	25	52	33
Kano	43	17	45	7	55	21
Adamawa	34	19	27	20	44	33
Taraba	32	15	24	8	34	30
Nasarawa	29	16	28	17	32	27
Kwara	48	3	42	12	57	27
Kaduna	24	10	27	9	39	13
Plateau	20	11	21	12	30	23
Osun	8	14	13	21	21	25
Ogun	18	3	22	3	26	16
Enugu	8	11	12	13	17	21
FCT	11	8	20	8	30	15
Oyo	21	4	25	6	31	13
Delta	9	6	14	8	24	28
Kogi	7	5	6	3	18	9
Edo	6	4	10	2	26	17
Ondo	6	3	8	3	21	18
Rivers	3	5	5	6	17	23
Akwa Ibom	3	5	6	12	21	27
Abia	3	1	6	0	20	22
Ekiti	1	3	4	3	6	10

Source: UNICEF (2023) Nigeria Education Fact Sheets, 2023, Analyses for learning and equity using MICS data, UNICEF-Nigeria.

Appendix 2: Indicators of Urban – Rural Disparity in School Attendance (Children Out of School Rates) in Nigeria by State and Level

State	Primary			JSS			SSS		
	Extent of Urban - Rural Disparity	Urban – Rural Disparity Ratio	Urban – Rural Disparity Index	Extent of Disparity	Disparity Ratio	Disparity Index	Extent of Disparity	Disparity Ratio	Disparity Index
Kebbi	58	0.2162	3.625	63	0.1486	5.7273	52	0.3333	2.0000
Zamfara	34	0.4237	1.3600	49	0.2686	2.7222	40	0.4444	1.2500
Bauchi	51	0.25	3.0	50	0.2647	2.7777	58	0.2927	2.4167
Yobe	-2	1.0351	-0.0339	6	0.8929	0.1200	1	0.9836	0.0167
Gombe	47	0.2656	2.7647	37	0.4032	1.4800	36	0.4194	1.8000
Sokoto	14	0.75	0.3333	20	0.6078	0.6452	33	0.4923	1.0313
Borno	14	0.7455	0.3415	22	0.6393	0.5641	19	0.6935	0.4419
Jigawa	38	0.2833	3.8000	49	0.1695	4.9000	58	0.275	2.6364
Niger	42	0.1600	5.2500	33	0.2826	2.5385	21	0.5714	0.7500
Katsina	7	0.8000	0.2500	15	0.625	0.6000	19	0.6346	0.5758
Kano	26	0.3953	1.5294	38	0.1556	5.4286	34	0.3818	1.6190
Adamawa	15	0.5588	0.7895	7	0.7407	0.3500	11	0.75	0.3333
Taraba	17	0.4688	1.1333	16	0.3333	2.0000	4	0.8824	0.1333
Nasarawa	13	0.5517	0.8125	11	0.6071	0.6471	5	0.8438	0.1852
Anambra	-20	6.0000	-5.0000	N/A	N/A	N/A	N/A	N/A	N/A
Kwara	45	0.0625	15.0000	30	0.2857	2.5000	30	0.4737	1.1111
Kaduna	14	0.4167	1.4000	18	0.3333	2.0000	26	0.3333	2.0000
Plateau	9	0.5500	0.8182	9	0.5714	0.7500	7	0.7667	0.3043
Osun	-6	1.7500	-0.4286	-8	1.6154	-0.3810	-4	1.1905	0.1600
Benue	14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ogun	15	0.1667	5.0000	19	0.1363	6.3333	10	0.6154	0.6250
Enugu	-3	1.3750	-0.2727	-1	1.0833	-0.0769	-4	1.2353	-0.1905
FCT	3	0.7272	0.375	12	0.4000	1.5000	15	0.5000	1.0000
Oyo	17	0.1905	4.25	19	0.2400	3.1667	18	0.4194	1.3846
Delta	3	0.6667	0.500	6	0.5714	0.75	-4	1.1667	-0.1429
Kogi	2	0.7143	0.400	3	0.5000	1.0000	9	0.5000	1.0000
Edo	2	0.6667	0.500	8	0.2000	4.0000	9	0.6538	0.5294
Ondo	3	0.5000	1.000	5	0.375	1.6667	3	0.8571	0.1667
Rivers	-2	1.6667	-0.400	-1	1.2000	-0.1667	-6	1.3529	-0.2609
Ebonyi	11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Akwai Ibom	-2	1.6667	-0.6667	-6	2.0000	-0.5000	-6	1.2857	-0.2222
Cross River	3	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bayelsa	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Abia	2	0.3333	2.000	6	0	-	-2	1.1000	-0.0909
Lagos	5	0.2857	2.500	N/A	N/A	N/A	N/A	N/A	N/A
Ekiti	-2	3.0000	-0.6667	1	0.7500	0.3333	-4	1.6667	-0.2500
Imo	1	0	n/a	N/A	N/A	N/A	N/A	N/A	N/A

Source: Calculated by Authors based on data in Appendix 1.

N.B: Calculation of the various metrics of disparity was as follows:

- Extent of Disparity = Urban Rate – Rural Rate
- Disparity Ratio = Urban Rate/Rural Rate
- Disparity Index = $\frac{\text{Urban Rate} - \text{Rural Rate}}{\text{Urban Rate}}$

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