

Functions and Effects of New Connectivities on Rural-Urban Symbiosis and Integrated Planning in Enugu Metropolis, South-East Nigeria

¹Dr Victor U. Onyebueke & ²Dr Akinyinka Akinyoade

Department of Urban and Regional Planning
University of Nigeria
Enugu Campus, Nigeria.

African Studies Centre, Leiden,
2300 RB Leiden, The Netherlands

E-mail: victor.onyebueke@unn.edu.ng, aakinyoade@ascleiden.nl

Abstract

Rural-urban circularity – a local scale of circular migration - is dominant in Southeast Nigeria. Associated connections and round trips derive from underlying economic and socio-political factors as well as cultural attachment to rural roots. Hometowns represent a place of identity and belonging, and they are not only a haven of seeming commonality, culture and tranquillity but also the nucleus of rural-urban linkages and community development. Amidst the massive increase in active mobile telephone subscribers, the paper explored the functions and effect of new connectivities (or telecommunications-enabled connections and transfers) on rural-urban symbiosis, emphasising the planning and shared development implications of Enugu, Southeast Nigeria. Questionnaire surveys with a random sampling of about 145 respondents elicited the study data. The results show that growing reliance on mobile technologies can strengthen and weaken circular migration without necessarily abetting the level of rural-urban symbiosis or circular flows (people, goods, services, resources and information) and investments. As a verified correlate of local community development, we proffer rural-urban symbiosis and its shared development gains as both the prerequisite and vital building block for integrated settlement planning and development in Nigeria.

Keywords: community development, circular migration, integrated (settlement) planning, mobile telephone (telephony), rural-urban symbiosis

Many respondents in these African cases are now busily engaged in efforts to build their network capital through the phone; however, the tipping point at which co-presence is deemed essential is delayed in conditions of precarity (Porter, 2016, p. 440).

Introduction

Rural-urban symbiosis or synergy¹ has been part and parcel of many African societies since colonial times (Gugler, 1971, 1991, 2002; Bah et al., 2003), and ever since, rural and urban areas have continued to “coexist along a continuum with multiple types of flows and interactions happening between those two spaces” (von Braun, 2007: 1). These circular flows of people, goods, capital and remittances, technology, knowledge and

information are unremitting despite widening ‘rural-urban divide’—the ubiquitous phenomena marked by inter-area disparities in development and living standards (Berdegué et al., 2014; UN-Habitat, 2019). Judging from the regional development perspective, the fundamental challenge facing researchers, development agencies, community associations and governments alike is to narrow, if not overcome, ramifications of rural-urban gaps in many development sectors, including digital communications (Buys et al., 2009; Berdegué et al., 2014; Adeleke, 2020). More recently, rural-urban connection and synergy have been highlighted as part and parcel of sustainable urbanisation dynamics, and the fresh mandate is how to incorporate them into contemporary planning and

¹There are many coterminous variants of rural-urban or urban-rural liaison. Some of them include: 'rural-urban interaction', 'rural-urban

linkages', 'rural-urban continuum', 'peri-urban interface', 'rural-urban connection', 'rural-urban interdependencies' (Polimeni, 2006)

management systems (Agergaard & Ortenbjerg, 2017; Agergaard et al., 2019; UN-Habitat, 2020).

Gugler's (2002) heuristic idea of the rural-urban divide as 'multiple distances', signifying tangible and intangible distances of spatial, economic, social, cultural, and political nature is imperative here. It benefits the understanding of individual/household efforts at narrowing or bridging these disconcerting gaps and various bridging interventions at community, sub-national/national, and even global levels.² (Agergaard et al, 2019; Ye & Liu, 2020). The latter is true in the sense of 'infrastructure distance' in the *von Braunian* (2007) logic that "infrastructure works as a bridge between the rural and urban worlds" (von Braun, 2007, p. 12), thereby highlighting the extrinsic and intrinsic values of government and development partner interventions in the rural-urban continuum. One enduring and significant event in the rural-urban transformation debate in Africa has remained the shared or symbiotic effects of circular migration of urban dwellers and households between the cities and village homes (Chukwuezi, 2001; Gugler, 2002; Onyebueke & Ezeadichie, 2011). One critical controversy underlying this debate is whether this symbiotic co-existence of urban and rural lives is rising or receding with modernisation and globalisation (Coquery-Vidrovitch, 1991; Gugler, 2002; Polimeni, 2006; Onyebueke, 2008; Porter, 2016). De Bruijn et al. (2009) has affirmed the upsurge of new communications technologies on the continent and refer to them as the "new talking drums" because of the wide reach and instant connectivity of these space- and time-compressing gadgets. As expected, active GSM and Internet subscribers in Nigeria have increased significantly at an annual rate of about 13 per cent, and as of 2021, amount to a gross total of over 195.1 and 154.3 million subscriptions, respectively (National Bureau of Statistics, 2022). The socio-economic impacts of mobile phones penetration and related new connectivities applications (voice calls, instant messaging, e-banking and transfers, cable televisions, radios, etc.) are changing the nature of communications and interactions between places (urban-urban, rural-urban, and international) and the volume and speed of transfers and accruable benefits

(Baro & Endouware, 2013). Equally, new connectivity is enhancing the agency and participation of marginalised sub-groups like older people, people living with disabilities, and women owing to the "intersection of virtual with physical mobility" (Porter et al., 2018, p. 92; see also Abubakar & Kah, 2021; Iliya & Ononiwu, 2021).

Understanding how the new connectivities affect circular migration and rural-urban symbiosis has become exigent, emphasising the challenges posed by the development divide and how planning can bridge and mutualise the accruing development gains. The paper explores the functions and effects of new connectivities (i.e., telecommunications-enabled connections and transfers via mobile phones and related mobile technologies) on rural-urban symbiosis in Enugu, Southeast Nigeria. This is with a view to exploring how the socio-cultural-cum-community development trends fit into and/or can be incorporated into an integrated planning framework for managing these two settlement types. In so doing, the study builds on two previous works by the corresponding author that dwelt on the urban-rural drift of retirees and circular migration of urban dwellers (Onyebueke, 2008; Onyebueke & Ezeadichie, 2011) but whose development implications were confined to a specific local community or hometown. More precisely, the new task is to explore how reliance on mobile phones and other new communications affects circular travels by urban dwellers to and from their hometowns and the extent to which the emergent economic and socio-cultural benefits and community development potentials constitute a building block for integrated settlement planning.

Literature Review

With the relative recentness of Africa's urbanisation history, long spells of underdevelopment, and decades of urban-biased policies, the rural-urban divide is as profound as it is persistent on the continent. Using the pre-2000 Demographic and Health Surveys (DHS)

²This reasoning is also synonymous with the fact that the rural-urban divide manifests empirically at diverse hierarchical levels - community, sub-national/national, regional, and even global (Sahn

& Stifel, 2004). This same meaning also infuses the definition and use of "circular migration".

dataset³ For 24 African countries, Sahn and Stifel (2004: 26) concluded that:

“Our major finding is that living standards in rural areas lag far behind those in urban areas. While we expected to observe gaps, we did not anticipate such dramatic spatial differences. Furthermore, we find no overall evidence of declining differences in urban and rural living standards despite the (at least) rhetorical emphasis on rural development as the central pillar in the strategies of international organisations, development agencies and non-governmental organisations to generate sustainable growth and poverty reduction.”

Almost two decades afterwards, this grave development divide (in infrastructure provision, employment, and general well-being) persists in Africa and some global South regions (Menashe-Orn & Stecklov, 2018). In Nigeria, for instance, the persisting rural-urban divide is often articulated in terms of disparities in poverty headcount rates (52.1% rural as against 18.0% urban), mortality indexes (infant, adult, and maternal), and/or access to education, employment, housing, health facilities. (National Bureau of Statistics, 2019; National Bureau of Statistics/World Bank, 2020; Menashe-Orn & Maasquelier, 2022). Table 1 compares three recent Demographic and Household Surveys (DHS) in Nigeria with remarkable rural-urban disparities in the general well-being (asset endowments, health and development benefits) between urban and rural dwellers. Table 1 shows a comparative outlook of this rural-urban development between 2010 and 2018 using several indices of well-being. Apart from non-improved water sources, which the rural areas have in abundance (60.6 over and above the urban areas), it is very remarkable to note that mobile phone ownership (highlighted) recorded the least rural-urban divide index of 13.1%, and as such can be said to be the biggest gainer among the indices assessed. While we do not deny incidences of the digital divide (telephone density and Internet usage) across states, cities and villages in Nigeria (Adeleke, 2020), it is evident that new connectivities hold a crucial niche in rural-urban linkage and transformation in the country.

³ The evaluation is based on eight indicators: asset poverty, enrolments, the ratio of girls to boys enrolled,

Table 1: Some dimensions of rural-urban gaps in Nigeria by year

Indicators	2010 (%) ^b		2015 (%) ^b		2018 (%) ^c		
	Urban	Rural	Urban	Rural	Urban	Rural (Diff*)	Per Diff (%)*
Electricity							
Yes	78.0	34.0	81.5	32.8	81.7	37.1 (44.6)	54.6
No	21.4	65.4	18.5	67.2	-	-	
Missing	0.6	0.6	0.0	0.0	0.0	0.0	
Source of drinking water							
Improved source	76.9	47.0	88.7	58.0	73.9	58.4 (15.5)	21.0
Non-improved	22.7	52.8	11.2	41.9	25.9	41.6 (-15.7)	-60.6
Household effects	76.8	70.1	73.2	52.9	70.9	51.6 (19.3)	27.2
Radio	70.3	28.9	74.8	28.4	70.7	30.0 (40.7)	57.6
Television	81.2	52.2	90.2	70.8	94.5	82.1 (12.4)	13.1
Mobile telephone	1.6	0.8	3.1	1.4	1.0	0.4 (0.6)	60.0
Non-mobile	34.9	8.3	41.1	11.1	35.3	10.3 (25.0)	70.8
Refrigerator	12.4	3.4	29.7	6.3	29.7	6.3 (23.4)	78.8
Cable TV	35.5	19.7	43.3	20.5	39.9	18.5 (21.4)	53.6
Generator	4.5	0.5	7.5	0.8	5.7	0.9 (4.8)	84.2
Air conditioner	7.1	1.3	13.4	2.5	10.8	2.5 (8.3)	76.9
Computer	56.1	15.9	59.9	18.4	51.6	16.6 (35.0)	67.8
Electric iron	70.2	23.8	73.2	26.1	70.5	30.5 (40.0)	56.7
Fan							

Sources: (a) National Population Commission (NPC) and ICF Macro (2009) *Nigeria Demographic and Household Survey 2008*. Abuja, Nigeria and Calverton, Maryland, USA: NPC and ICF.

<https://dhsprogram.com/pubs/pdf/fr222/fr222.pdf>, (b) National Malaria Elimination Programme (NMEP), National Population Commission, National Bureau of Statistics (NBS) and ICF International (2016).

National Malaria Indicator Survey 2015. Abuja, Nigeria: NMEP, NPC and ICF.

<https://dhsprogram.com/pubs/pdf/MIS20/MIS20.pdf>, and (c) National Population Commission, NPC and ICF International (2019).

Nigeria Demographic and Household Survey 2018. Abuja, Nigeria and Rockville, Maryland, USA: NPC and ICF.

<https://www.dhsprogram.com/pubs/pdf/FR359/FR359.pdf>

*Authors’ calculations:

Difference (Diff) = Urban % – Rural %

Percentage Difference (Per Diff) = $\frac{Diff}{Urban \%} \times \frac{100}{1}$

infant mortality rate, neonatal care with skilled personnel, contraceptive use, child stunting, and adult malnutrition.

With the marginal ICT Development Index (IDI) 2016 value of 2.48, as compared to the global average of 4.94, Africa remains in the thickest twilight of the Digital Era, yet quite remarkably, the continent has recorded the "highest growth achieved was in the number of mobile-cellular subscriptions, in contrast to other regions."⁴ (International Telecommunications Union, ITU, 2016, p. 5). De Bruijn et al. (2009) believe that 'mobile phone culture' has indeed emerged in Africa; and that mobile phones have somewhat become "an instrument of power, capable of positive and negative outcomes like a double-edged sword" (p. 14). On a positive note, Chapman and Slaymaker (2002) have demonstrated the potential of the upsurge in communications-enabled gadgets (mobile phones inclusive) for speed of information and other transfers in making the once information-poor rural areas awash with "information vital to their lives and livelihoods" (p. 6). Furthermore, mobile phones, with their capacity for distance compression and travel substituting/reconfiguring, are transforming the economic and social landscape of many communities across the rural-urban continuum. While social interactions and access to essential services are growing, many travels are increasingly being substituted by (mobile) phone calls, thus sacrificing face-to-face meetings—an essential fabric of African society—on the altar of virtual mobility (Porter, 2016), but in other ways enabling and empowering hitherto excluded and marginalised groups like poor rural dwellers, women, older people, and the physically challenged (Abubakar & Kah, 2021; Iliya & Ononiwu, 2021).

Even though the two settlement domains (i.e. rural and urban settlements) retain potentially different spatial/environmental, economic, social, cultural, and political sub-systems, the intervening complex sets of in-flows and outflows epitomise the linchpin and pathway to sustainable development. Kammeier (2005) catalogues five categories of flows, namely: agriculture-based, economic, consumption/services, physical or spatial (roads, waterways, and other transport channels), and socio-political transactions. In contrast, von Braun (2007), in the elucidation of his

'stylised rural-urban continuum' idea, chose only two categories—spatial flows (consisting of migration and remittances; goods, services and waste; information; resources, water and nutrients) and sectoral flows (crop/livestock for local use; input markets; high-value agricultural trade; peri-urban and multifunctional agriculture). Even though rural-urban flows are two-sided in nature, they are far from being equitable—overly favouring urban areas at the expense of rural areas, notwithstanding recurrent rhetorics and donor-funded rural/peri-urban development programmes (Sahn & Stifel, 2004; Berdegué et al., 2014). As far back as the 1970s, anthropologists and sociologists—and more lately from the 1980s indigenous knowledge system scholars (see Honey & Okafor, for example)—have focused on the dual rural-urban identity in the then newly urbanising Africa and the home-grown mobilities or circular migration by urban resident between the cities and their hometowns or rural roots. Through his "rural-urban symbiosis" thesis, Gugler (2002: 22) criticised the historiographical interpretation of Coquery-Vidrovitch (1991) and other Western scholars that rural ties of urban dwellers constituted a passing phase in the urbanisation process and were gradually disappearing. This is, however, not the case, as the benefits and development impacts of rural-urban connections are multiplying by the day (Agergaard & Ortenbjerg, 2017; Agergaard et al., 2019).

In Nigeria, new connectivities appear to augment tangible access, face-to-face contact (co-presence), and physical or spatial flows with virtual access, presence, and "electronically mediated exchanges."⁵ of people, goods, services, resources and information. In this manner, the speed, value, and volume of rural-urban flows of all sorts are optimised. Among the significant benefits to the conditions and well-being of rural households and the other marginalised include improved income generation and financial inclusion, social belonging and connectedness, cultural identity, and seamless information sourcing (Baro & Endouware, 2013; Afolayan et al., 2015; Abubakar & Kah, 2021; Agwu, 2021). According to Agwu (2021, p. 129), new connectivities have contributed to rural

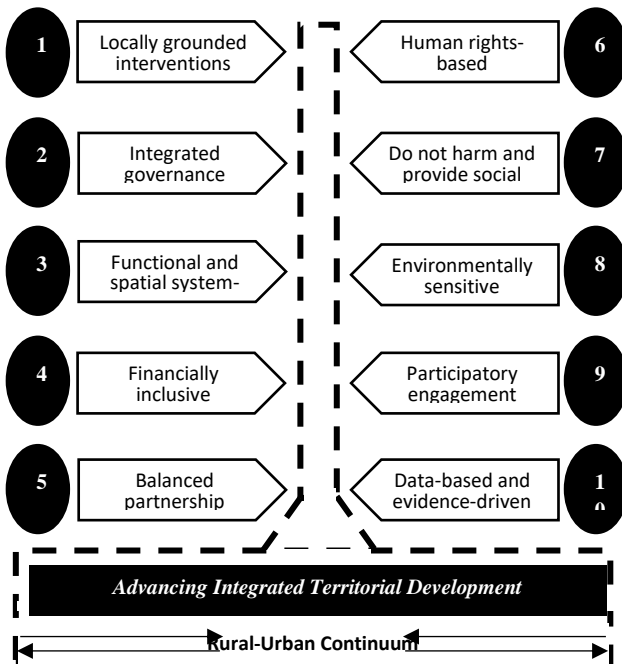
⁴This statement refers to the phenomenal increase in mobile phone subscriptions per 100 inhabitants in Africa, far above the other five ITU regions. Between 2015 and 2016, for instance, while mobile phone subscriptions in Africa grew by 6.04% in Africa, 1.18% in

Asia & Pacific and 0.35% in the Commonwealth of Independent States (CIS), they experienced reductions of 0.54% in the Arab States, 0.27% in the Americas and 0.25% in Europe.

⁵The term was adopted from Porter (2016, p. 435).

development by becoming "a veritable tool to bridge the glaring gaps between rural dwellers and financial institutions". At the settlement level, this throws into sharp relief the UN-Habitat's (2019) action framework for integrated territorial planning to, among other things, ensure sustainability, coordination of ecosystems and governance, food systems and food security, balanced flows of people, goods and services across the rural-urban continuum.

Figure 1: The ten guiding principles for advancing integrated territorial development (Author's conception based on UN-Habitat, 2019)



The UN-Habitat's integrated territorial development framework is comprehensive and specific to the required actions and strategies (Figure 2).

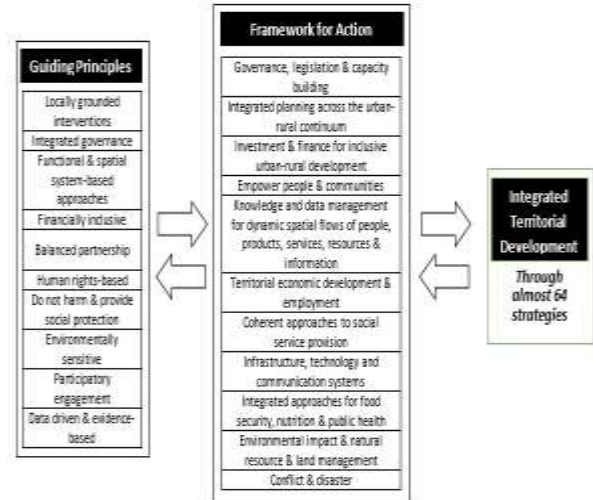


Figure 2. The UN-Habitat (2019) guiding principles and framework for action in advancing integrated territorial development (Author's conception).

A close examination show that this integrated settlement planning is a culmination of major urban planning-compliant prescriptions, some of which have been variously discussed: agriculture-centred market hierarchy and food systems (Fadairo et al., 2018); small town development and rural-urban transformation (Pedersen, 1997, 2003; Agergaard et al., 2019); and the evolving integrated settlement planning strategy (UN-Habitat, 2005, 2019; Ye & Liu; 2020; Onaiwu, 2021). For example, Ye and Liu (2020) define "rural-urban co-governance", which is, in fact, the closest approximation of this comprehensive agenda, as:

"...a continuous co-governance process concerning knowledge and practice between the urban and the rural, in which different stakeholders can cooperate, and take joint measures or actions at the different scales from national to community, in order to promote rural-urban coordination and achieve sustainable development" (Ye & Liu, 2020, p. 778)

Suppose there is a singular lesson to be drawn from the related and overlapping concepts of "integrated settlement planning", "rural-urban co-governance", and "integrated territorial development". In that case, it is the fact that not only is their basic building block of rural-urban symbiosis, but they all focus on the rural-urban continuum. As Onaiwu (2021) has demonstrated

in his Edo State (Nigeria) case study, the Nigerian planning system is still far from the integrated planning ideals. There is a clear overemphasis on the planning and development of state capitals – and by implication, the major population centres –to neglect secondary towns and "with next to nothing in the villages" (Onaiwu, 2021, p. 61).

Research Setting and Methodology

The study area is the city of Enugu, the current capital of Enugu State and the dominant administrative city in Southeast Nigeria (Figure 3). Ever since 1936, when Enugu became the headquarters of Eastern Nigeria under the British colonial administration, the city has retained the capital status all through the successive state creation and demarcations of administrative boundaries in Nigeria [headquarters of former Eastern Region (1936–1967); capital of defunct secessionist Biafra (1967–1969); and capital of East-central State (1970–1976), old Anambra State (1976–1991), and Enugu State (1991 to date)]. Hence, the city's population is more sub-regionally and nationally diverse than other Southeast Nigeria cities.



Figure 3: Enugu in sub-regional and national contexts

The study relied on a descriptive design involving questionnaire surveys undertaken between the 4th and 11th of June 2017. The instrument comprises 24 open-

and close-ended questions, which, besides the respondents' socio-economic background, also explored ownership and usage of mobile phones and related technologies and how such new connectivities affect mobility practices, interaction and social network-building across the rural-urban divide. Random sampling enabled the distribution of 145 questionnaires to be distributed in stages of the two selected sample cohorts - staff members of the University of Nigeria, Enugu Campus (UNEC) and members of a hometown association, the Ajalli Welfare Union (AWU), Enugu Branch (Men and Women Wing)⁶While the choice of the two sample cohorts (equivalent to roughly 38% and 70% of the sample frame) is based on both convenience and purposive considerations⁷, the rationale for the respective sampling frames from which the sample sizes were drawn is informed by gender and staff strength per department or unit (for AWU, the total number of members in attendance for the meeting in question). Out of 145 questionnaires distributed, 110 correctly filled ones were returned, collated and analysed using simple tally methods. The relatively low return rate of the AWU cohort (45%) as against the UNEC equivalent (98%) is adducible to the attendant distractions and pressures during the AWU monthly meeting.

Table 2: Sample size determination and sampling techniques for the Enugu Questionnaire survey

Sample Strata/Sub-strata	Staff Strength of Unit in UNEC/ AWU Members in Attendance (Sample Frame)			Questionnaires	
	Male	Female	Total	Distributed	Completed/ Returned
Ajalli Welfare Union (Men & Women Wings)	49	37	86	60	27

⁶The Ajalli Welfare Union (Enugu Branch) holds its monthly meetings on the first Sunday of every month at the current questionnaire survey was undertaken during the meeting on June 4th 2017.

⁷Convenience and purposive considerations relate to correspondingly the fact that the lead author works at the University of Nigeria, Enugu Campus and is a full-fledged member of Ajalli Welfare Unio.

University of Nigeria, Enugu Campus	27	12	39	14	14
Architecture Estate	7	10	17	6	6
Management Faculty	20	14	34	12	12
office(Environmental Studies)	8	24	32	12	11
Geo-informatics and Surveying	8	10	18	6	6
ICT Unit	3	9	12	4	4
Institute of Development Studies (IDS)	13	14	27	9	9
Library					
Office of the Deputy Vice-Chancellor					
School of Postgraduate Studies Unit					
Urban and Regional Planning					
Sub-total	139	107	226	85	83
Total	188	144	312	145	110

Source: Fieldwork and analysis, June 2017.

Data Presentation and Analysis

Socio-economic Profile of Respondents

Out of the total of 110 respondents drawn from two cohorts (AWU members [27] and UNEC employees [83]), 66.0 % are males, while 34.0 % are females. 66.0 % and 34.0 % were obtained by averaging the percentage of male and female respondents for AWU (Male, 77.8 % and Female, 22.2 %) and UNEC (Male, 54.2 % and Female, 45.8 %). The majority of them (i.e., 85.4 %) fall into the two age categories of 31-45 years (44.6 %) and 46-60 years (40.8 %) and possess university and polytechnic education (87.8 %). The highest educational attainment of the rest is secondary (9.8 %) and primary education (2.5 %). By occupational grouping, the respondents are civil/public workers (59.3 %), private sector workers (20.4 %), professional practitioners (16.7 %), and traders/contractors (3.6 %), with 61 % of them earning an average monthly income of between ₦75,000 and ₦150,000 (or \$224.8 and \$449.5 at the 2017 average exchange rate of ₦333.7 to \$1). The respondents have lived in Enugu for an average of 15 years, and most have lived as tenants (75.7 %) as against owner-occupiers (11.1 %), sharing/cohabitation (6.7 %), and 6.1 % who admitted living with parents.

Effects of New Connectivities on Rural-Urban Symbiosis

All the respondents owned mobile phones and had used them for an average of 12½ years. Against the backdrop that mobile telephony was first commissioned in 2001 by the Olusegun Obasanjo Administration (Baro & Endouware, 2013), the ownership duration is, on average, about three and a half years behind. For purposes of improved communication with extended family and social networks, apart from making regular calls, the people in question also deploy other new connectivity appliances such as Internet-enabled handsets (50.0 %), Internet-enable personal computers (27.8 %), fixed wireless telephones (20.2 %) as well as tablets (2.0 %). Table 3 shows that most respondent (74.5 %) visit their hometowns once or several times a month for personal and family matters and to attend socio-cultural events like burials, traditional marriage, meetings, etc. The increasing reliance on new communication technologies to negotiate the rural-urban divide, particularly mobile phones and mobile money transfers (60.4 %), is also manifest. Most people (68.1 %) admitted that their circular travels (physical mobility) had reduced from slightly to substantially because of the use of new connectivities (virtual mobility).

Table 3: Effects of mobile technology usage and patterns of circular travel behaviours in Enugu

Variables (Frequency)	AWU		UNIT		TOTAL	
	No.	%	No.	%	No.	%
A. Circular travel to hometown						
1. About once a year	3	11.1	16	19.3	19	17.3
2. Several times a year	3	11.1	6	7.2	9	8.2
3. About once a month	8	29.6	48	57.8	56	50.9
4. Several times a month	13	48.2	13	15.7	26	23.6
Sub-total	27	100.0	83	100.0	110	100.0
B. Major reasons for maintaining regular visits to hometown						
1. Caring for aged parent(s)	15	35.7	39	24.8	54	27.1
2. Attending socio-cultural events (e.g. burials, traditional marriage, etc.)	10	23.8	53	33.8	63	31.7
3. Housewarming and repairs/change of scene	13	31.0	46	29.3	59	29.6
4. New/ongoing building projects	4	9.5	19	12.1	23	11.6
Sub-total	42	100.0	157	100.0	199	100.0
C. Use of Mobile Technologies for hometown connectivity						
1. Mobile phone	14	33.3	81	38.4	95	37.5
2. Mobile money transfer	11	26.2	47	22.3	58	22.9
3. E-mail	8	19.1	40	18.9	48	19.0
4. Internet/Social Media/Others	9	21.4	43	20.4	52	20.6

Sub-total	42	100.0	211	100.0	253	100.0
D. Effects of Mobile Technologies on circular travel to Hometown						
1. <i>Reduced slightly</i>	11	40.8	19	22.9	30	27.2
2. <i>Reduced very much</i>	5	18.5	40	48.2	45	40.9
3. <i>Increased</i>	2	7.4	4	4.8	6	5.5
4. <i>No effect</i>	9	33.3	20	24.1	29	26.4
Sub-total	27	100.0	83	100.0	110	100.0

Source: Field survey and analysis, June 2017.

It is crucial, however, to know why so many people are more and more substituting physical mobility for virtual mobility on many occasions, but this does not necessarily imply any abatement in levels of rural-urban symbiosis as characterised by circular flows (people, goods, services, resources and information) and investments (see Rows B and C of Table 3). In other words, little or no substantive exist that the growing practice of sacrificing face-to-face contact or co-presence—the primary ingredient of rural-urban ties or attachments—with electronically mediated exchange is in any way the levels or volumes of flows and investments. Certainly, this presents an issue for further studies.

Incentives and Disincentives to Circular Travels and Their Effects on Hometown Ties

Since the rural-urban connection connotes an origin-destination nexus (Berdegué et al., 2014: 67-70, for example), the selection of Enugu City, Southeast Nigeria, implies one urban starting point and numerous rural endpoints corresponding to the various villages or hometowns of the 110 respondents. In the case of the current research, we recorded up to hundred different villages with assorted distance implications scattered across the five Southeast states (Abia, Anambra, Ebonyi, Enugu, and Imo) and further afield. In addition to the customary incentives of regular visits to one's hometown (refer to Table 3, column B), many urban circular migrants see their villages in a variety of ways, but mainly as—places of memory, relaxation and refuge, repositories of culture and tradition; identity and belonging; as well as centres of opportunities and autochthonous or native assets. The critical incentives in maintaining such rural-based networks are socio-cultural events (31.7 %), village housewarming and repairs (29.6 %), aged parent(s) (27.1 %), and new/ongoing building projects (11.6 %). Constituting a clear majority (about 69.1 %), active circular migrants

are more open to the prospects of returning to their rural abodes after retirement from active service. On the contrary, a somewhat sizeable minority (about 30.9 %) not only share negative and less idealised thoughts on rural living after retirement but insist on remaining abroad 'until death do us part'. Critical opinions of the pro-rural and pro-urban groups regarding prospective retirement locations are compared in Table 4.

Furthermore, several physical mobility challenges may appear as opportunity costs to circular migrants that shun virtual mobility. Respondents listed the major social, economic and/or logistic challenges of recurrent travels to their hometowns as follows, in order of frequent mention: high cost and inefficient system of transportation, the poor state of many rural roads, city engagements and time constraints, road accidents and other related mishaps (like armed robbery, as well as kidnapping, police harassment).

Table 4: Respondents' assessment of their prospective retirement destination

Devised Categories	Respondents' key descriptors and phrases regarding prospective retirement place	
	Pro-rural living	Pro-urban living
<i>Memory, relaxation and refuge</i>	'Serenity of the environment', 'comfort and tranquillity', 'return to my rural roots', 'good rest in my village', 'home is home', 'no place like home', 'natural affinity' etc.	'Tend to be boring', 'diminishing family presence since my parents live in the city', 'not used to rural life', 'access to basic infrastructure', etc.
<i>Repository of culture and tradition</i>	'inevitable and customary', 'it is spiritual and cultural importance', 'to participate in cultural activities', 'traditional commitments', etc.	'negative spiritual influences', 'barriers to my faith', 'my responsibility in the Lord's vineyard may continue to be urban-based, etc.
<i>Identity and belonging</i>	'The political terrain has made it so', 'you must identify with your people', 'my parents live in the village', 'I am a community leader', 'I need to keep in touch with parents and relatives', contribute my quota to my kindred', etc.	'Relatives are too demanding', 'I love visiting not residing', 'keep away from the envy of villagers', 'I was born and brought up in the town', 'I prefer the town where I have friends, I am not the village type', 'I'm able to call and make my

		transfers from my mobile phone', etc.
<i>Opportunities and native asset base</i>	'I plan to establish a business and engage in farming, 'manage family assets and properties, 'the need to look after our rural home and environment.'	'I work more in the town', 'no greener pasture in my village', 'I own a personal house in the city', 'my economic base in the urban abode...', etc.

Source: Field survey and analysis, June 2017.

Table 5: Variations in urban dwellers’ assessment of their attachment to hometowns

Variables (Frequency)	AWU		UNIT		TOTAL	
	No.	%	No.	%	No.	%
A. Attachment or ties to hometown	18	66.7	49	59.0	67	60.9
1. Growing stronger	3	11.1	12	14.5	15	13.6
2. Growing weaker	4	14.8	14	16.9	18	16.4
3. No Effect	2	7.4	8	9.6	10	9.1
4. I don't know						
Sub-total	27	100.0	83	100.0	110	100.0

Source: Field Survey and Analysis, June 2017.

In response to the question on their attachment to their hometowns compared to the urban abode, the results in Table 5, even though mixed, help understand how close such ties may be and their inherent contradictions, as we shall see in the concluding section. Whereas for most urban dwellers, hometown attachments or ties are growing stronger (60.9 %), the same cannot be said for an ample number of others (39.1 %) as can be deciphered converse descriptors and phrases in Table 4, two of which are quoted fully below:

“Both environments (rural hometown and urban) have their places and importance in my existence. I can’t be more attached to any” (our addition).

"My economic base is in the urban abode, notwithstanding that my hometown is my ancestral base to which I will ultimately retire at death. I intend to continue practising my profession after retirement. I think it's better to be visiting rather than stay permanently."

Granted that the incentives outweigh the disincentives, the present obligation is to escalate or scale up these

rural-urban migratory tendencies and trends beyond hometown development functions to incorporate a wider integrated territorial development agenda (see UN-Habitat, 2019).

Discussion and Policy Recommendations

Although ties to the hometown cultivated through circular migration are the reality of many urbanites in the study area, attendant hassles of this 'balancing act' routine of urban and rural living are equally present. Apparently not just for the majority of the retirees (71.7 %) who, as of 2007, preferred to remain in Enugu than relocate to their hometowns (Onyebueke, 2008, p. 278), inter-rural/urban push and pull factors regarding more permanent stay keeps tilting in favour of the city. In the light of the current depletion of rural manpower and resource base coupled with the gapping rural-urban disparities in infrastructure, health and socio-economic well-being (refer to Berdegué et al., 2014), the general pro-urban impulse observed in the study signifies that without adroit interventions, the rural-urban development divide in various levels and scale is likely to worsen. This is because the ostensible ties to rural roots connote participation in city branches of hometown associations and living most of one’s life in the city with guarantees of a final burial site in the rural home (Onyebueke, 2008; Onyebueke & Ezeadichie, 2011). Therefore, counterbalancing this push and pull factors that is currently larger sections of the population (even very active circular migrants), not counting their associational lives, socio-economic and political transactions, is the new development imperative.

In articulating its guiding principles, action framework, and strategies, UN-Habitat (2019) envisages the critical two steps of “creating an enabling environment for strengthened rural-urban linkages” and then adopting “sectorial and thematic entry points to promote integrated territorial development” (p. 15). Therefore, it becomes exigent to construe the functions and effects of new connectivities on rural-urban symbiosis as part and parcel of this enabling environment. The transpositioning of actual trips and co-presence with virtual connections and presence across the rural-urban divide is the new normal for a growing majority of urban residents in Enugu, and by extension, the Southeast sub-region; and without doubt, do guarantee one of the most critical aspects of any planning and development agenda – public participation and support. Efforts to

improve rural-urban connections/transformations are consistent with the Sustainable Development Goal (SDG) No. 11 of *making cities and human settlements inclusive, safe, resilient and sustainable* and in line with far-reaching implications for rural-urban transformations.

Implementing integrated settlement planning in Nigeria would require policy and programme shifts. Onaiwu (2021) offers four recommendations, namely: (i) policy cohesion in the areas of employment, economic investments, and social infrastructure; (ii) local content consolidation in rural/urban industries by establishing a direct link to agricultural produce; (iii) production and adoption of rural master plans; and (iv) subjecting sectoral plans (agriculture, mining, health, education, telecommunications, etc.) to spatial/functional outcomes and supervisions by planning authorities. As practical as these proposals may seem, much more work development, we confine ourselves to just the fourth and fifth action points (empower people and community, and issues of dynamic spatial flows of people, products, resources and information, respectively) as shown in Table 6. Besides the economy of space, the main reason is that the two action frameworks resonate with the current study results and simultaneously represent their rational extrapolation.

Table 6. Strategies for advancing integrated territorial development

ACTION FRAMEWORK	STRATEGIES
Empower people and community	Identify and support various types of inclusive partnerships and enhance synergies at all levels in both urban and rural spaces.
	Commit to equitable and balanced inclusion of urban and rural actors in both informal and formal sectors for equitable participation and benefit sharing.
	Adopt participatory methodologies (such as partnership guides, participatory budgeting and assessment tools) to stimulate equitably and shared knowledge management across institutions and power hubs.
	Establish a framework for enhancing cooperation among communities and other actors in urban and rural areas that facilitates the flow of investment, knowledge and skills necessary for

	addressing the spatial, economic and social disparity between urban and rural peoples and territories.
	Establish local governments and institutions inclusive of working groups, thematic clusters, or partnerships of actors with representatives from both civil society and the private sector.
	Design and convene effective partnerships (formal and informal) across different economic, social, cultural and environmental dimensions to address inequalities and power imbalances between urban and rural actors
Knowledge and data management for dynamic spatial flows of people, products, resources and information	Develop participatory models and methods that map and describe complex systems and their relationships with surrounding rural areas at a territorial level.
	Develop national and local government's capacity to use, collect and process spatially disaggregated data and information in collaboration with all stakeholders.
	Generate new data to close information gaps (e.g. data on tenure and property transactions, local mapping of existing and traditional land tenure systems, origin-destination surveys, and GPS data to access the flows and barriers to movements such as people, goods, services, resources and information between urban and rural areas).
	Collect and make available the data and knowledge on people's mobility (including women, youth and people living with disabilities) across the urban-rural continuum (including international migratory flows).

Source: UN-Habitat (2019, pp. 22-25).

Concluding Remarks

Even though the emergence of mobile phone culture has undeniably reduced circular travels to and from one's hometown, and by extension, acting in concert with modernisation and globalisation, equally weakening certain connections and strengthening others, however, maintaining co-presence or physical presence in hometowns enables circular migrants to keep up ties, exchanges, and transactions with rural people (parents, relatives, and village compatriots), place (village house, village scape, etc.) and events (burial ceremonies, traditional marriages, association meetings, etc.). The increasing reliance on mobile technologies is like a two-

edged sword. It can strengthen (or, in fewer cases, weaken) circular migratory trends and, by implication, rural-urban symbiosis characterised by socio-cultural attachments, associated rural-urban flows (people, goods, services, resources and information) and investments. We have revealed that the abstract entity of memories and experiences of hometown identity, material and symbolic geographies—signified in the current theme by circular migration and associational life—is essential in both inspiring and driving local community development. Since rural-urban symbiosis and its shared development gains create the enabling environment for local community development, we hereby proffer the attendant processes and trends as both the prerequisite and vital building blocks for integrated settlement planning and development in Nigeria. Future studies are, however, required to decipher and distinguish the nature and dynamics of these electronically mediated exchanges across the rural-urban continuum with particular emphasis on shifts in circular trips, flows and shared development gains, and principally, to domesticate the guiding principles, action frameworks and strategies in the country.

Acknowledgements

The draft paper on which this article is based was presented at the 7th European Conference on African Studies (ECAS 2017) under the theme of "Urban Africa - Urban Africans: New Encounters of the Rural and the Urban" at Basel, Switzerland, 29 June to 1 July 2017. The authors thank the two anonymous reviewers and the journal editor for their constructive comments and suggestions. The usual disclaimer applies.

References

Abubakar, N. H., & Kah, M. M. (2021). Mobile Phones and Social Inclusion of Women in Africa: A Nigerian Perspective. *The African Journal of Information Systems*, 13(2), 241-258.

Adeleke, R. (2020). Digital divide in Nigeria: The role of regional differentials. *African Journal of Science, Technology, Innovation and Development*, 13(3), 333–346.

(Working paper No. 192). London, UK: Overseas Development Institute.

Coquery-Vidrovitch, C. (1991). The Process of Urbanisation in Africa: From the Origins to the

Afolayan, T. O., Aiterebhe, E. F., Mejabi, V., Oyekunle, R. A., Bello, O., & Balogun, N. (2015). Mobile phone usage in rural communities in Kwara state, Nigeria. *Inform Technolt*, 12(2), 1-15.

Agergaard, J., & Ortenbjerg, S. B. (2017). Urban transformations and rural-city connections in Africa. *Geografisk Tidsskrift-Danish Journal of Geography*, 117(2), 63-67.

Agergaard, J., Tacoli, C., Steel, G., & Ørtenblad, S. B. (2019). Revisiting rural–urban transformations and small-town development in sub-Saharan Africa. *The European Journal of Development Research*, 31(1), 2-11.

Agwu, M. E. (2021). Can technology bridge the gap between rural development and financial inclusion? *Technology Analysis & Strategic Management*, 33(2), 123–133.

Bah, M., Cissé, S., Diyamett, B., Diallo, G., Lerise, F., Okali, D., Okpara, E., Olawoye, J. and Tacoli, C. (2003). Changing rural–urban linkages in Mali, Nigeria and Tanzania. *Environment and Urbanisation*, 15(1), 13-24.

Baro, E. E., & Endouware, B. E. C. (2013). The effects of mobile phones on the socio-economic life of the rural dwellers in the Niger Delta region of Nigeria. *Information Technology for Development*, 19(3), 249-263.

Berdegú J. A. and Proctor F. J. with Cazzuffi C. (2014). *Inclusive Rural–Urban Linkages*. Working Paper Series N° 123. Working Group: Development with Territorial Cohesion. Territorial Cohesion for Development Program. Rimisp, Santiago, Chile.

Blunt, A., & Varley, A., (2004). Introduction: Geographies of home. *Cultural Geographies*, 11(3), 3–6.

Buys, P., Dasgupta, S. & Thomas, T. S. (2009). Determinants of a Digital Divide in Sub-Saharan Africa: A Spatial Econometric Analysis of Cell Phone Coverage. *World Development* 37(9), 1494–1505.

Chapman, R., & Slaymaker, T. (2002). *ICTs and rural development: Review of the literature, current interventions and opportunities for action* Beginning of Independence, *African Studies Review*, 34(1), 1-98.

- De Bruijn, M., Nyamnjoh, F. and Brinkman, I. (Eds.) 2009. *Mobile phones: The new talking drums of everyday Africa*. African Books Collective.
- De Haas, H. (2006). *International migration and national development: Viewpoints and policy initiatives in countries of origin—The case of Nigeria*. International Migration Institute, University of Oxford, Oxford.
- Fadairo, O. S., Olutegebe, S., & Eforuoku, F. (2018). Agricultural Markets as Drivers of Rural-Urban Interdependence: Lessons from Selected Produce Assembly Markets in Oyo State, Nigeria. In Kapfudzaruwa, F., Kudo, S., Mfuno, O., Hansen, M., & Nyerere, J. (Eds.). *Rural-Urban Linkages and Sustainable Development in Africa*. (93-121). Denver: Spears Media Press LLC.
- Furuholt, B. and Kristiansen, S. (2007). A rural-urban Digital Divide? Regional aspects of Internet use in Tanzania. *The Electronic Journal of Information Systems in Developing Countries*, 31(1), 1-15.
- Gugler, J. (1971). Life in a dual system: Eastern Nigerians in town. *Cahiers d'Etudes Africaines*, 11, 400-421.
- Gugler, J. (1991). Life in a dual system revisited: urban-rural ties in Enugu, Nigeria, 1961-87. *World Development*, 19(5), 399-419.
- Gugler, J., (2002). The son of the hawk does not remain abroad: the urban-rural connection in Africa. *African Studies Review*, 45(1), 21-41.
- Gugler, J. & Flanagan, W. G. (1978). *Urbanisation and Social Change in West Africa*, Cambridge: Cambridge University Press.
- Honey, R. & Okafor, S.I. (Eds.).(1998). *Hometown Associations: Indigenous knowledge and development in Nigeria*. Intermediate Technology.
- Iliya, A. A., & Ononiwu, C. (2021). Mechanisms for mobile phone use in empowerment: A critical realist study of people with disabilities in Nigeria. *The Electronic Journal of Information Systems in Developing Countries*, 87(2), e12158.
- International Telecommunication Union [ITU]. (2016). *Measuring the information society report 2016*. (pp. 1-274) Geneva, Switzerland: ITU. <https://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2016/MISR2016-w4.pdf>
- Kammeier, H.D. (2005). Rural-urban linkages in the Mekong region: A conceptual framework and policy implications for a region in transition. *UN-Habitat, urban-rural linkages approach to sustainable development*. Nairobi, Kenya: UN-Habitat, 9-30.
- Menashe-Oren, A. & Stecklov, G. (2018). Rural-Urban Population Age and Sex Composition in Sub-Saharan Africa, *Population and Development Review* 44(1), 7-35.
- Menashe-Oren, A., & Masquelier, B. (2022). The shifting rural-urban gap in mortality over the life course in low-and middle-income countries. *Population Studies*, 1-25.
- National Bureau of Statistics (2019). *Poverty and inequality indicators in Nigeria*. Abuja, NBS. <https://nigerianstat.gov.ng/download/1092>
- National Bureau of Statistics/World Bank (2020). *Nigeria Living Standards Survey (2018/2019)*. (Report No. 13698), July, Abuja, Nigeria. <https://www.proshareng.com/admin/upload/report/13698-Nigeria%20Living%20Standards%20Survey%202018%20-%202019-proshare.pdf>
- National Bureau of Statistics (2022). Telecoms Data: Active Voice and Internet per State. <https://nigerianstat.gov.ng/elibrary/read/1241133>
- Onaiwu, D. N. (2021). Rural-Urban Integration and Spatial Planning in Edo State, Nigeria. *Ghana Journal of Geography*, 13(1), 50-62.
- Onyebueke, V. U. (2008). Ageing and urban-rural drift in Nigeria: coping or dispensing with city accommodation in retirement. *Ageing Research Reviews*, 7,275-280.
- Onyebueke, V.U. and Ezeadichie, H.N. (2011). Rural-Urban 'Symbiosis', community self-help, and the new planning mandate: Evidence from Southeast Nigeria. *Habitat International*, 35(2), 350-360.
- Pederson, P. O. (1997). *Small African Towns: Between rural networks and urban hierarchies*. Avebury: Ashgate.
- Pederson, P. O. (2003). *The implication of agricultural national policies for the development of small and intermediate urban centres*. London: IIED.

- Polimeni, R. I. (2006). Rural and urban interdependencies in Nigeria: survey results from two Igbo villages. *International Journal of Agricultural Resources, Governance and Ecology*, 5(1), 35-50.
- Porter, G. (2016). Mobilities in Rural Africa: New Connections, New Challenges. *Annals of the American Association of Geographers*, 106(2), 434-441.
- Porter, G., Tewodros, A., & Gorman, M. (2018). Mobility, transport and older people's well-being in sub-Saharan Africa: Review and prospect. *Geographies of transport and ageing*, 75-100.
- Sahn, D.E. and Stifel, D.C. (2004). *Urban-Rural Inequality in Living Standards in Africa* (No. 2004/04). Research Paper, UNU-WIDER, United Nations University (UNU).
- UN-Habitat. (2005). Urban-rural linkages approach to sustainable development. Nairobi, Kenya: UN-Habitat.
- UN-Habitat. (2019). *Urban-Rural Linkages: Guiding Principles. Framework for Action to Advance Integrated Territorial Development*. Nairobi, Kenya: UN-Habitat. <https://urbanrurallinkages.files.wordpress.com/2019/04/url-gp.pdf>
- von Braun, J. (2007, June). Rural-urban linkages for growth, employment, and poverty reduction. In *International Food Policy Research Institute, Washington, DC, USA. Ethiopian Economic Association Fifth International Conference on the Ethiopian Economy June* (pp. 7-9).
- Ye, C., & Liu, Z. (2020). Rural-urban co-governance: multi-scale practice. *Science Bulletin*, 65(10), 778-780.