

The Potential of Rural–urban Linkages for Sustainable Development and Trade

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Abstract

Rural–urban linkages play a crucial role in the generation of income, employment and wealth. Yet, for various reasons the importance of such linkages is not recognized and thus ignored in national economic and trade policies. The present paper investigates infrastructure problems, institutional constraints and trade barriers that tend to discourage linkages between rural and urban regions and thus prevent a process of rural empowerment and economic development. The findings of our review indicate that clustering rural and urban areas into regional planning units may create the necessary enabling environment for extended trade networks and knowledge exchange between the city and the countryside. As such, stronger rural–urban linkages could also play a crucial role in poverty reduction in developing countries

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1. Introduction

When policy makers address important issues such as poverty reduction and economic development, they classify the economic activities as either ‘rural’ or ‘urban’. This distinction between the ‘*rural/agricultural/natural resources*’ sector and the ‘*urban/manufacturing and services/infrastructure*’ sector, however, misses the important linkages that exist between rural and urban activities. As argued by the World Bank (2006), ignoring rural–urban linkages leads to inefficiencies and causes growth-inhibiting inequality. In fact, an important part of industrial growth in most low-income countries can be attributed to the forward and backward linkages with agriculture – e.g. processing and manufacturing of agricultural raw materials (forward linkages); and manufacturing of agricultural inputs (backward linkages). A better understanding of the opportunities and constraints of urban–rural linkages therefore will contribute to sustainable development through the adoption of appropriate economic and social policies as well as interventions. As Evans (1990) has argued, any discussions on development need to consider rural–urban linkages with regard to both economic development and structural transformation. OECD (2013) also adopts the rural-urban partnerships approach for economic development, since they argue that this approach help economic development through enhancing the production of public goods, achieving economies of scale in public services, developing new economic opportunities and capacity building, improving administration, taking into account negative externalities, and dealing with the coordination failures. Likewise, Global Monitoring Report (2013) emphasizes the important role of the rural-urban linkages for poverty reduction.

At the micro-level, rural–urban linkages are important tools for understanding the complexities of people’s livelihoods and their strategies, which involve mobility, migration and the diversification of income sources and occupations. The remittances that most rural households depend on are the result of this mobility and migration. High levels of multi-activity are also the result of the income and occupation diversification that most rural individuals and households practice when combining farming with non-farming, as well as with off-farm¹ activities; this is especially true among the younger generations and unmarried

¹ Non-farm activities that are carried out on the farm can include, e.g., furniture- and brick-making, brewing and coffee-processing for sale on both urban and rural markets. Off-farm activities are carried out away from the farm and can include work as village school teachers, village medical personnel, road construction and

young women in rural and peri-urban areas. At the macro-level, the demand created by the urban-based markets is crucial for rural producers and it is these same urban-based markets that link rural producers to regional and international markets (Tacoli, 2006).

Spatial rural-urban linkages, which are flows of people, goods, money and information between urban centres and rural regions, are important drivers of economic activities. Rural–urban linkages also involve sectoral linkages such that demand from rural consumers is crucial for urban enterprises and agricultural producers rely on urban markets. Okpala (2003) also adds the flow of ideas and the flow of diffusion of innovation to the rural-urban linkages.

It should be noted, however, that many people in rural areas engage in ‘urban’ activities, such as manufacturing and service provision and, likewise, many people in urban areas engage in agricultural production, either for household consumption or for sale or both. The rural and urban economies therefore are interdependent, intertwined and complementary.²

The objective of this study is to analyse the importance of infrastructure, market and non-market institutions, and trade in facilitating rural–urban linkages. Therefore, the study investigates the infrastructural, institutional and trade barriers to effective links between rural and urban regions. It further contributes to identifying strategic policy and programme interventions that can help create infrastructure and encourage institutions to forge dynamic links between rural and urban regions. Furthermore, the study addresses how rural–urban linkages promote sustainable development and the role of trade in this process, as the lack of optimal rural–urban linkages leads to inefficiencies, poverty and inequality that inhibit growth. Conversely, strong linkages enhance sustainable development, because they channel resources to where they have the largest net economic and social benefits. Therefore, rural–urban linkages need policy attention that we also discuss in the study. The results of the study

maintenance workers, administrative and clerical personnel, etc. (Baker, 1995). Haggblade et al. (2010) describe non-farm economic activities as all economic activities – mining, manufacturing, utilities, construction, commerce, transport, and services – other than ‘production of primary agricultural commodities’.

² Irwin et al. (2010) note that in rural North America labor-saving technological progress, reductions in transport costs, and rising household incomes increased rural-urban interdependence. See Reimer (2010) for the rural-urban interdependency in Canada.

suggest that rural–urban linkages are not only important in relation to the policies meant to address poverty reduction and but also in relation to economic and sustainable development.

Our aim, therefore, is to better understand the role of the rural-urban linkages for sustainable development, and therefore, in this study, we try to answer the following questions: How can the rural-urban linkages enhance sustainable development? Can rural-urban linkages be a solution to the growing labor force in rural areas? And doing so can it be a way out of poverty for the rural poor? What is the role of trade in this process? However, our main conclusion is that affirmative answers to these questions depend on the connection of the rural markets to national and international markets. Thus, openness to trade and appropriate domestic policy stances can enhance the rural-urban linkages, therefore, sustain development and reduce poverty. Furthermore, our study describes the challenges and policy recommendations for strengthening the rural-urban linkages by examining key factors that affect and enhance the rural-urban linkages.

Section 2 defines ‘urban’ and ‘rural’, ‘rural–urban linkages’ and the ‘rural–urban continuum’; and shows that rural and urban areas are indeed interdependent. Section 3 illustrates the connection that exists between rural–urban linkages and livelihood strategies. It also discusses that the usage of the urban opportunities depends on urbanization, innovations, sectoral transformations and international trade. Therefore, this section especially emphasizes the role of trade in strengthening the rural-urban linkages. In addition, we also mention the importance of the non-farm activities for the rural households’ survival strategy that are again possible with international trade. Section 4 discusses mobility and migration between rural and urban areas. The flows of information, money and goods through mobility and migration help strengthen the rural-urban linkages. Section 5 overviews the different approaches to development; and discusses policies, market institutions, small urban centres, infrastructure, and information that enhance and hinder the rural-urban linkages. The main conclusion of this section is that trade agreements and/or trade networks by strengthening the rural-urban linkages determine the sustainable development. Section 6 concludes by highlighting key drivers of the rural-urban linkages, and recommending specific policies for sustainable development for both rural and urban areas.

2. Defining ‘Urban’ and ‘Rural’ and ‘Rural–urban Continuum’

2. 1. Defining ‘Urban’ and ‘Rural’

Most governments define an urban centre in one of four ways (Frey and Zimmer, 2001; and Tacoli, 2006):

- Through population size thresholds;
- Through population size thresholds combined with measures of population density or the proportion of the population employed in non-farm activities;
- Through administrative or political status; or,
- Through lists of settlements defined as ‘urban’ in the national census.

However, these definitions are not without flaws. For example, many European and Latin American countries consider 2,500 inhabitants an appropriate population-size threshold, whereas many African nations use a threshold of 20,000 inhabitants. Therefore, it is difficult to compare the urban areas internationally and make generalizations (Tacoli, 2004). Similarly, the definition of urban boundaries poses a problem. Firman (1996) shows that in Southeast Asia’s Extended Metropolitan Regions, agriculture, industry and suburban developments coexist side by side in areas with a radius as large as 100 km. For example, in Penang and Malaysia, the expansion of metropolitan areas into the countryside since the 1970s takes place as a result of the government policies that favor industrialization over agriculture (Ghazali, 2013). Furthermore, high mobility of the population in the form of circular migration and commuting within these regions further blurs the ‘rural-urban divide’. Von Thünen and Christaller pointed out these linkages and developed the rural–urban linkage concepts in their pioneering work. In 1826, von Thünen analysed the spatial allocation of economic activity by using a model of agricultural land use. He showed that land use is a function of transport costs to markets and the farmer’s land rent. Concentric rings of agricultural activity around a central city, with dairy and intensive farming closest to the city, followed by timber and firewood in the second circle, grain production in the third, and finally, ranching and livestock activities in the fourth circle, were used to describe his model. In von Thünen’s model, the spatial allocation of economic activities was determined by the urban demand. However, his model did not allow for roads or railways that make it easier to transport goods over long

distances. In 1933 Walter Christaller developed *the central place theory* to describe how settlements are formed and spaced out relative to each other. Although he acknowledged the importance of the marketing principle for these rural–urban linkages, he placed greater emphasis on the spatial organization of administrative activities which consist of hierarchical systems that will facilitate political leadership, administrative control and comprehensive regional planning (Preston, 2009). However, von Braun (2007) criticizes these early models that ‘are based on strong assumptions such as homogeneous spaces, uniform consumer preferences and proportionality of transport costs to distance while they are really characterised by different factor endowments’.³

In a recent study by the Organisation for Economic Co-operation and Development (OECD), ‘urban’ is defined by economic function rather than administrative boundaries. Population density and travel-to-work flows are used as key information in the definition; therefore, urban areas are characterized by densely inhabited ‘urban cores’ and ‘hinterlands’ whose labour market is highly integrated with the cores. Although, this OECD study recognizes the importance of the linkages and interactions between cities and those between urban and rural areas for economic production, it hardly mentions the role of these linkages for sustainable development.

2. 2. Rural–urban Continuum

The population of a country is divided into ‘rural’ and ‘urban’ according to particular features – e.g., according to the settlements they live in and the sector in which they earn their living. However, this definition ignores the fact that rural households rely on urban income sources, such as remittances and income derived from producing for consumption in the urban markets; urban households also rely on rural resources, especially in low-income countries. While rural specialists mention *rural industrialization* and ‘off-farm’ and ‘non-farm’ employment by way of ignoring the role of urban centres, urban specialists completely ignore the role of agriculture for urban development. All settlements should be seen as occupying a

³ However, Swenson and Eathington (2013) find components of central place theory still to be useful to explain the ongoing flow of rural trade and service sectors into urban centers since the peak of the farm debt crisis in the rural parts of the Midwestern areas of the Mississippi River.

space along a continuum, with respect to both their population size and economic activity.⁴ This is a consequence of the fact that many households in rural areas rely on non-agricultural employment and income, while urban agriculture plays an important role in most urban areas, and especially for low-income urban households. The Food and Agriculture Organization of the United Nations (FAO) has emphasized the fact that food and nutrition security can be addressed by envisioning a continuum between urban and rural landscapes and actors (FAO, 2011).

The importance of this continuum was acknowledged by Jane Jacobs, in her book *'The Economy of Cities'* (1969), in which she argued that the distinction drawn between city commerce and industry on the one hand and rural agriculture on the other is artificial and imaginary. She also found it difficult to make a distinction between 'city-created work' and 'rural work', as well as between 'city consumption' and 'rural production'. She also argued that cities can serve as engines of economic development of rural areas, as was clearly the case in Japan.

Krüger (1998) found that 5–10% of all plots in low-income housing areas and service areas in places like Gaborone and Francistown, Botswana, are home gardens, devoted to growing vegetables, maize and sorghum for subsistence, with excess production sold at market. In addition, 50% of low-income urban households conduct farming activities on their land. In a low-income town such as Old Naledi, an outlying community of Gaborone, some 25% of households keep both cattle and land that serves as a safety net for the urban poor. However, there is also a trend in cities in Africa toward 'supermarketization' (replacing informal food production and consumption) (Hebinck, 2011). In wealthy cities in developed countries a reverse trend towards farmer's markets can be observed, but this relies heavily on the support of municipalities. Moreover, the link to rural areas is either of a recreational nature (food from the region/agritourism) or related to urban industry transplants as Jane Jacobs illustrated in the case of Tokyo in Japan (Jacobs, 1969). However, rooftop gardens in developed countries as well as in developing countries are not only popular and trendy for their environmental and

⁴ Lichter and Brown (2011) describe the 'rural-urban interface' as the 'urban-rural interdependence and boundary crossing, shifting and blurring'.

financial benefits, but they also make substantial contribution to the self-sufficiency of the cities.⁵

Potts (1995) reported that the maintenance of rural–urban linkages and of rural assets acts as an emergency reserve in sub-Saharan Africa. These linkages persist long after migrants have left their home towns and even when the home villages are far removed from their nearest urban centres. For example, rural–urban linkages are sustained through livestock ownership and land tenure because migrant households that own livestock and land return home more often (Krüger, 1998; Lesetedi, 2003; Edaku, 2010; Uchenna et al., 2012; Posel and Marx, 2013). Likewise, in peri-urban communities in the Toluca Metropolitan Area, west of Mexico City maize is produced for an insurance strategy against volatile job markets as well as for making homemade tortillas - suggesting the persistence of maize production in peri-urban areas (Lerner et al. 2013). These rural–urban linkages are important and any disruption to such linkages may be a severe threat to both urban and rural households.

3. Rural–urban Linkages and Livelihood Strategies

Most individuals or households in low-income countries straddle the rural–urban divide through income and occupation diversification and migration.⁶ Time devoted to, as well as the income share derived from, non-farm and off-farm activities are therefore substantial parts of the lives of rural households.⁷ The most successful rural households use urban opportunities and exploit urban niches in addition to agricultural land resources. Such households combine agricultural production with non-farm and off-farm income-generating activities. By contrast, the least successful rural households are non-diversified. However, the entry of rural people into non-farm activities has only been possible where there is availability of non-farm employment opportunities of the type that arise from urbanization, innovations, sectoral transformations, and national and international trade. Therefore, the role of trade in spreading and strengthening the rural–urban linkages should be emphasized. For example, new agricultural technologies and innovations, modern farm inputs, and the increased labor

⁵ See for example, Mok et al. (2013) for developed and Hamilton et al. (2013) for developing countries.

⁶ Occupational diversification is defined as non-agricultural, income-generating activities that are undertaken by rural residents and farming activities undertaken by urban residents (Bah et al., 2003).

⁷ For example, non-farm income increases farm productivity by increasing the purchase of modern hybrid seeds, fertilizers, and other inputs, see Oseni (2007) for Nigeria.

productivity on the farm release (poor) workers from agriculture to non-farm activities. In addition, new investments in non-farm sectors take place with an increase in farm incomes and rural savings, (Hazell and Haggblade, 1991; and Hazell and Ramasamy, 1991). As farm income grows, the demand for non-farm goods and services increases, (Hossain, 2004). To meet this demand, rural economic activities are diversified into production of rural non-farm goods and services. However, expansion of the rural non-farm and farm economy is possible with enhancing growth in tradables and linking rural areas to external markets that help expand rural markets and employment. Thus, the rural non-farm economy provides economic opportunities for the rural poor if only productivity of rural tradables is ensured for the competitiveness in external markets, (Haggblade et al, 2010). However, this requires investments in agricultural technology and innovations, rural human capital, health, communications, transportation, and electrification.

National employment data records only people's primary activity; however, individuals can engage in multiple activities, some of which can be seasonal or temporary or informal or can be related to the individuals' life courses. Indeed, Ellis (1998) reported that the proportion of rural households' incomes that are derived from non-farm activities (including migrants' remittances) can reach as high as 50% in sub-Saharan Africa and 90% in South Africa. This proportion is estimated to be 60% in South Asia (Reardon et al., 2001), 51% in Asia, 34% in Africa (75% in Namibia) and 51% in Latin America (Reardon et al., 2007). This indicates that rural households rely on non-farm and off-farm activities as well as migrant members' remittances.⁸ The non-farm activities of rural households are part of a survival strategy that aims to reduce risk, overcome seasonal income fluctuations and respond to external and internal shocks and stresses – e.g., economic and financial crises (Baker, 1995 and Haggblade et al, 2010). Similarly, Bah et al. (2003) found that farming is an important economic activity for low-income urban residents, both in terms of household consumption and of income-generation – e.g., the growing of both subsistence and cash crops – in Tanzania and Mali. However, for wealthier urban residents in peri-urban regions, farming is associated with an important investment motive. The heads of such households re-invest their profits from urban-based activities into agricultural production in order to increase their capital and accumulate

⁸ See for example, Otsuka and Yamano (2006) and Otsuka et al. (2009) for Asia and Africa for a detailed analysis.

assets. This causes the agricultural sector in peri-urban areas to undergo major transformations – e.g., a switch from a mix of subsistence and cash crops to commercial farming and from small-scale, family farms to larger farms that rely on wage labour.

Emerging employment opportunities in urban areas (e.g., those brought about by the trade liberalization efforts made in Tanzania since 1984),⁹ in combination with affordable transportation services, have increased mobility or migration, which has facilitated income diversification. Gender and generational relations are also important in shaping rural–urban linkages, as reflected by the higher levels of multi-activity among the younger generations and among unmarried young women in Africa. For example, although young people are expected to contribute to farming, they have little say in farm management because absolute control over the land and farming decisions is held by the older men in the family (Lerise et al., 2001). In addition, in south-eastern Nigeria, if young men from rural settlements do not find work after a period of time in the urban centres, they are derided as being lazy (Okali et al., 2001). Likewise, urban labour markets might offer more work opportunities for women than do the rural areas – especially for women who might have lost their rights to land following the death of or their separation from their husbands, or for women with little prospect of inheriting any land. Young women often migrate further than young men and remit a higher share of their income (Tacoli and Mabala, 2010). Ali (2013) shows that rural–urban linkages between Bahir Dar and its surrounding rural areas in Ethiopia benefited females the most through their participation in the non-farm activities. Rural–urban linkages thus redefine ‘households’ as ‘multi-activity and multi-local units in which members engage in a variety of income-generation in a number of different locations’ (Tacoli, 2006).

A rise in the income levels of the rural population due to the diversification of their livelihoods would not only increase demand for manufactured goods and services among these populations, which would in turn stimulate the growth of local towns and urban areas, it would also trigger agricultural growth. Furthermore, small-scale farmers would be stimulated by the growth of local urban markets and by the increased demand for agricultural products (Tiffen, 2003). Indeed, Tiffen (2003) found that, ‘a multitude of small investments linked to

⁹ Similarly, since 1978, a large migration to major foreign trade centres in the coastal regions of China has occurred (Chen and Parish, 1996).

technologies and products in agriculture' are funded by remittances from family members engaged in non-farm activities.

The 'virtuous circle' model of regional development considers urban centres, through their provisioning of markets and services, to be the engines of agricultural growth for rural areas. Growth in the agricultural sector is then translated into an increase in non-farm employment and an increased demand for both agricultural and manufactured goods and services. However, case studies such as that conducted by Bah et al. (2003) have shown that this interaction is more complex and was achieved in only two urban centres: Aba, in southeastern Nigeria, and Himo, in northern Tanzania. These two urban centres have played an important role in the development of their surrounding regions because both have been integrated into national and international trade networks. Therefore, national and international trade networks, by providing enabling environments, constitute an important structure for regional and sustainable development. Furthermore, most developing countries have a comparative advantage in exporting their agricultural production to world markets. Without access to and integration into national and international trade networks it would be difficult to overcome the constraints associated with agricultural production and to make farming attractive to the younger generations and to women who are steadily abandoning the rural areas. This suggests that macroeconomic policies, such as those that focus on the liberalization of international trade, can have an important impact on local economies. Therefore, greater emphasis should be placed on national and international trade, as well as on the rural–urban linkages that connect rural producers to their domestic and external markets, in order to address the potential and limitations of regional economic development and sustainable development.

4. Mobility and Migration between Rural and Urban Areas

Mobility – the commuting between rural areas and urban centres – and migration are both important parts of livelihood strategies. Mobility and migration have always been integral parts of economic development policies. For instance, the modernization view that prevailed throughout the 1950s and 1960s initially supported rural–urban migration; it was only later that migration came to be seen as problematic and a cause of growing urban poverty. Regional development planning, therefore adopted the objective of finding ways to attract rural migrants to local towns rather than to larger cities (Satterthwaite and Tacoli, 2003).

Migrants' remittances not only contribute to rural economies, but are also important parts of household livelihoods – household income diversification and risk strategies (Barret et al, 2001; and Ellis and Freeman, 2004). In Mali, Nigeria and Tanzania, for example, anywhere from 50% to 80% of households have at least one migrant member and remittances not only contribute to households' consumption, but also are re-invested in local production activities (Bah et al., 2003). Similarly, in Vietnam's Red River Delta, seasonal migrant workers work in the urban construction sector and remittances are invested in the intensification of agricultural production in the migrants' home villages (Thanh et al., 2005).¹⁰ In a recent study, Mai et al. (2013) show that relaxing China's household registration system over the period 2008 to 2020 will increase GDP, consumption, and wages due to rural labour flows from agricultural and rural non-agricultural sectors into urban sectors.

Person-to-person financial flows (e.g., migrant remittances) constitute the majority of financial flows from urban centres to rural areas, because the financial flows to villages from financial institutions, such as banks and credit associations, are very low and are considered to be one of the weakest rural–urban linkages. Therefore, migrant remittances strengthen the financial linkages between urban and rural activities.

Migrants maintain and accumulate assets both in their home (rural) areas and in their host (urban) areas as part of a broader livelihood strategy. Krüger (1998) noted that migrants in Gaborone, Botswana, retained strong ties with their home villages and invested in rural areas in the face of declining urban income, limited employment opportunities and growing costs of living in the cities.

Migrants – and especially commuters – by providing all sorts of information to villagers – especially information on agricultural prices, agricultural products and consumer preferences – enhance the knowledge and bargaining position of rural producers at the local, national and international levels. Both local and central governments, therefore, should pay special

¹⁰ Oberai and Singh (1980) found that remittances are also invested in improving agriculture in India. Similarly, the development of irrigation facilities was the main motivation for migration and remittances in India (Shah, 2005). Likewise, remittances in Swaziland were used to increase agricultural productivity (Simelane, 1995).

attention to maintaining adequate transportation infrastructure, and to ensuring the mobility and access to employment in urban areas that are important for rural–urban linkages.

5. Rural–urban Linkages, Policies and Institutions

Policies that seek to address rural–urban linkages and, by extension, livelihood strategies are relatively recent developments. However, the agricultural sector and its development have always been a key part of the economics of development. In the 1950s and 1960s, ‘modernization’ was characterized as a shift of labour towards higher productivity sectors – e.g., from agriculture to manufacturing and services (Singer, 1964). The widely used Lewis model of economic development was based on the appropriation of rural resources, labour and capital by cities (Fei and Ranis, 1964). However, sluggish job creation in the manufacturing and services sector and a failure to absorb the fast-growing urban populations has led to a shift in emphasis back towards the agricultural sector (e.g., through structural adjustment programmes designed to encourage crop production for export).

Therefore, in the 1960s, ‘growth poles’ policies sought to encourage industrial development in urban centres through public investment, with little emphasis on rural development (Friedmann, 1968; Williamson, 1965). However, such policies benefited only privileged social groups and large conurbations. In the 1970s, it was argued that rural underdevelopment was being perpetuated by political, social and economic forces that favoured cities in their decision making at the expense of rural regions (Lipton, 1977).¹¹ The profound divide between urban planners and rural planners became increasingly evident in subsequent decades. On the one hand, the negative view has argued that small towns were the bases used by colonial powers, national elites, and multinational corporations, all of whom have sought to extract raw materials and exploit the rural poor (Southall, 1988); on the other hand, the positive view has been that innovation and modernization trickle down from small towns to the rural populations (Rondinelli, 1985). Rather than dividing activities into rural and urban, however, an analysis of rural–urban linkages potentially offers clearer insights into planning that can propose appropriate policy measures that are mutually beneficial to both town and village households.

¹¹ See, Jones and Corbridge (2010) for the current debate on urban bias approach.

It was not until the 1970s and 1980s that a comprehensive rural–urban development framework was developed. The ‘agropolitan’ approach explicitly sought to unite rural with urban development (Douglass, 1981; Friedmann and Douglass, 1978; Friedmann and Weaver, 1979; Hardoy and Satterthwaite, 1986). This approach argued that rural development could best be achieved by linking rural with urban development at the local level. In addition, it proposed to incorporate local knowledge into the planning process through close interaction with rural producers and households. Friedmann (1992) argued that a programme can be mutually beneficial to both rural and urban areas only through local capacity building – e.g., investing in human capital, skills and training – and through popular participation.

The functions and roles played by cities in rural areas are the outcomes of interdependencies that need to be seen as being mutually reinforcing. Douglass (1998) summarized this relationship by noting that, for every role a city is expected to play, there is a necessary role to be played by rural areas (Table 1).

Table 1: Urban–Rural Linkages and Interdependencies

Urban	↔	Rural
<ul style="list-style-type: none"> • Agriculture trade/transport centre • Agricultural support services <ul style="list-style-type: none"> - Production inputs - Repair services - Information on production methods (innovation) • Non-agricultural consumer markets <ul style="list-style-type: none"> - Processed agricultural products - Private services - Public services (health, education, administration) • Agro-based industry • Non-agricultural employment 	<ul style="list-style-type: none"> ↔ ↔ ↔ ↔ ↔ ↔ 	<ul style="list-style-type: none"> • Agricultural production • Agricultural intensification <ul style="list-style-type: none"> - Rural infrastructure - Production incentives - Education and capacity to adopt/adapt innovation • Rural income and demand for non-agricultural goods and services • Cash crop production and agricultural diversification • All of the above

Source: Douglass (1998) Reproduced with the kind permission of the publisher.

As Table 1 shows, urban and rural areas are interdependent. While urban centres provide markets for agricultural and rural commodities for regional, national and international

distribution, rural areas provide agricultural surpluses. Therefore, on the one hand, intensification of agriculture requires agricultural inputs and repair facilities for agricultural production from the urban-based businesses. On the other hand, the sustainability of growth of urban centres depends on rural prosperity and requires raising the incomes of the majority of rural households.

Satterthwaite and Tacoli (2003) found that small urban centres can play a crucial role in this process. However, the trickle down effects depend on regional differences such as natural resource base, population density and infrastructure, land-ownership structure and socio-economic and cultural transformations. However, Douglass (1998) and Romein (1997) have argued that local towns are bypassed by links with larger urban centres and therefore play a limited role in regional development. Yet, as we will see in the following sections, improved infrastructure, such as roads and other transport networks, as well as information on how markets operate, including price fluctuations and consumer preferences, can also affect regional development as well as the role of the small towns in regional development.

5.1. Growth Pole and Regional Network (Cluster) Models Compared

The urban bias approach, also referred to as the ‘growth pole approach’, sought to dichotomize planning and management as rural and urban, which promoted rivalry rather than collaboration, whereas ‘the regional network (cluster) concept’ incorporated rural and urban structures with rural–urban linkages (Douglass, 1998). First, the growth pole approach sees urban-based manufacturing as the preferred method by which to achieve regional development; however, according to the network model, the sources of growth could be varied and do not need to be urban based. A recent OECD study shows that rural regions are in fact, very productive (OECD, 2013). Second, growth pole policies adopt a top-down policy with an emphasis on city size, while the network approach considers the clustering of many settlements, each with its own specializations, comparative advantages and rural–urban linkages. For example, Douglass (1998) showed that the most successful villages near Yogyakarta, Indonesia, were those that were linked to and interacted with more than one urban centre. Third, the network approach saw agriculture as a productive sector for urban growth in agrarian regions. Indeed, it is documented in many studies that growth originating in agriculture reduces poverty more than growth originating outside agriculture (Ravallion

and Chen, 2007; Loayza and Raddatz; 2010; Christiaensen, Demery, and Kuhl, 2011; Dorosh and Thurlow, 2012). Fourth, the growth pole approach recognized the urban node as the most important spatial actor, while the regional network concept favoured a localized capacity to coordinate interrelated rural–urban activities. Finally, the growth pole approach supported the public provisioning of economic infrastructure for urban industry, e.g., the manufacturing sector; this is in contrast to the manner in which the regional network concept has emphasized the need to expand both the rural and urban infrastructure. The regional network concept supported the decentralized approach for planning – that is, a more diversified, multi-stranded approach to regional development, and one that integrates rural and urban development at the local level. This approach suggested disaggregated policy interventions of the type that involve allocations of regional resource endowments and the division of labour between urban and rural sectors. In this approach, local governments, by providing structure and formulating and implementing policies, can contribute to local economic development as well as poverty reduction.

China is one of the few countries to have implemented policies designed to address the interactions between urban centres and their surrounding regions. For this purpose, municipal boundaries were extended beyond the already built-up areas, with vast tracts of the surrounding rural areas included in the urban areas (Kirkby et al., 2000; Shieh, 2011). This not only helped rural development, but also accelerated overall economic development through increased access to domestic and international trade networks.

The expanded markets act as a ‘vent’ for farmers and encourage agricultural production at levels above family subsistence needs, in addition to contribute to increase demand for consumer goods, service sector products and agricultural inputs. The external economy, by providing investment capital for transport facilities and infrastructure contributes to the expansion of local urban sectors. More importantly, agriculture becomes more productive with the stimulus of export markets, because better agricultural implements are being brought in through trade. These innovations subsequently are locally manufactured or adjusted to better address local conditions. Thus the agricultural sector, through trade, does not only supply additional food, but also release excess labour to the growing urban regions that produce and supply consumer goods, services and agricultural inputs. The urban sector also

grows also because farmers are more efficient and earn higher incomes. The expanded and more productive urban sector enables the market for farmers and encourage them to invest in further improvements (Tiffen, 2003).

5.2. Small Urban Centres

Small urban centres, on the one hand, are ‘market towns’ that offer markets and services for local agricultural producers and retail and service provisioning for their populations and the surrounding populations. They are therefore well-positioned to positively influence rural development and agricultural productivity. On the other hand, they are also ‘administrative towns’, in which a large proportion of the population derives their income from government services and government-funded services.¹² Thus, although official employment in government services is common in small urban centres, it is also common for a large proportion of such urban centres’ population to engage in agriculture. Small urban centres attract domestic as well as foreign enterprises whose output is intended to meet demand not only in larger cities but also abroad.

Small urban centres in low- and middle-income countries occupy a space in the middle of the rural–urban continuum and therefore have the characteristics of both urban and rural areas. Rural regions provide food, labour and demand for the urban goods and services that enable small urban centres to grow.

5.2.1. Small Urban Centres and Regional and Rural Development

Small urban centres can contribute to regional and rural development in four ways (Satterthwaite and Tacoli, 2003)¹³.

5.2.1.1. Small Urban Centres’ Demand and their Role as Markets for Agricultural Produce from the Surrounding Rural Regions: Agricultural produce is consumed in small urban

¹² Douglass (1998) found that that municipalities and administrative centres off the island of Java were heavily dependent on the size and continued expansion of the civil service sector and their expenditures, which were also an important part of rural–urban linkages. Such government employees were able to demand higher value-added agricultural products, for instance processed foods, as well as village crafts.

¹³ See van Leeuwen (2010) for the multifunctionality of small towns for urban and rural households in the European context. See Wandschneider (2003, 2004) for the importance of small towns for the livelihood strategies in India.

centres, in addition to being transported to national and international markets. The availability of physical infrastructure and the affordability of transport are crucial to connecting producer areas to local urban centres as well as to connecting local urban centres to national and international urban centres. The location of urban centres is also important for their connection to wider market networks; this is especially true for the urban centres located at major intersections, along railways and rivers or in coastal areas. In addition, rural producers' access to market information such as price fluctuations and consumer preferences through small urban centres can help small farmers maximize their use of resources and adapt production to meet demand in a manner that allows them also to be competitive in regional, national and international markets. However, small urban centres are bypassed due to large-scale commercial agriculture. This was the case, for instance, in the export-oriented raising of cattle and certain other crops that were directly shipped to larger centres and ports in Costa Rica (Romein, 1997). Despite the apparently limited role small urban centres are expected to play, they are nevertheless an important part of a survival strategy for low-income rural residents. Indeed, Dorosh and Thurlow (2013) find stronger linkages between agricultural production and small towns than cities in Ethiopia and favour redirecting urban growth toward small towns rather than cities so that broader-based economic growth and poverty reduction can be obtained.¹⁴ Similarly, Christiaensen and Todo (2013) find for 51 developing countries for the period 1980-2004 that migration out of agriculture into the rural nonfarm economy and secondary towns is associated with more inclusive growth patterns and reduces poverty faster than rapid metropolitization.¹⁵ Furthermore, the expansion of markets for local produce (agricultural products) has been possible in Uganda, by linking the rural areas to big national and international cities (e.g. Kampala in Uganda, Kisumu and Nairobi in Kenya, and Juba in Sudan), (Edaku, 2010). Yet, the major obstacles such as lack of storage and processing facilities and high transport costs to reach the wider markets and take part in further trade networks still remain to be solved.

5.2.1.2. Small Urban Centres Provide for the Distribution of Goods and Services to the Surrounding Rural Regions: Goods can include both goods for household consumption and

¹⁴ Alaci (2010) and Dorosh and Schmidt (2010) also emphasize the important role of small towns for the rural-urban linkages as well as for economic development in Ethiopia.

¹⁵ Christiaensen et al. (2013) also find the same result for rural Kagera in Tanzania.

agricultural production inputs. Services can include agricultural extensions, farmer supply agencies, health services (e.g., doctors and dentists), education (e.g., secondary education institutions), banking and other professional services (e.g., lawyers and accountants) and wholesale and retail sellers of goods manufactured both within and outside the region (Morris, 1997). The demand for these goods and services is dependent on the income levels and purchasing power of the rural population, which could be very high if they produce high-value crops. Thus, increasing rural incomes fosters the economic development of small urban centres. In addition, income diversification by rural households, as well as employment opportunities in non-farm activities, may also affect the demand for goods and services produced in small urban centres. Li (2011) emphasizes the importance of peri-urban areas in providing services, industrial production, and employment to the rural areas in the Jing-Jin-Ji region in China.

5.2.1.3. Small Urban Centres are Centres for Economic Growth and the Consolidation of Non-Farm Activities and Employment: Rural households devote time and derive income from non-farm activities,¹⁶ while urban households rely on agriculture either for household consumption or for income generation (Baker, 1995; Kamete, 1998). Although national employment data do not record multiple activities, Lerise et al. (2001) have reported that 67% of their sample population of people living in villages and in the intermediate town of Lindi was engaged in more than one income-generating activity, including both farming and non-farming activities.

Diversification is an important element of the ‘virtuous circle’ of rural–urban economic development that emphasizes economic linkages and infrastructure as essential for connecting farmers and other rural producers to both domestic and external markets. According to the ‘virtuous circle’ of rural–urban economic development, a mutually reinforcing pattern of linkages between an urban centre and its surrounding rural regions spurs the growth of both agricultural and non-farm activities (Evans, 1990 and UNDP/UNCHS, 1995). The three stages of this model can be described as follows:

¹⁶ Non-farm activities are all activities that fall outside of the agricultural sector.

The first stage: Higher incomes from the production of agricultural goods for non-local markets lead to an increased demand for consumer goods among rural households.

The second stage: Increased demand creates non-farm jobs and leads to diversification, especially in small urban centres.

The third stage: The rural labour surplus is absorbed and demand for agricultural produce increases, thereby leading to increases in agricultural productivity and in rural incomes.

For example, Thanh et al. (2008) found a positive reciprocal relationship between urban centres and farming in three rural settlements in Tien Giang and Vinh Long provinces in Vietnam. The development of the Upper Valley of the Rio Negro in Argentina is another example of the ‘virtuous circle’ of rural–urban economic development (Manzanal and Vapnarsky, 1986). The Upper Valley is linked by rail to Buenos Aires, thereby connecting local farmers to both national and international markets. Local urban growth has since been stimulated by prosperous farmers through forward and backward linkages.

Income and occupation diversification are determined by push (or constraints) and pull (or opportunities) factors. For example, in some regions of China and in the Red River and Mekong River deltas in Vietnam, diversification has been determined by large labour surpluses in the agricultural sector, which resulted from the demise of the communal farm system that prevailed from 1979–1984 in China and in the period post-1986 in Vietnam (Kirkby et al., 2000). Sharecroppers, small tenant farmers and rural squatters in Brazil’s central plains were forced to find employment in non-farm sectors because of the export-oriented, agro-industry policies adopted there (Chase, 1997). In sub-Saharan Africa, the growth in non-farm employment was a result of structural adjustment programmes (Bah et al., 2003). The development of small urban centres and the growth of non-farm employment in those urban centres, as well as in their surrounding rural regions in northern Mexico, were the result of foreign investment in production for international markets in *maquiladoras*, (Beneker and Verkoren, 1998).¹⁷

5.2.1.3.i. Policy Recommendations to Encourage and Support Non-Farm Activities

¹⁷ See Tacoli (2006) for more examples.

The development and acceleration of non-farm activities is dependent on the regional, national and international macro-economic environment. The key policy recommendations to encourage and support non-farm activities are summarized as follows:¹⁸

- **Forward and backward linkages between agriculture and non-farm activities** should be strengthened in order to stimulate regional economic growth, development and sustainability.
- **Small and micro-entrepreneurs are the engines of economic growth** and their access to markets, capital, and education and extension services and to technical knowledge should be eased.
- **Necessary institutional support should be given to small and micro-enterprises** in order to make them competitive in national and international markets.
- **Trade and networking activities in small urban centres should be fostered** in order to stimulate links between the local and rural economy on the one hand and the national and global economy on the other.
- **Natural resource management should be carried out** according to the needs of both farm and non-farm activities. Natural resources should be carefully managed by local governments making sure that land and water are not allocated to residential and industrial users at the expense of farmers and rural residents.

5.2.1.4. Small Urban Centres Attract Rural Migrants from the Surrounding Regions through Demand for Non-Farm Labour: Migration to small urban centres leads to increased diversification of income and employment, because poor rural residents can combine urban and peri-urban agriculture with other urban-based, non-farm occupations. In addition, migration to small urban centres decreases the pressure on larger urban centres. However, migration to small urban centres is influenced by macroeconomic policies, such as trade policies. Trade can have an important effect on non-farm activities as well as on the development of small urban centres. Export-oriented industries in small urban centres in particular offer important employment opportunities for rural residents. For example, demand in new sectors, such as an export-oriented manufacturing sector and the service sector, led to increased employment opportunities for young, unmarried women in small urban centres in

¹⁸ See Satterthwaite and Tacoli (2003) for a detailed analysis.

Bangladesh (Afsar, 1999). The poorest rural residents can move only locally or within regions due to financial and informational constraints. Therefore, small urban centres constitute important destinations for the poorest rural residents. Available and affordable transport facilities are an important element in supporting diversification. For example, in southeast Nigeria, the availability and affordability of transportation facilities allows poor rural residents to regularly commute from their villages to the nearby small urban centre of Aba while simultaneously retaining a foothold in farming (Okali et al., 2001). Similarly, rural households in Ethiopia have few direct links to distant urban centres and to the capital, so that small urban centres are the main destinations for economic activity (Hoddinott and Dercon, 2005). Cali and Menon (2013) also point out the positive spillovers from small towns on the rural areas in the form of consumption linkages, remittances, and the generation of non-farm employment in Indian Districts.

Small urban centres by connecting local regions to external markets spur agricultural production and income growth in the agricultural sector and this in turn increases demand for services and goods in urban economies. Thus, small urban towns fortify the rural-urban linkages.

5. 3. Rural–urban linkages and policy interventions

Douglass (1998) constructed a template for research on rural–urban relations that can aid efforts to formulate a better plan for sustainable development. The template provided here (Table 2) connects rural structural change and development to urban functions and roles by identifying a set of flows that exist between rural and urban areas. Research is then conducted to analyse: (1) the patterns of flows; and (2) their combined impact on stimulating rural, regional development. Flows consist of people, production, commodities, capital and information, with each having multiple components and impacts that reveal different spatial linkage patterns and that carry different benefits to rural and urban areas. For example, research can investigate the information content of the rural–urban linkages and, if it is found that little or no information on market prices, crop prospects and other vital areas of rural interest flow from urban centres to rural areas, then the reasons for this limited flow of information can be identified and policy options to improve information flows can be considered. It can be more effective to study the multiple linkages among several villages and

local as well as distant cities rather than studying the linkage between a single village and a single urban centre. The study of multiple linkages can aid efforts to identify opportunities and constraints in regional networks as well as in a regional cluster. Thus, the investigation of the dynamics of flows as well as of structural change within clusters will help in efforts to adjust and fine-tune policies to address local conditions, so that reciprocal linkages between rural and urban development can be established. In addition, multiple linkages with very distant cities can and typically do involve international linkages, for instance through international trade. The study of multiple linkages within an international context will highlight the role of international linkages, e.g., international trade in rural and urban development. This is especially pointed out by Baylis et al. (2013) that market and trade liberalisation together with infrastructure construction in China have increased value of agricultural production, off-farm income, the welfare and nutrition of rural households, since liberalisations have lowered the barriers for farmers to enter off-farm labour markets.

Von Braun (2007) argued that innovations that arise from agricultural research and development, developments in information and communication technologies and improved infrastructure and market institutions can foster rural–urban linkages in a way that can enhance growth, create employment and reduce poverty. For example, Bulderberga and Pilvere (2012) show that availability of public transport and quality of roads are considered to be the most important factor affecting rural–urban linkages in Latvia. Similarly, Duguma (2011) argues that road and transportation facilities need to be developed in the rural areas in order to strengthen the linkages between Seru town and its hinterlands in Ethiopia. Agricultural research and development not only enables increased production of food to meet increased demand but also leads to rural development in non-farm sectors through consumption and production linkages (Haggblade, Hazell and Reardon, 2007). Information and communications technologies, by providing efficient and reliable market information, can stimulate rural–urban linkages. More importantly, information and communication technologies, by shrinking the cultural and spatial distances between rural and urban areas, create certain jobs in rural areas that before were constrained by the requirement of physical presence in cities. Indeed, at the macro-level, Wavermann et al. (2005) showed that 10 more mobile phones per 100 people increase GDP by 0.6 per cent in developing countries. Similarly, at the micro-level, Torero and van Braun (2006) found that the welfare gains from

Table 2: Rural Regional Development Process: Structures, Flows and Policy Interventions

Rural–urban Linkages/Flows				
<i>Rural Structure/ Structural Change</i>				<i>Urban Functions/ Roles</i>
Socio-economic structure/relations	←	1) People <ul style="list-style-type: none"> • Labour commuting/migration • other migration (e.g., education) • shopping/visiting/selling 	→	Non-agricultural employment
Rural economy (sectors)	←	2) Production <ul style="list-style-type: none"> • upstream linkages (inputs) • downstream linkages (processing, manufacturing) 	→	Urban services Population supplies
Rural production regimes	←	3) Commodities <ul style="list-style-type: none"> • inputs • consumer non-durables/durables • rural products 	→	Non-durable and durable goods Markets for selling rural products
Natural environment and resources	←	4) Capital/income <ul style="list-style-type: none"> • value added • savings/credit • migrant remittances 	→	Processing/manufacturing
Infrastructure/built environment	←	5) Information <ul style="list-style-type: none"> • production/sales/prices • welfare/social/political • employment 	→	Information on employment, production, prices, welfare services
<i>Policy Interventions</i>				
<ul style="list-style-type: none"> • Agrarian reform • Agricultural intensification/diversification • Cooperatives • Environmental programmes • Irrigation, storage facilities and other rural infrastructure • Roads/transportation • Electricity • Communication • Seaports/airports • Market centres • Commercial outlets • Urban services • Banking/credit • Urban infrastructure • Communications services 				

Source: Douglass (1998) Reproduced with the kind permission of the publisher.

a telephone call range between USD 1.62 to USD 1.91, in Bangladesh and Peru. Better quality infrastructure can generate more and longer hours of non-farm activities that strengthen the interlinkages between rural areas (Chowdhury and Teroro, 2007). In many developing countries, deficiencies in information and lack of regulatory and legal enforcement mechanisms limit trade between different regions (Gabre-Madhin, 2001). Therefore, efficient and strong market institutions, by facilitating spatial flows, will stimulate and strengthen rural–urban linkages.

Hence, policies that aim to stimulate rural–urban linkages should prioritize innovations in agriculture, transport and communications infrastructure, and the development of market institutions.

Indeed, institutions are important determinants of rural–urban linkages. Trade agreements and/or trade networks facilitate the strengthening of such linkages and thus sustainable economic growth. Such trade linkages (more than aid linkages) as well as public investment programmes and policy incentives which promote rural infrastructure, rural markets and rural education can play an important role in rural–urban linkages. All these variables enhance rural–urban linkages and thus the share of off-farm employment and the diversity of employment opportunities in rural areas. Yet they may also lead to more migration and a higher share of remittances in the total household income in rural areas. Remittances can be a curse or a blessing depending on what households do with the additional money (actively investing it or passively consuming it). If remittances are only used for passive consumption then the offspring are likely to migrate due to lack of off-farm employment. This is not necessarily bad if structural change is desperately needed (especially in least developed countries where farm sizes tend to get smaller – not larger). Rural development can be jump-started by creating regional centers of economic growth (e.g. special economic zones), however, Goldstone (2006), Aerni (2009), and Fuller and Romer (2012) argue that there is no blueprint for this (Silicon Valley cannot be created elsewhere, and the land grant college system, which is being revived in New Zealand, may not work elsewhere due to political interests that oppose change because they benefit from the status quo through subsidies). Indeed, Aerni (2009) finds that Swiss stakeholders saw international trade competition as the most important problem for sustainable development in Swiss agriculture, and they had

reservations about the use of new technologies. He explains these results are due to the less competitive Swiss agriculture and the protective agricultural policies. Stakeholders in New Zealand, by contrast, believed that their agriculture is quite sustainable because of their policies which promote technological innovation and agricultural and trade reforms. In addition, the importance of trade agreements and/or trade networks relative to aid in promoting growth and development in developing countries has been acknowledged in several studies (Alesina and Weber, 2002; Easterly, 2006). Alesina and Weber (2002) show empirically that corrupt governments actually receive more foreign aid rather than less and conclude that foreign aid programmes are often unsuccessful because they are not well targeted. Likewise, Easterly (2006) argues that aid falls short of sparking sustained development. Therefore, increasing trade agreements and/or trade networks of developed countries with developing countries can help sustainable development, because they strengthen the rural–urban linkages by reaching the poor in rural areas. Harrison (2007), Anderson et al. (2010, 2011), and Hertel and Keeney (2010) demonstrate that developing countries would gain in welfare (in the form of increased farm-income and the demand for unskilled labor, and of reduced inequality and poverty) if current agricultural and trade distortions are eliminated.¹⁹ Especially, the effect of agricultural trade reforms is stronger suggesting that agricultural trade reforms should have a priority in trade negotiations. In addition, Hertel and Winters (2005, 2006) argue that the impact of trade reforms should be enhanced by domestic policies such as improving labor mobility between the farm and non-farm sectors and encouraging farmers to take advantage of new export opportunities. Therefore, the positive welfare enhancing effects of trade liberalisation can be maximized by strengthening the rural-urban linkages.

6. Conclusions

In this study we have drawn attention to the often neglected sectoral and spatial linkages between urban centres and rural areas. The rural-urban linkages include the flows of backward and forward linkages between agriculture, manufacturing, and service sector.

¹⁹ See also Das (2002), Winters (2002), Cline (2004), Keller (2004), Cameron et al. (2005), Xu and Chiang (2005), Bardhan (2006), Wang (2007) and Belhaj Hassine (2010) for the debate on transfer of technology from developed countries to developing countries through international trade and its effect on poverty. For example, Belhaj Hassine (2010) shows that international trade promotes productivity growth through transfer of technology and reduces poverty in Tunisia.

Synergies between rural economy and urban based businesses can enhance the development and sustainability of local economies and promote 'pro-poor' regional economic development through several channels that we have discussed.

The findings presented in this study can be used to argue that the potential role of rural or urban regions, as well as the opportunities they offer, must be related to the regional context rather than only to the rural or urban area. Therefore, the programmes that aim to foster the growth of urban activities for rural development should devote attention to rural–urban linkages and to the impacts of these linkages rather than concentrating only on urban space. Concentrating only on urban space for economic development might ameliorate rural inequality and poverty by supporting rural elites and large farmers. As argued by Lipton (1977), urban elites collaborate with rural elites in order to facilitate the rural-to-urban transfer of surplus; however, this collaboration has a deleterious effect on the economic welfare of the majority of rural households. Therefore, the overall positive benefits from urban investments as well as the desired outcomes should be calculated prior to the implementation of the projects. This requires a detailed analysis of the impact of proposed urban investments on rural development as well as on the target groups, such as small farmers, landless workers and the rural poor.

Mobility and migration have great potential to create prosperity and should be encouraged from lagging, rural areas to selected growth centres. Transport networks are needed to facilitate the mobility of rural residents; therefore, policies should heed the state of the physical infrastructure needed to link urban centres with their surrounding rural regions. Indeed, the movement of goods between locations involves costs, such as information-, transport- and policy-induced costs, e.g., tariffs and restrictions on the interregional movement of goods and factors. Once these costs have been reduced, regional integration as well as trade between rural and urban areas will increase, thereby increasing the scope of rural–urban linkages (Chowdhury and Torero, 2007).

Small urban centres have a considerable impact on regional and economic development, since they enhance agricultural productivity by providing agricultural inputs, urban goods and services; non-farm employment; markets for agricultural products; and processing agricultural

products. However, this impact is dependent on the region's internal characteristics – e.g., its natural resource base, its population density and the quality and scope of its infrastructure – as well as economic, social and cultural structures that exist at the regional, national and international levels. The international integration of small urban centres through access to international markets for small- and medium-sized producers, along with stable commodities prices and capital introduced via foreign investment, will support local production and trade. International trade has an important role to play in strengthening rural–urban linkages. At the national level, the provision of infrastructure and information, credit facilities and extension services to small- and medium-sized producers, revenue support to local governments, and sound institutional structures, are all important policy measures that will help the development of small urban centres as well as their surrounding rural areas. At the regional level, forward and backward linkages between agriculture and industry should be given priority together with the regulation and management of local natural resources.

Krüger (1998) showed that migrants arriving in Gaborone, Botswana, maintained strong links with their home villages and invested in assets such as land and livestock. However, these urban residents were not entitled to compensation for cattle or harvest losses through government-sponsored drought-relief measures. Policies such as drought-relief programmes, therefore should consider the rural–urban interface and bear in mind that drought can render both the rural areas and urban households, and their respective income bases, vulnerable.

Rural and urban development potential and complementarities must be brought together in the planning process and an attention should be given to the decentralization of government to improve linkages in service provision. More importantly, an urban policy should make urban and rural areas more interdependent (Turok and Parnell, 2009). Thus, clustering rural and urban areas into a regional unit of development can take into account both the diversity and the complementarities that exist between the rural and urban areas in a region and makes these rural and urban areas interdependent. It is these relations between urban centres and rural areas, which are more horizontal, interdependent, complementary and reciprocal, that lead to regionally sustainable growth. In addition, a cluster of well-connected, highly interactive rural and urban settlements offers increased opportunities for agglomeration and economic diversity and can capture upstream and downstream linkages and multiplier effects within the

region. These clusters not only connect regional and national markets, but also widen markets beyond national boundaries and help overcome monopolistic markets. They also provide a wide range of alternative employment opportunities for members of rural households. In addition, more efficient land use and planning, better provision of public services and better management of natural resources are among the benefits of these clusters.

This study has suggested that regional, national and international policies, and especially investments in farm and non-farm sectors, should consider rural–urban linkages as well as the differences between rural and urban activities. On the one hand, the emphasis should be on creating an enabling environment to support small farmers, who in turn become buyers from urban service providers and manufacturers. On the other hand, adequate regional, national and international resources should be devoted to the continued development the urban area. For instance, international trade, by providing an enabling structure and demand for goods as well as by introducing information, knowledge and technology, makes international linkages an important avenue for sustainable development and economic growth.

Indeed, although urbanization has brought up the importance of the rural-urban linkages for regional development, the regional rural-urban linkages go beyond the national boundaries to global interactions that promote sustainable development. Thus, the existence of the rural-urban linkages can increase the level of economic growth and development, reduce poverty and improve livelihoods, but the scale, strength and sustainability of economic growth and development, poverty reduction and livelihood improvements depend on global interactions and international trade linkages.

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