



# Why some rural areas decline while some others not: An overview of rural evolution in the world



Yuheng Li<sup>a,\*</sup>, Hans Westlund<sup>b,\*\*</sup>, Yansui Liu<sup>a,\*\*\*</sup>

<sup>a</sup> Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, 11A Datun Road, Chaoyang District, Beijing, 100101, China

<sup>b</sup> Department of Urban Planning and Environment, School of Architecture and Built Environment, KTH Royal Institute of Technology, Sweden

## ARTICLE INFO

### Keywords:

Rural decline  
Rural revitalization  
Rural resilience  
Rural evolution  
Sustainability

## ABSTRACT

Rural decline is an inevitable process as human society transforms from the agrarian to the urban-industrial economy, and further on to the knowledge economy. Through an extensive literature review, this paper aims to interpret why some rural areas decline while some others do not. The findings show that it is by the interactions between rural areas and the external environment that rural communities either grow, decline or even vanish. The paper emphasizes the necessity to improve rural communities' resilient capacity through adjusting their internal components' function and structure to survive the external changes. In this process, rural livelihood diversification, the creation of market oriented institutions and strong social capital are considered to enhance rural resilience and build up sustaining rural communities. Finally, three conditions for sustainable rural development in the knowledge economy are discussed: 1) development of new economic activities that can respond to potential urban demand; 2) local entrepreneurship that can establish and expand these new activities; and 3) social capital that can support the entrepreneurship in new activities with access to credits, labor, human capital, external markets and external knowledge for learning and innovation.

## 1. Introduction

Despite the lack of a common definition on what is rural and what is urban, rural decline is today an undisputed fact and it has become a global issue as the world endeavors to promote urbanization and industrial development (Liu and Li, 2017). Countries like the US, Canada, Sweden, Australia, China and Japan have either experienced or are experiencing rural decline (Wood, 2008; Markey et al., 2008; Odagiri, 2009; Luck et al., 2011; Hedlund and Lundholm, 2015; Li et al., 2018a). As early as the 1960s, concerns about rural renewal were expressed in the US (Anding and Gustafson, 1968). Then, similar expressions such as rural decline, community destruction, "dying" rural communities, marginal community and "hollowing out" of the countryside were put forward successively to describe the downward spiral of decreasing employment, depopulation, economic depression and deteriorating quality of life in the countryside (Gallaher and Padfield, 1980; Forth, 2000; Ono, 2005; Carr and Kefalas, 2009; Li et al., 2016).

A general explanation to rural decline is the outcomes owing to the differences in living standards between rural and urban areas (Young, 2013). Living standards have both an economic and a social component

and the bigger the economic and social differences between city and countryside are, the higher outmigration from rural areas can be expected. Depopulation, particularly the outward migration of young adults, is the main expression of the shrinkage of rural communities and local economies (Mullu and Rusanen, 2003; Champion and Shepherd, 2006; Amcoff and Westholm, 2007; Luck et al., 2011). As people have left rural communities, services have been reduced, businesses have closed, and social capital has diminished. In these circumstances, the spiral of rural decline seems inexorable. Coupled with the outflow of young adults, aging of the remaining residents also leads to a significant decline in community-based autonomy (Ono, 2005, 2008). As young and talented peasants move to cities, the left-behind population's capacity to maintain the basic rural functions diminishes, a development often referred to as community marginalization (Sakuno, 2006; Kasamatsu, 2009; Odagiri, 2011).

Moreover, policy making that disrupts the urban-rural relationship will directly impair the countryside. For instance, the policy program in Canada views hinterland areas as a "resource bank" from which to fund provincial infrastructure and services, without adequate attention to rural reinvestment. Consequently, such policies have led to sharp rural

\* Corresponding author.

\*\* Corresponding author.

\*\*\* Corresponding author.

E-mail addresses: [liyuheng@ignrr.ac.cn](mailto:liyuheng@ignrr.ac.cn) (Y. Li), [hans.westlund@abe.kth.se](mailto:hans.westlund@abe.kth.se) (H. Westlund), [liuys@ignrr.ac.cn](mailto:liuys@ignrr.ac.cn) (Y. Liu).

decline in northern British Columbia, Canada (Markey et al., 2008). China has decades' of history of urban biased policy, which put villages into a disfavored position from which huge amounts of rural value were squeezed to support cities and heavy industries (Li, 2011). As a result, the rural-urban divide has widened and the hollowing villages with huge amount of left-behind population have become a widespread phenomenon in China (Ye et al., 2009; Liu et al., 2010). As urbanization in developing countries still takes place predominantly at the expense of the countryside (Westlund, 2014), the induced policies and measures will affect rural development in the long run.

Generally, cities and villages are an organic whole and they are tightly connected with each other in the forms of resource flows like labor, capital, material and information (Li, 2012). Thus, in large parts of the developing world the existence of rural outmigration drags cities when large scale influx of peasants exceeds the resource environmental bearing-capacity of cities, especially small and medium-sized cities (Birkmann, 2016). Under these circumstances, both cities and villages need to develop sustainably to support each other. This development has resulted in an increasing call for rural revitalization, rural renewal or rural rebirth (Allison and Hobbs, 2004; Gleeson, 2008; Larsen and Barker-Reid, 2009). Thus, both considering the migration pressure on unplanned slum areas of cities in the third world, and the hollowing out of countrysides all over the world and all its consequences, it is important to investigate the potentials for various types of rural areas to develop and grow in the era of the knowledge economy.

Discussing the development of rural areas worldwide is not unproblematic. First, the definitions of rural areas differ between countries and statistics are sometimes approximate, particularly in many developing countries. Second, countries find themselves at different stages of development, different stages of urbanization and different stages of rural transformation. Third, as discussed below, it is not possible to talk about just one type of rural area.

Broadly speaking, current rural areas can be divided in four categories. A first category is villages and surrounding areas that by natural population increase and in-migration are transformed into densely populated urban centers. This process is since long completed in the developed countries, but is an important component of urbanization in developing countries (Farrell, 2017). A second category is the rural areas that form parts of metropolitan regions, which consist of a mosaic of activities and land-use. These rural areas are (still) not being densely populated, but are integrated in the markets of labor, housing and leisure activities of the metropolitan regions, and their development is governed by the city-region's development (Westlund, 2018). A third category is the "intermediate" rural regions that surround metropolitan regions and that have the potential of increasing their interaction with the metropolitan regions and possibly becoming integrated in them. Intermediate regions exist in the developed countries, but it is uncertain to what extent they are found in developing countries. The fourth category is the vast peripheral rural areas that are situated outside the (positive) influence spheres of the metropolitan regions. These areas of agriculture, forestry or other natural resource based industries have in general declined due to increased capital intensity of their industries, which have meant less jobs and a vicious circle (Westlund, 2018). Our discussion in this paper focuses on the two latter types of rural areas.

Bearing these questions in mind, the paper aims to investigate the mechanism of rural decline in the world and tends to answer why some rural areas and villages decline while some others do not. We base our rendering on two assumptions: 1) Rural development in the knowledge economy are local processes that are determined by strongly linked endogenous and exogenous factors; and 2) The right combination of bonding (internal) and bridging (external) social capital in local/community activities has positive influence on rural development.

Grounded on the experiences of the highly urbanized developed countries, we discuss the trends, threats and opportunities for rural areas in the rapidly urbanizing developing countries. Further, we review the rural evolution process in the latter type of countries and

portray characteristics of sustainable rural communities. Policy implications are given based on discussions of future rural development and the rural-urban relationship in the knowledge economy.

## 2. The glimpse of rural evolution in the world

Throughout history, the urban-rural divide has mainly been based on the differentiation of economic activities. The countryside has been the areas where agriculture and other areal activities have been performed, while non-agricultural activities have taken place in cities and towns. In the long pre-industrial era, the countryside dominated strongly over the cities; it has been estimated that in the year 1800, about 97 percent of the world's population was living in the countryside (Raven et al., 2011). In this era, urban-rural interaction was featured by urban residents' consuming agricultural products in exchange of cities' industrial products. Such interaction was restricted by low productivity and limited transportation and communication.

The industrial revolution and relative rural over-population were the main driving force behind urbanization in the now developed countries. In addition, improved transportation and communication technologies enabled cities to utilize resources for production use in a larger context beyond their surrounding areas, while rural areas became increasingly dependent on their metropolitan counterparts for a multitude of social, economic and political goods and services. Urban-rural interaction in this era shifted from the previous balanced exchange, to flows of labor and population to the urban areas and an increasing dependency of rural areas on urban economies (Li, 2011).

Since the second half of the twentieth century, most developed countries have had a major urban-resided population, mainly in growing suburbs, while the developing countries have experienced rapid urbanization. In the 1970s, repopulation of the countryside, a process commonly termed "Counterurbanisation" or "Rural Renaissance" was noted in many developed economies where rural areas gained population at faster rates than urban areas (Berry, 1976; Hugo and Smailes, 1985; Champion, 1989; Frey, 1995; Kontuly, 1998). Then, rural growth lagged in the early 1980s but returned once more in the 1990s with the "Rural Rebound" as seen in countries like the US and UK (Fuguitt, 1985; Champion, 1988; Fuguitt and Beale, 1996). In this process, rural places being located within commuting distance of cities have become increasingly populated by more affluent and mobile professional urbanites who are striving to reconnect with "community" and "nature" (Cloke et al., 1998; Nelson et al., 2010). Connected to this, the concept of "Rural Gentrification" was coined to signify the change in social composition that took place when middle class people with urban lifestyles replaced the local villagers, mostly farmers and working-class people (Phillips, 1993). The phenomenon of rural gentrification has been detected and widely studied in countries like the UK (Cloke et al., 1995), New Zealand (Swaffield and Fairweather, 1998), Australia (Curry et al., 2001), the US (Ghose, 2004) and Spain (Solana-Solana, 2010).

In contrast to the abovementioned cases of rural repopulation, for the developed and developing countries alike, rural areas, particularly those agriculture-based and far away from the city regions have inevitably experienced depopulation and the induced problems like recession and social degradation, local markets shrinkage and small business closure. For instance, the period 1980–2000 saw seven hundred rural counties losing 10 percent or more of their population in the US. In particular, people in their twenties are the ones leaving the countryside in dramatic numbers (Carr and Kefalas, 2009). As quite many rural and small town enterprises went bankrupt in the late 1990s, China witnessed the loss of 128 million rural employment opportunities in the period 1995–2016 while the number of closed rural primary schools reached 365,400 in this period (National Bureau of Statistics of China, 2017; Yang et al., 2017). As Fig. 1 shows, the majority of countries in the world experienced rapid decreases in the proportion of the population residing in rural areas in the period 1981–2016. This

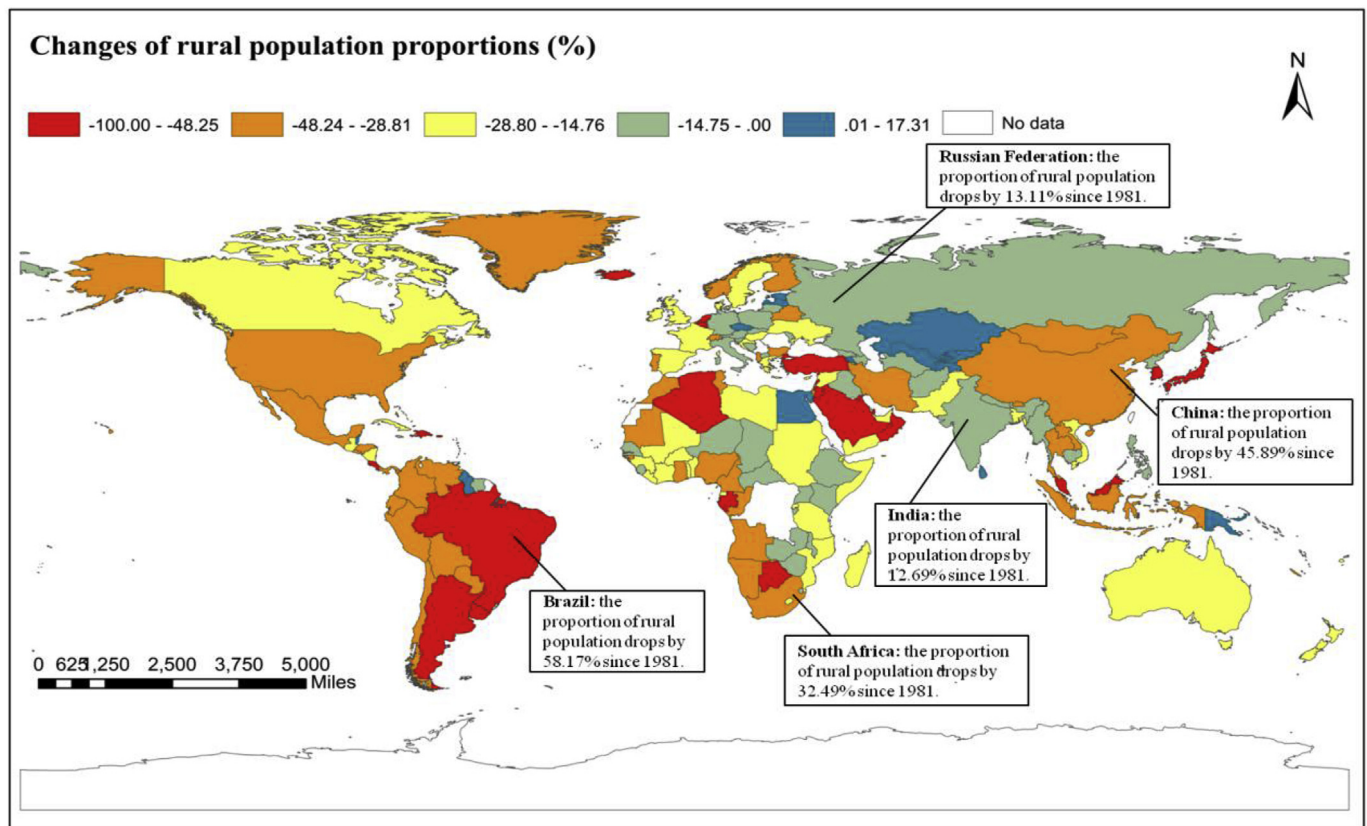


Fig. 1. The changes of rural population proportions in the world, 1981–2016. Data source: The World Bank, <https://data.worldbank.org/>

trend is especially prevalent in east and south Asia, north and south Africa as well as in Latin American countries. For instance, the rural proportion of China has decreased by 45.89% during the past 35 years while the figure in Brazil almost reached 60%.

Today's global knowledge economy signifies still another stage of the urban-rural relationship. In this paper, we adhere to the definition given by the UK's department of Trade and Industry (DTI): "A knowledge-driven economy is one in which the generation and the exploitation of knowledge has come to play the predominant part in the creation of wealth. It is not simply about pushing back the frontiers of knowledge; it is also about the more effective use and exploitation of all types of knowledge in all manner of economic activity" (DTI, 1998). The knowledge economy, which includes knowledge-intensive industries, is based on innovations and innovations are dependent on new combinations of human knowledge (Westlund, 2006). In this sense, big city-regions give the highest potentials for face-to-face contacts and new combinations of human knowledge. This is why the knowledge economy concentrates in big city-regions. For cities, the resources of the rural hinterlands (land, forests, minerals) have lost in relative importance and the resources of other cities (knowledge) have increased in importance. As a result, inter-city interaction, trade and exchange are now the predominating forms of exchange at both global and national levels, while the share of urban-rural interaction and trade has decreased with changing consumption patterns and shrinking rural population shares (Westlund and Kobayashi, 2013).

Even if the knowledge economy is a global phenomenon, it is unevenly developed across the world. It is dominating the large metropolitan regions and transforming smaller city-regions in the developing world, and it is rapidly growing in the leading metropolitan regions of the developing world. The knowledge economy means clear opportunities for many rural areas that are "intermediate" i.e. located sufficiently close to metropolitan regions and that have a sufficiently

large population base, and thus a good potential to utilize the access to urban resources, knowledge spillovers, etc. For these areas, "smart specialization" might be a successful strategy in the developed countries (Naldi et al., 2015). On the other hand, in the vast rural areas outside the positive economic influence of the metropolitan regions, the impacts of the knowledge economy are (with certain exceptions such as successful tourism sites) mainly negative in both developed and developing countries: rationalization or closure of existing industry and agriculture, depopulation and brain drain (Westlund, 2018).

The transformation from a pre-industrial to a knowledge economy took several centuries in the western world. In the developing world, it is a much more compressed process, and in many cases, the growth of the knowledge economy has commenced while industrialization continues to unfold. For rural areas, this means that they in the developed countries have gone through a decline that has elapsed over a century, while in the developing world this decline is a much more rapid process (Farrell and Westlund, 2018). As rural development becomes more dependent on cities, and villages are losing their relative importance in the emerging knowledge economy, rural decline in many places of the world turns out to be a predestined outcome. As a result, the once self-sufficient villages have become hollowed out and exist in a state of decay when many young and fit villagers have moved to cities (Li et al., 2016).

### 3. Why do some rural areas decline while others do not?

Generally, the development of rural communities consist of both the material and immaterial contents. The "material" content indicates those what we can see, such as physical space, geographic characteristics, population and resource endowments while the "immaterial" content includes those intangible things such as personal relationships, values, attitudes, culture and institutions. Since the rural communities

never have been separate and independent societies, strong linkages between cities and villages have existed based on their spatial and functional interdependencies (Davoudi and Stead, 2002; Potter et al., 2004). Thus, it is the interactions between the inside elements and the outside environment that affect the rural communities and their well-being (Warren, 1963).

Influenced by globalization, industrialization, urbanization and informatization processes, the traditional agriculture- and natural resource-dependent villages, either fail to transfer their economic base from the older to the newer forms of capital investments, or they are less capable of transforming themselves into sites where the affluent groups from cities can enjoy rural landscapes and livelihoods. In short, the traditional rural communities, which decline or even vanish, fail to make adaptive and innovative responses to the external changes. In this process, local rural communities that are subordinated to outside forces can be exploited and manipulated, and their resources can be expropriated (Vidich and Bensman, 1958).

Attempts such as improving local infrastructures, consolidating rural land and restructuring dispersed settlement patterns have been introduced to meet the challenges presented by rural decline (van der Ploeg et al., 2000; Cullingworth and Nadin, 2002; Hassebrook, 2003; Bjorna and Aarsaether, 2009; Natsuda et al., 2012; Li et al., 2018b). Are these measures efficient against rural decline once and for all? We would say no, since they might be effective but are not decisive factors. Villages of favorable geographic conditions, i.e. situated close to large urban agglomerations, and having natural resource endowments have more chances to become prosperous. However, it is the local people by way of their knowledge, capability, willingness and resolutions that decide whether the prosperity can be maintained and sustained. In this process, the risk faced with top-down measures, planning and investment initiatives is that they may fail to conform to the real needs of local populations. For the future success of revitalizing declining rural communities, the actions and commitment of the people who live there and their collective self-reliance are increasingly called upon to shape and maintain their own living quality (Wood, 2008; Elshof and Bailey, 2015).

Compared with the material contents of a village or rural community, like infrastructure and resource endowment, the immaterial contents, like social capital has proven its usefulness and suitability in explaining why some places are more successful than others in producing a high level of material wellbeing (Putnam, 1993; Woolcock, 1998; Brown and Schafft, 2011). Social capital, which is often defined as the collective norms, trust and networks of affiliation, can reduce transaction costs, enhance people's access to information and resources, generate information spillovers, promote the transmission of knowledge, and facilitate collective actions (Westlund, 2006). Further, bonding social capital involves the close in-group solidarity while bridging social capital connects diverse groups both in and outside of a community. Places with a higher density of combined bonding and bridging social capital are more inclusive and participatory and they are also predicted to have superior development outcomes and a higher quality of life (Flora and Flora, 2003; Besser, 2009). Bonding and bridging are not only expressions of the network aspect of social capital. The two concepts relate also to the values and attitudes of the actors in the social networks and these “emotional” aspects influences both the strength of the bonding features and the extension of the bridging features of the local social capital.

When facing various challenges, villages of this kind are able to mobilize both internal and external resources to accomplish locally initiated change that benefits the wider community, and to adapt to the changing circumstances. The revival of the mountain village of Åre in north Sweden and Xiaoguan village in China's Hebei Province have demonstrated the important role of local social capital in enhancing the endogenous development capability of the community (Li et al., 2016).

According to the above analysis, rural evolution could be attributed to the internal relations and governance of rural areas and it also

concerns interactions with the external environment (Fig. 2). At the very beginning, villagers turned local resources into products on which the rural economy could rely, while rural social order was simultaneously upheld by intimate social relationships. Then, influenced by external processes such as globalization, industrialization, urbanization and informatization etc., villages have become increasingly dependent on cities and their markets. A series of changes and transformation were induced, including rural spatial restructuring, industry upgrading, population mobility, life-style change, production-mode transformation and social management change (Li, 2011). However, not every single village was able to adapt to the external changes. In many cases, individually-run local industries failed to meet the market competition and the owners were less capable to introduce sufficient technologies and capital to upgrade their industries. Depopulation also exacerbates rural decline when local markets shrink and talented laborers are in shortage to maintain rural industries (Wood, 2008; Carr and Kefalas, 2009). Both the bonding and bridging aspects of social capital are prone to being affected due to rural depopulation. In this process, villages are inclined to be individualistic, lose social cohesion and become both socially and economically isolated. As a result, villages of this kind will go into a vicious circle when declining local economy and depopulation coexist and mutually reinforce each other. This vicious circle will be accelerated into a vanishing process in the knowledge economy where big city-regions dominate and villages outside their spatial sphere of influence become marginalized.<sup>1</sup>

Compared to the rural decline cases, there are many exceptions of rural communities that survive external challenges and develop in a growing pattern (Li et al., 2016). For one thing, there are communities that possess certain functions, such as retirement communities, local trade centers, recreation communities, academic communities and government centers. These functions could help rural communities to develop in a multifunctional way and maintain their vitality and wellbeing. For another thing, there are communities that successfully have upgraded their local industries, making them geared to the (urban) market demand (Westlund and Kobayashi, 2013). In the meantime, these communities often go through a social management transformation from individual to more collective based system to deal with the depopulating and aging challenges. In this process, communication and dialogue among individuals are improved and collaborations between different stakeholders also get strengthened in line with similar values and attitudes. Such local social capital acts as a form of glue, able to hold people and groups together and to interact with different external actors and sectors. Villages of this type will establish and maintain effective interactions to the external environment, which provide access to financial and political capital that can have beneficial development outcomes (Vidich and Bensman, 1958; Li et al., 2016).

Villages in the stagnant stage indicate currently self-sufficient communities. Their rural industries are still localized, small-scale and homogeneous activities that are mainly serving the local market. The rural society is still characterized by close personal relationships and typically maintained via informal control. Villages of this kind will either grow or decline; this depends on the ability of locals to foresee external challenges and opportunities and mobilize resources to make in-time responses in both their economic development and social management system (Lefebvre, 2003).

Fig. 3 portrays the rural evolution process when rural communities transform from an agrarian society to an urban-industrial, capitalist society and then to a knowledge economy. We consider rural evolution as a process in which the rural communities gain or lose their resilient capacity against external challenges, which further influence both the material and immaterial elements of the rural system.

<sup>1</sup> These types of processes are described by Myrdal (1957) as “cumulative causation”. The New Economic Geography has formulated these processes in formal equations, see e.g. Fujita et al. (1999).

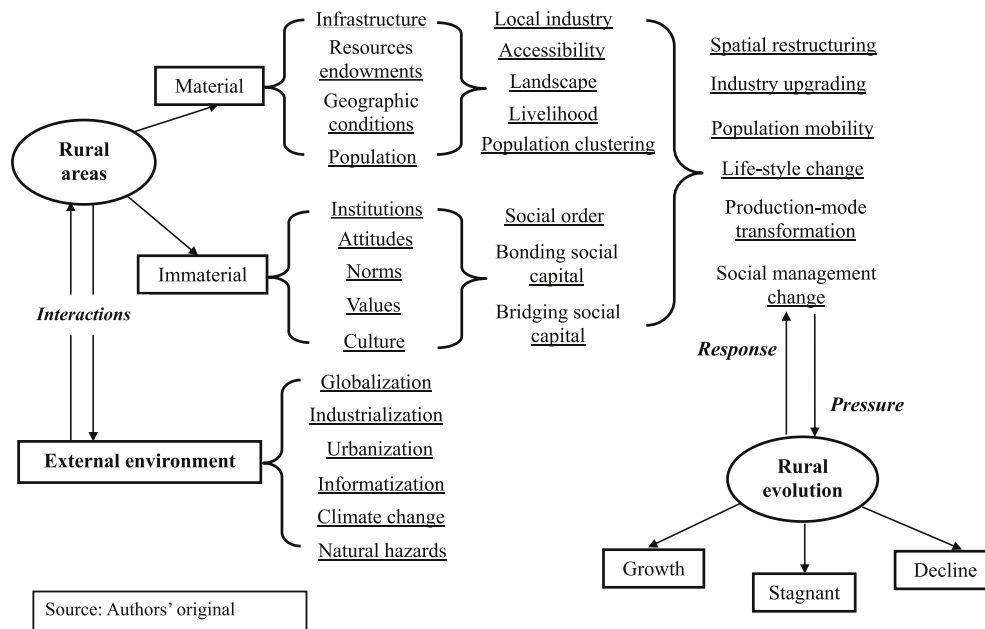


Fig. 2. The diagram of rural evolution.

Source: Authors' original

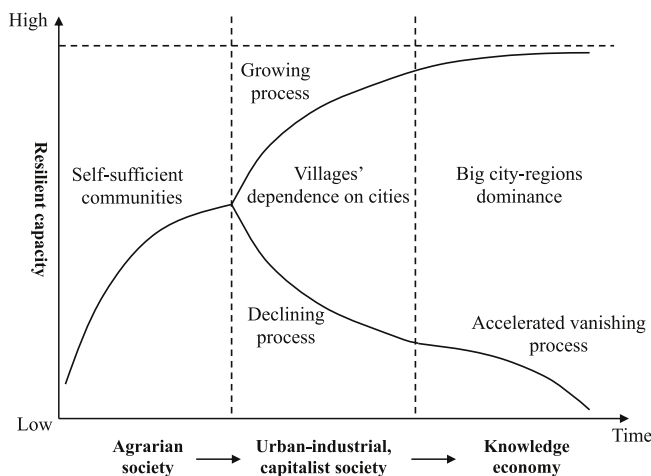


Fig. 3. A sketch map of rural evolution process.

Source: Authors' original

#### 4. What characterizes sustainable rural communities?

Generally, sustainability and vulnerability represent the two extremes of a continuum.

That indicates the quality of the livelihood system (Niehof, 2004). As rural communities consists of many elements, the robustness of rural communities depends on the sustainability of many facets such as economy, population, social networks, spatial factors, agriculture, culture, land use, ecology and government policy etc. (Epps, 1995; Troughton, 1995). This indicates the complexity of rural areas and intensifies the assertion that there is no single "model" for sustainable rural development (Bryant et al., 1996). As people attempt to approach rural sustainability, it is necessary to discuss what sustainable rural communities are characterized by.

Some Japanese scholars introduced the concept "community-function" to assess the state of a given rural community, including the management of local resources and environment, seasonal cleanups, and organization of local events (Sakuno, 2006; Ono, 2008; Kasamatsu, 2009; Odagiri, 2011). They held that sustainable rural communities

have the manageability in maintaining the community function while depopulation has limited their manageability. Crandall and Etuk (2008) coined the concept "community vitality" in the US to understand the self-managing capacity of a rural community. They assumed that a sustainable rural community has the ability to sustain itself into the future as well as to provide opportunities for its residents to pursue their own life goals and the ability of residents to experience positive life outcomes. Thus, rural decline means the declining vitality of a rural community.

The above two cases have portrayed an ideal status of sustainable rural communities in which their function and people's livelihood could be maintained and sustained. However, this description is too general and fails to clarify the interactions between the rural areas and the external environment. It is our contention that sustainable rural communities should be characterized by rural resilience, a reaction to the notion of rural decline and associated with enhancing villagers' livelihood through changes in their behavior and adaptation to new circumstances, rather than being passively dictated at the mercy of unmanageable external forces.

The concept of resilience, which was firstly introduced to assess the ecological system, is defined as "the capacity of a system to absorb disturbance, undergo change, and retain the same essential functions, structure, identity and feedbacks" (Holling, 1973). Resilience has been widely applied in the social and economic contexts (Allison and Hobbs, 2004). Walker and Salt (2006) emphasized that any attempt for sustainable development that does not explicitly acknowledge the resilience of a system leads to a malfunctioning system, which does not provide the goods and services that are expected. They argued that the key to sustainability lies in enhancing the resilience of the system, not in optimizing isolated components of the system. As thus, a resilient rural community possesses the capacity to prevent unwelcome challenges in the face of external circumstances, and to adapt to the changing external environment in such a way that a satisfactory standard of living is maintained.

Walker et al. (2004) and Folke et al. (2010) have identified three aspects of resilience: 1) the capacity to buffer systemic shocks while conserving existing functions and structures (persistence); 2) the capacity to deal with challenges such as uncertainty and surprise through renewal, reorganization and learning within the current regime (adaptability); and 3) the capacity to create a whole new trajectory that

is rooted in a radical change in the very nature of the system (transformability). When coming to rural resilience, we consider these three aspects of resilience as three different stages in which rural areas respond to the changing external environment. Depending on their countries' general development level, rural areas of various countries may find themselves in different stages. We propose the following actions to enhance rural resilience in order to strengthen the sustainability of rural areas.

#### 4.1. Rural livelihood diversification

In rural areas still dominated by agriculture, as is the case in developing countries, it is necessary to improve rural diversification as an important strategy for decreasing livelihood vulnerability in order to meet the external changes (Walker and Salt, 2006). Thus, rural livelihood diversification indicates the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living (Ellis, 2000).

For individual farmers, diversification means that they diversify their farm activities and that they are not solely dependent on primary agricultural production, so that their income would fluctuate less, thereby increasing their economic persistence (Darnhofer, 2010). Agricultural diversification includes multi-functional agricultural activities such as diversified agricultural products, agro-product processing, and agriculture tourism. For the villages alike, it is better for the rural economy to be diversified and there are both agricultural and non-agricultural industries on which villagers could rely and get income to maintain their livelihood. This requests villagers to better exploit local resources and develop them into profitable industries. As for villagers who worked outside and sent back remittances, we consider this as a way of expanding people's income sources, which can help local households to initiate new careers.

In the developed countries, rural diversification is not only about complementing farmers' activities with new, non-agricultural activities such as agro-tourism. It is also about creating a new foundation for the local rural economy, in which local agriculture merely is a part of the mix. One example is the remote Swedish village of Åre, which is not only Scandinavia's leading ski-resort, but also an all-year round destination that offers a mix of sports, outdoor life and entertainment. Åre's "smart specialization" strategy has meant a focus on innovations related to sports and outdoor activities, and besides being a tourist destination it has become a hotbed for start-ups and corporate ventures in the sport-technology sector – but the growth of tourism has also meant an increase in demand for locally produced agricultural products. New actors in new industries with new networks have meant a comprehensive transformation of the village's social capital, not least regarding the external, bridging links, but the entrepreneurial attitudes have been there for generations (Nordin and Westlund, 2009). The revival of Xiaoguan village of Yangyuan county which is classified as a national impoverished county in China's Hebei Province represents a case in the developing countries. Xiaoguan village, which used to be challenged by depopulation due to its backward local economy, initiated a share-based cooperative system for mutton breeding and greenhouse vegetable industries. The village committee, impoverished households, ordinary households and wealthy households receive dividends on their shares in terms of the capital, land, labor and other production elements they have contributed with. By way of this system, local peasants benefit from diversified income sources and people become bound to the interests of all the households of Xiaoguan village. As a result, there are migrant workers who returned to Xiaoguan and joined the local industries in the period following the initiation of the program. A strong sense of mutual aid, solidarity and common prosperity has emerged among the peasants (Li et al., 2016).

#### 4.2. Market oriented institutions

Rural livelihood diversification only means that rural areas have more chances to survive external challenges such as market fluctuations. However, effective rural institutions can strengthen local decision power and the ability to local management, which strong outside forces are less able to undermine (Warren, 1963). As the transformation from agrarian to urban-industrial societies proceeds, there is an increasing demand for organization of rural citizens if they are to succeed in the market economy. The very important factor is to create market-oriented institutions where formal rules replace informal norms as a way of regulating relationships among workers and owners, producers and states, and capitalists and the nation state (Weber, 1978). This means that the owners of the rural industries and those employees in the market economy should follow more formal mechanisms of social coordination such as contracts and work rules, instead of the informal habits and folkways. Thus, the self-regulating rural communities are to be transformed into societies, which are coordinated by rational, contractual and associative bonds.

In villages of strong market oriented institutions, people's behavior and decision-making are regulated in a way that local industries will be run more efficiently. Villages' adaptability will be enhanced as a response to the changing external environment.

#### 4.3. Strong social capital

Rural communities with strong social capital are considered to be inclusive and participatory and they are assumed to have an increased capacity to respond to external disturbances (Flora and Flora, 2003; Murphy, 2007). Villages of diverse internal relationships and strong external linkages are able to mobilize both internal and external resources to realize locally initiated actions and adjustments to respond to external changes (Brown and Schafft, 2011). Besides, social capital reduces transaction and monitoring costs, and knowledge and expertise can be exchanged more easily than in low-trust communities (Nkhata et al., 2008). As an individual-level attribute, social capital generates more immediate economic connotations since people make decisions to invest in building their social relationships in a rational way, which then pay off when in need.

When facing external challenges, social capital acts as a form of glue and holds people and groups together which help them to work jointly to conquer difficulties. Villagers' collective actions like cooperation are facilitated when there is a high level of trust among the people and they hold the same values and attitudes towards protecting public interests and controlling the destiny of their village (Ito, 2013). Thus, rural transformation will be accomplished by actors who initiate radical change in the very nature of their rural system, making it more adaptive and resilient.

### 5. Discussion

Rural decline is an inevitable process associated with the transformation from the agrarian to the urban-industrial economy, and further on to the knowledge economy. However, rural decline is not predestined. It is by the interactions between rural areas and the external environment that rural communities either grow, decline or even vanish. How rural evolution proceeds depends on the capacity of the rural communities, which respond to external changes through adjusting their internal components' function and structure. In this process, rural communities of different geographic conditions, natural resource endowments and social relationship, as well as people's values, attitudes and institutions will make different responses, which finally lead to different evolution patterns and outcomes.

As urban-rural relationships change in their patterns and contents when human society transforms, it becomes necessary to take measures in advance to strengthen the capacity of rural areas to meet external

challenges. However, compared with the broad public policy and planning initiatives, which are often implemented from the top-down, we call for more bottom-up initiatives and collective actions as well as commitments from those who live there. It is the inhabitants' resolutions, will-power and attitudes that decide the destiny of their communities when there is support from the outside. In this process, the endogenous development capability of communities is strengthened and the local social capital is enhanced when increased unity, cooperation and trust is developed among the villagers. Then, the local social capital can serve as a platform for collaboration and interplay with different external actors and sectors.

The knowledge economy and all the applications of new knowledge-intensive technologies has meant that natural resources are no longer a guarantee for rural development. Capital-intensive, high-tech equipment (which increasingly can be remote controlled) have replaced most of the need of a local labor force. However, there are many examples of rural areas that have adapted to changes in urban demand. The most frequent of these are of course areas of tourism that have been able to exploit new resources in the form of natural and cultural amenities. Tourism comprises a wide range of activities but mainly within low-paid service jobs. Still, without tourism these areas would be much worse off. There are also examples of rural areas that have found new functions as research stations, testing areas of vehicles for rough climates, or other functions that corresponds to urban demands.

In the knowledge economy we want to stress three necessary conditions for sustainable rural development across the world: 1) development of new economic activities that can respond to potential urban demand; 2) local entrepreneurship that can establish and expand these new activities; and 3) social capital that can support the entrepreneurship in new activities with access to credits, labor, human capital, external markets and external knowledge for learning and innovation.

The traditional perspective on entrepreneurship has been that economic growth is the result of individual entrepreneurs and their activities, whereas government and the civil sector have played a modest or insignificant role. During the last decades, this view has been replaced by theories of innovation systems (Freeman, 1987; Lundwall, 1992) and "triple-helix" (Etzkowitz and Leydesdorff, 2000) where collaboration between entrepreneurs and government (incl. institutes for education and research) and sometimes the civil sector has been given a more prominent role. However, these theories have been developed from a mere urban perspective and have hardly ever been applied to rural development, which by public policy still mainly is considered an agricultural issue. Here we deliberately break with this tradition and attempt to apply modern growth theory also on rural areas.

While universities and research institutes normally are assumed to play a role for urban, regional and national development, local entrepreneurs, local government and the local civil society are the decisive actors in local rural development. As shown in Table 1, each of these actor groups have a traditional main activity, marked with an O. However, based on the theories of innovation systems and triple-helix we claim that the traditional main activity of each group of actors is not enough to achieve local rural development. No single actor group – not even the entrepreneurs – is able to achieve revitalization of rural areas without supportive collaboration with the other actor groups. The

collaborative side-activities are marked with (o) in Table 1. Entrepreneurs need other local entrepreneurs, they need public infrastructure and services and they need embeddedness in the local community. Local governments need entrepreneurs to create local employment and incomes, and it needs local, civic associations to create an attractive local environment that make people want to live there. Local associations and the civic community need government and entrepreneurs for various forms of support in order to perform their activities. Successful collaboration builds on a positive social capital within and between the local actor groups.

It must, however, be pointed out that successful local collaboration as described in Table 1, which can be the key to sustainable local urban development, most often is insufficient for rural development. The reason is the lack of scale in rural areas. In urban areas, there are in general sufficient demand for new products, the labor markets are large and can supply labor with the right skills, access to credits are better, the number of competitors are larger which means that the potential for informal knowledge spillovers is larger, which in its turn facilitates innovation. All these factors mean advantages for urban areas; advantages that rural areas must compensate for by building bridging social capital, i.e. links and networks to external markets, actors and sources of knowledge (Westlund and Kobayashi, 2013). This seems to be one of the main characteristics of the rural areas, situated outside the metropolitan regions that have shown a successful development in the knowledge economy.

## 6. Concluding remarks

This paper has investigated the mechanisms of rural decline and has tried to provide some answers to the question of why certain rural areas decline while others seem to find ways to survive and even develop. Our focus has been on two types of rural areas, the "intermediate" rural regions being situated close to the city-regions, and the vast peripheral areas that lay beyond the positive economic influence of the city-regions. Our conclusion is that the former, if they have a sufficient population density and connectivity, have a potential for utilizing the city-regions knowledge spillovers and markets for rejuvenating their economies, while the latter most often are in too disadvantaged of a position to be able to turn their negative trends.

However, while the negative prognosis for peripheral rural areas can be considered a global one, the potential for intermediate regions might be restricted to developed countries, as their potential in many developing countries is uncertain. There, the big city-regions function as "migration magnets" for the population in neighboring regions, which means that the slum areas of the big cities should be the prime areas for the positive influence of the cities' economic growth.

We based our overview on two assumptions of which the first was that rural development in the knowledge economy are local processes that are determined by strongly linked endogenous and exogenous factors. Our findings support this assumption. External economic, social and increasingly also environmental changes exert pressures on rural areas. Often these pressures are of such a magnitude and the rural areas' potential to counteract them so limited, that rural decline cannot be prevented. However, by combinations of internal and external resources, including internal and external social capital, certain villages

Table 1

Local prerequisites for sustainable rural development, groups and their activities. The main activity of each group of actor is market "O", while the necessary involvement in/support of other actor groups' activities are marked "(o)".

Source: Adapted from Westlund (2006, p. 93)

Activity	Groups of local actors		
	Entrepreneurs	Government	Local associations and community
Product development and production	O	(o)	(o)
Public infrastructure and service	(o)	O	(o)
Leisure activities, place attractiveness	(o)	(o)	O

and rural areas are able to transform their economies and respond to potential urban demand, and thereby initiate a growth process.

The second assumption was that the right combination of bonding (internal) and bridging (external) social capital in local/community activities has a positive influence on rural development. There are both theoretical arguments and a number of studies supporting this assumption but it should be underscored that social capital's role in rural development still is a relatively under-explored research area. However, as a necessary source for local collaboration and joint action the role of social capital is undisputed.

From a policy point of view, our results clearly indicate that the heavy subsidization of agriculture, which is one of the cornerstones of the European Union, only contributes to rural development to a very small extent, if any. If the rural areas of the developed countries should have a future, and in particular the remote ones, it does not lie in agriculture. A similar conclusion should also be drawn for the developing countries. Diversification of the economy, increase of agriculture's productivity and a decrease of agriculture's relative share of the economy is also the future for rural areas in the developing world.

Needless to say, a general overview of rural evolution in the world, like this article, suffers from a number of limitations and problems: the countries of the world find themselves at different stages of development and so do their rural areas. Moreover, "rural areas" are not a homogeneous group of entities, but differ in a number of aspects, such as climate, natural resources, population density, labor's education and skills, economic standard, access to metropolitan regions with their markets and resources, institutional arrangements, social capital, culture, etc. There are always exceptions to the general patterns, conditions and trends that we have depicted in this review – as we also show in the positive examples that deviate from the general negative pattern in remote rural areas. Still we would like to claim that, in spite of these limitations, the general pattern that we describe could serve as a reference point for further studies of rural areas' development potentials in the rapidly emerging global knowledge economy. Among possible topics for future research, we would especially like to stress the study of places in rural areas in intermediate and remote locations that are able to transform and revitalize. How have these processes taken place? Which strategies and resources have been used? Which links have been built to external resources (input) and markets (output)? Which actors and actor groups have been involved and which combinations of bonding and bridging social capital have been utilized? What has been the role of public policy at different levels?

## Acknowledgements

The written of the paper was supported by the National Natural Science Foundation of China (41771191). The authors are grateful for valuable comments from three anonymous referees and from Kyle Farrell.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jrurstud.2019.03.003>.

## References

- Allison, H.E., Hobbs, R.J., 2004. Resilience, adaptive capacity, and the "Lock-in Trap" of the Western Australian agricultural region. *Ecol. Soc.* 9 (1), 3.
- Amcoff, J., Westholm, E., 2007. Understanding rural change—demography as a key to the future. *Futures* 39 (4), 363–379.
- Anding, T.L., Gustafson, N.C., 1968. For Rural Revival Regional approach suggested to create system capable of producing 'the good life' for everyone. In: This Is an Address at the National Municipal League's National Conference on Government in New Orleans in December 1968.
- Berry, B.J.L., 1976. The counterurbanization process: urban America since 1970. In: In: Berry, B.J.L. (Ed.), *Urban Affairs Annual Review*, vol. 11. Sage, Beverly Hills, CA, pp. 17–30.
- Besser, T., 2009. Changes in small town social capital and civic engagement. *J. Rural Stud.* 25, 185–193.
- Birkmann, J., 2016. Boost resilience of small and mid-sized cities. *Nature* 537, 605–608.
- Bjorna, H., Aarsaether, N., 2009. Combating depopulation in the northern periphery: local leadership strategies in two Norwegian municipalities. *Local Gov. Stud.* 35 (2), 213–233.
- Brown, D.L., Schafft, K.A., 2011. *Rural People and Communities in the 21st Century Resilience and Transformation*, vol. 65 Polity Press, UK Bridge Street Cambridge CB2 1UR.
- Bryant, C.R., Nellis, M.D., Bowler, I., 1996. 'Sustainability of rural systems: an introduction. In: Sasaki, H., Saito, L., Tabayashi, A., Morimoto, T. (Eds.), *Geographical Perspectives on Sustainable Rural Systems*. Kaisei, Tokyo, pp. 1–3.
- Carr, P.J., Kefalas, M.J., 2009. *Hollowing Out the Middle: the Rural Brain Drain and what it Means for America*. Beacon Press, Boston.
- Champion, A.G., 1988. The reversal of the migration turnaround: resumption of traditional trends? *Int. Reg. Sci. Rev.* 11 (3), 253–260.
- Champion, A.G. (Ed.), 1989. *Counterurbanization. The Changing Pace and Nature of Population Deconcentration*. Edward Arnold, London.
- Champion, T., Shepherd, J., 2006. Demographic Change in Rural England. *The Ageing Countryside: the Growing Older Population of Rural England*. pp. 29–50.
- Cloke, P., Philips, M., Thrift, N., 1995. The new middle classes and the social constructs of rural living. In: Butler, T., Savage, M. (Eds.), *Social Change and the Middle Class*. UCL Press, London, pp. 220–238.
- Cloke, P., Goodwin, M., Milbourne, P., 1998. 'Inside looking out: outside looking in. Different experiences of cultural competence in rural lifestyles. In: Boyle, P., Halfacree, K. (Eds.), *Migration into Rural Area*. John Wiley & Sons, Chichester, pp. 134–150.
- Crandall, M., Etuk, L., 2008. What is community vitality? Retrieved August 17, 2015, from. <http://oregonexplorer.info/content/what-community-vitality>.
- Cullingworth, J.B., Nadin, V., 2002. *Town and Country Planning in the UK, thirteenth ed.* Routledge, London.
- Curry, G.N., Koczberski, G., Selwood, J., 2001. Cashing out, cashing in: rural change on the south coast of Western Australia. *Aust. Geogr.* 32 (1), 109–124.
- Darnhofer, I., 2010. Strategies of family farms to strengthen their resilience. In: *Environmental Policy and Governance*, vol. 20. pp. 212–222.
- Davoudi, S., Stead, D., 2002. Urban-rural relationships: an introduction and brief history. *Built. Environ.* 28 (4), 269–277.
- DTI, Department of Trade and Industry UK, 1998. *Our Competitive Future: Building the Knowledge-Driven Economy*. cm4176, London.
- Ellis, F., 2000. *Rural Livelihoods and Diversity in Developing Countries*. Oxford University Press, Oxford.
- Elshof, H., Bailey, A., 2015. The role of responses to experiences of rural population decline in the social capital of families. *J. Rural Community Dev.* 10 (1), 72–93.
- Epps, R., 1995. The sustainability of Australian agricultural production systems: a realistic objective or simply a desirable aim? *Aust. Geogr.* 26, 173–179.
- Etzkowitz, H., Leydesdorff, L., 2000. The dynamics of innovation: from national system and model to a triple helix of university – industry-government relations. *Res. Pol.* 29, 109–123.
- Farrell, K., 2017. The rapid urban growth triad: a new conceptual framework for examining the urban transition in developing countries. *Sustainability* 9 (8), 1–19.
- Farrell, K., Westlund, H., 2018. China's rapid urban ascent: an examination into the components of urban growth. *Asian Geogr.* 35 (1), 85–106 2018.
- Flora, C., Flora, J., 2003. Social capital. In: Brown, D., Swanson, L. (Eds.), *Challenges for Rural America in the Twenty First Century*. Penn. State University Press, University Park, PA, pp. 214–227.
- Folke, C., Carpenter, S.R., Walker, B., Scheffer, M., Chapin, T., Rockstrom, J., 2010. Resilience thinking: integrating resilience, adaptability and transformability. *Ecol. Soc.* 15 (4), 299–305.
- Forth, G., 2000. The future of Australia's declining country towns: following the yellow brick road. *Reg. Policy Pract.* 9 (2), 4–10.
- Freeman, C., 1987. *Technology and Economic Performance: Lessons from Japan*. Pinter Publishers, London.
- Frey, W., 1995. Immigration and internal migration "flight": from US metropolitan areas: toward a new demographic balkanization. *Urban Stud.* 32, 733–757.
- Fuguitt, G., 1985. The nonmetropolitan population turnaround. *Annu. Rev. Sociol.* 11, 259–280.
- Fuguitt, G., Beale, C., 1996. Recent trends in nonmetropolitan migration: toward a new turnaround? *Growth Chang.* 27, 156–175.
- Fujita, M., Krugman, P., Wenables, A.J., 1999. *The Spatial Economy: Cities, Regions and International Trade*. The MIT Press, Cambridge, Massachusetts, London, England.
- Gallaher, Art, Padfield, Harland, 1980. *The Dying Community*. University of New Mexico Press.
- Ghose, R., 2004. Big sky or big sprawl? Rural gentrification and the changing cultural landscape of Missoula, Montana. *Urban Geogr.* 25 (1), 528–549.
- Gleeson, B., 2008. Critical commentary. Waking from the dream: an Australian perspective on urban resilience. *Urban Stud.* 45 (13), 2653–2668.
- Hassebrook, C., 2003. *Strategies to Revitalize Rural America, a Compilation of Articles from the Center for Rural Affairs Newsletter*. pp. 1–22.
- Hedlund, M., Lundholm, E., 2015. Restructuring of rural Sweden – employment transition and out-migration of three cohorts born 1945–1980. *J. Rural Stud.* 42, 123–132.
- Holling, C.S., 1973. Resilience and stability of ecological systems. *Annu. Rev. Ecol. Systemat.* 4, 1–23.
- Hugo, G., Smailes, P., 1985. Urban-rural migration in Australia: a process view of the turnaround. *J. Rural Stud.* 1, 11–30.
- Ito, K., 2013. Social capital and community function in depopulated areas. In: Westlund, H., Kobayashi, K. (Eds.), *Social Capital and Rural Development in the Knowledge*



- Society. Cheltenham UK and Northampton, USA, pp. 127–155 Edward Elgar.
- Kasamatsu, H., 2009. 小規模高齢化集落の再生にむけて (For regenerations of small scale and aging hamlets). *Bulletin of the Shimane Prefecture Mountainous Region. Res. Center* 5, 73–76.
- Kontuly, T., 1998. Contrasting the counterurbanisation experience in European nations. In: Boyle, P., Halfacree, K. (Eds.), *Migration into Rural Area*. John Wiley & Sons, Chichester, pp. 61–78.
- Larsen, K., Barker-Reid, F., 2009. Adapting to climate change and building urban resilience in Australia. In: *Urban Agriculture Magazine*, vol. 22. pp. 22–24.
- Lefebvre, H., 2003. *The Urban Revolution*. University of Minnesota Press, Minneapolis (French original first published 1970).
- Li, Y.H., 2011. Urban-rural interaction in China: historic scenario and assessment. *China Agric. Econ. Rev.* 3 (3), 335–349.
- Li, Y.H., 2012. Urban-rural interaction patterns and dynamic land use: implications for urban-rural integration in China. *Reg. Environ. Change* 12 (4), 803–812.
- Li, Y.H., Westlund, H., Zheng, X.Y., Liu, Y.S., 2016. Bottom-up initiatives and revival in the face of rural decline: case studies from China and Sweden. *J. Rural Stud.* 47, 506–513.
- Li, Y.H., Jia, L.R., Wu, W.H., Yan, J.Y., Liu, Y.S., 2018a. Urbanization for rural sustainability-Rethinking China's urbanization strategy. *J. Clean. Prod.* 178, 580–586.
- Li, Y.H., Wu, W.H., Liu, Y.S., 2018b. Land consolidation for rural sustainability in China: practical reflections and policy implications. *Land Use Pol.* 74, 137–141.
- Liu, Y.S., Li, Y.H., 2017. Revitalize the world's countryside. *Nature* 548 (7667), 275–277.
- Liu, Y.S., Liu, Y., Chen, Y.F., Long, H.L., 2010. The process and driving forces of rural hollowing in China under rapid urbanization. *J. Geogr. Sci.* 20 (6), 876–888.
- Luck, Gary W., Black, Rosemary, Race, Digby, 2011. Demographic change in rural Australia: future opportunities and challenges, 375-384. In: Luck, G.W. (Ed.), *Demographic Change in Australia's Rural Landscapes. Landscape Series*, vol. 12 Springer Science Business Media B.V. [https://doi.org/10.1007/978-90-481-9654-8\\_16](https://doi.org/10.1007/978-90-481-9654-8_16).
- Lundvall, B.-Å., 1992. *National Systems of Innovation: towards a Theory of Innovation and Interactive Learning*. Pinter Publishers, London.
- Markey, Sean, Halseth, Greg, Manson, Don, 2008. Challenging the inevitability of rural decline: advancing the policy of place in northern British Columbia. *J. Rural Stud.* 24, 409–421.
- Muili, T., Rusanen, J., 2003. Rural young people in regional development—the case of Finland in 1970–2000. *J. Rural Stud.* 19 (3), 295–307.
- Murphy, B.L., 2007. Locating social capital in resilient community-level emergency management. *Nat. Hazards* 41, 297–315.
- Myrdal, G., 1957. *Economic Theory and Underdeveloped Regions*. Harper and Row, London.
- Naldi, L., Nilsson, P., Westlund, H., Wixe, S., 2015. What is smart rural development? *J. Rural Stud.* 40, 90–101 2015.
- National Bureau of Statistics of China, 2017. *China Statistical Yearbook*. China Statistics Press, Beijing.
- Natsuda, K., Igusa, K., Wiboonpongse, A., Thoburn, J., 2012. One village one product rural development strategy in Asia: the case of OTOP in Thailand. *Can. J. Dev. Stud.* 33 (3), 369–385.
- Nelson, P.B., Oberg, A., Nelson, L., 2010. Rural gentrification and linked migration in the United States. *J. Rural Stud.* 26, 343–352.
- Niehof, Anke, 2004. The significance of diversification for rural livelihood systems. *Food Policy* 29, 321–338.
- Nkhata, A.B., Breen, C.M., Freimund, W.A., 2008. Resilient social relationships and collaboration in the management of social-ecological systems. *Ecol. Soc.* 13 (1).
- Nordin, S., Westlund, H., 2009. Social capital and the life cycle model: the transformation of the destination of Åre. *Tourism: Int. J.* 57 (3), 259–284.
- Odagiri, T., 2009. *農村再生 (Regenerating Agricultural Communities in Mountainous Regions)*. Iwanami Shoten, Tokyo.
- Odagiri, T., 2011. *集落再生 (Regeneration of Rural Communities)*. Gyousei, Tokyo.
- Ono, A., 2005. *Sanson Kankyo Shakaigaku Jyosetsu [Introduction to Environmental Sociology of Mountain Villages]*. Nouson gyoson bunka kyokai, Tokyo.
- Ono, A., 2008. *限界集落と地域再生 [Marginal community and regional regeneration]*. Kochi Shinbunsha, Kouchi, pp. 313.
- Phillips, M., 1993. Rural gentrification and the processes of class colonisation. *J. Rural Stud.* 9 (2), 123–140.
- Potter, R., Binns, T., Elliott, J., Smith, D., 2004. *Geographies of Development*. Pearson, Harlow.
- Putnam, R., 1993. *Making Democracy Work*. Princeton University Press, Princeton, N.J.
- Raven, P.H., Hassenzahl, D.M., Berg, L.L., 2011. *Environment*, eighth ed. John Wiley & Sons, New York.
- Sakuno, H., 2006. 中山間地域における地域問題と集落の対応 (The Problems and expectations of regional development in hilly-mountainous region and correspondence of rural settlements). In: *The Japan Association of Economic Geographers*, vol. 52. pp. 46–64.
- Solana-Solana, M., 2010. Rural gentrification in Catalonia, Spain: a case study of migration, social change and conflicts in the Empordanet area. *Geoforum* 41, 508–517.
- Swaffield, S., Fairweather, J., 1998. In search of Arcadia: the persistence of the rural idyll in New Zealand rural subdivisions. *J. Environ. Plan. Manag.* 41 (1), 111–127.
- Troughton, M., 1995. Rural Canada and Canadian rural geography. *Can. Geogr.* 39, 290–305.
- van der Ploeg, J.D., Renting, H., Brunori, G., Knickel, K., Mannion, J., Marsden, T., de Roest, K., Sevilla Guzman, E., Ventura, F., 2000. Rural development: from practice and policies to theory. *Sociol. Rural.* 40, 391–408.
- Vidich, A., Bensman, J., 1958. *Small Town and Mass Society*. Princeton University Press, Princeton, N.J.
- Walker, B., Salt, D., 2006. *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Island Press, Washington, D.C.
- Walker, B., Holling, C.S., Carpenter, S.R., Kinzig, A., 2004. Resilience, adaptability and transformability in social-ecological systems. *Ecol. Soc.* 9 (2), 5.
- Warren, R., 1963. *The Community in America*. Rand McNally, Chicago.
- Weber, M., 1978. *Economy and Society*. University of California Press, Berkeley, CA.
- Westlund, H., 2006. *Social Capital in the Knowledge Economy: Theory and Empirics*. Edward Elgar, Cheltenham.
- Westlund, H., 2014. Urban futures in planning, policy and regional science: are we entering a post-urban world? *Built. Environ.* 40 (4), 447–457.
- Westlund, H., 2018. Urban-rural relations in the post-urban world. In: Haas, T., Westlund, H. (Eds.), *In the Post-Urban World: Innovative Transformations in Global City Regions*. Routledge, London, pp. 70–81.
- Westlund, H., Kobayashi, K. (Eds.), 2013. *Social Capital and Rural Development in the Knowledge Society*. Edward Elgar, Cheltenham 2013.
- Wood, R.E., 2008. *Survival of Rural America: Small Victories and Bitter Harvests*. University Press of Kansas, Kansas.
- Woolcock, M., 1998. Social capital and economic development: toward a theoretical synthesis and policy framework. *Theor. Soc.* 27 (1), 151–208.
- Yang, D.H., Yang, M., Huang, S.L., 2017. *Annual report on China's education (2017). social sciences academic press*, Beijing.
- Ye, J.Z., Pan, L., Wu, H.F., et al., 2009. Women China 3, 24–33.
- Young, A., 2013. Inequality, the urban-rural gap, and migration. *Q. J. Econ.* 128 (4), 1727–1785. <https://doi.org/10.1093/qje/qjt025>.