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Abstract	Urban-to-rural migration (URM) is reshaping rural development worldwide, bringing both opportunities and challenges. This study follows the PRISMA methodology to conduct a systematic review of 58 cases from 19 articles published in Scopus and Web of Science between 1990 and March 2024. It examines how different types of URM impact rural development across economic, agricultural, social, demographic, and ecological aspects globally. Findings indicate that URM had more positive than negative impacts on rural development, particularly in economic revitalization, ecological protection, and agricultural diversification. This study also examines six typological categories of URM on				
	rural development." while amenity and be of URM in high-inc developing countries	Typological analysis reveals that retirement migration has little impact on economic development and accelerates rural aging back-to-the-land migration promote environmental conservation. The spatial analysis highlights the heterogeneous impacts one and developing countries. While URM positively contributes to economic development in both developed and s, the modes of economic development differ. In developing countries, new activities complement traditional agriculture, and countries, rural economics transform the expression of both agricultural and non agricultural costors. However, LIPM also			

whereas in developed countries, rural economies transform the expansion of both agricultural and non-agricultural sectors. However, URM also poses significant challenges, particularly in developed countries where rural gentrification exacerbates conflicts and inequalities between newcomers and local communities. The opportunities and challenges in URM deserve policy attention in rural development.

Keywords (separated by '- Urban-to-rural migration - Rural development - Systematic literature review - Counter-urbanization - Rural gentrification ')

Footnote Information



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The implications of urban-to-rural migration on rural

development: a systematic literature review

Yue Zhang · Suziana Mat Yasin 🕩 · Li Sun

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6 **Abstract** Urban-to-rural migration (URM) reshaping rural development worldwide, bringing AQI both opportunities and challenges. This study fol-9 lows the PRISMA methodology to conduct a systematic review of 58 cases from 19 articles published in Scopus and Web of Science between 1990 and March 2024. It examines how different types of URM impact 12 rural development across economic, agricultural, social, demographic, and ecological aspects globally. Findings indicate that URM had more positive 15 than negative impacts on rural development, particularly in economic revitalization, ecological protection, and agricultural diversification. This study also 18 examines six typological categories of URM on rural 19 development. Typological analysis reveals that retire-20 ment migration has little impact on economic devel-21

opment and accelerates rural aging, while amenity

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and back-to-the-land migration promote environmental conservation. The spatial analysis highlights the heterogeneous impacts of URM in high-income and developing countries. While URM positively contributes to economic development in both developed and developing countries, the modes of economic development differ. In developing countries, new activities complement traditional agriculture, whereas in developed countries, rural economies transform the expansion of both agricultural and non-agricultural sectors. However, URM also poses significant challenges, particularly in developed countries where rural gentrification exacerbates conflicts and inequalities between newcomers and local communities. The AQ2 opportunities and challenges in URM deserve policy attention in rural development.

Keywords Urban-to-rural migration · Rural development · Systematic literature review · Counterurbanization · Rural gentrification

Introduction

Rural decline has become a pervasive global phenomenon with rapid industrialization and urbanization (Liu & Li, 2017). Limited capital resources and high levels of migration with the consequent aging of the population have resulted in depopulation, diminished employment opportunities, an aging society, weakened community-based autonomy, economic



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depression, and deteriorating quality of life in rural areas (Ono, 2005, 2008; Carr & Kefalas, 2009; Young, 2013; Cañete et al., 2018; Li et al., 2019). However, the rural decline is not pre-destined, rather, rural areas are transforming, such as the emergency of *urbs in rure* (Pahl, 1965), agricultural industrialization (Chu et al., 2024), shifts in rural entrepreneurial behaviors (Keeble & Tyler, 1995), and the deeper integration of modern communications and globalization into rural areas (Woods, 2007). The outcomes of rural development depend on the capacity of rural communities to adapt and respond to external changes by adjusting the function and structure of their internal components (Li et al., 2019).

Urban-to-rural migration (URM) has considerable potential to play a powerful transformative role in neo-endogenous development by bringing extralocal and local resources and introducing new assets and opportunities (Murdoch et al., 2003; Bosworth, 2012; Dilley et al., 2024). The global population is now concentrated in urban areas at an unprecedented level, with 57% of the total population residing in cities (World Bank Open Data, 2022). Conversely, a relatively small but consistent number of people migrate from urban to rural areas. The trend of internal migration from urban to rural areas, first observed in developed European and North American countries during the 1960s, has gradually gained prominence in discussions on sustainable rural development in developing countries (Fielding, 1982; Takahashi et al., 2021). Numerous countries began focused policy efforts to promote the movement of capital and human resources from metropolitan areas to rural areas, such as Key Settlement Policies in the UK, Territorial Planning in France, Demonstration Cities and Metropolitan Development in the U.S., and New Village Movement in South Korea, and Rural Revitalization Strategy in China for supporting URM (Liu & Li, 2017; De Guzman et al., 2020; Yin et al., 2022).

URM flow presents an opportunity for rural development, with its positive impacts in several aspects. Firstly, URM fosters the diversification of rural functions by facilitating the integration and accumulation of both external and local resources (Bosworth & Finke, 2020; McManus, 2022). Secondly, it contributes to the emergence of new agrarian landscapes, promoting agricultural modernization and industrial upgrading (Bosworth & Finke, 2020; Bosworth, 2010). Additionally, URM stimulates rural

entrepreneurship, enhances economic booming, and improves environmental sustainability in rural areas (Haartsen & Stockdale, 2018; Herrero-Jauregui & Concepción, 2023). Some studies have found that the implications of URM are not always positive and may even have adverse effects on rural areas. Studies have shown that URM can skyrocket housing prices, exacerbate surplus labour issues, heighten employment pressures, and pose challenges to the sustainability of the local entrepreneurial business (Willett, 2023; Hu et al., 2023; Sherman, 2023). In certain cases, URM accelerates rural gentrification and worsens inequality in resource distribution (Willett, 2023). In general, the impacts of URM on rural development are complex and persistent.

Current research on URM remains limited in three aspects. First, insufficient interdisciplinary integration. The impacts of URM on rural development extend across multiple dimensions, including social, economic, environmental, and other factors. However, existing studies predominantly rely on partial disciplinary approaches, lacking a comprehensive analytical framework that integrates diverse perspectives. Secondly, limited geographical analyses. Most quantitative studies focus on specific local or national contexts due to the data limitation and constrained data accessibility, such as Niedomysl and Amcoff (2011) longitudinal analysis of Swedish internal migration to rural areas highlights population growth during the 2000s. Qin et al. (2015) investigated the demographic and socio-economic restructuring driven by URM in rural areas of the United States. Costello (2007) examined migration from metropolitan to rural or semi-rural regions in Australia, focusing on housing affordability and availability. A systematic and cross-regionally comparable evaluation framework has yet to be developed. Third, underdeveloped typological analysis of URM. Existing research has identified typologies of URM, such as lifestyle migration, amenity migration, and back-to-the-land movements (Benson & O'Reilly, 2009, 2016; Gosnell & Abrams, 2011; Sahin, 2025). However, empirical studies have yet to compare the differentiated developmental outcomes across URM typologies.

Thus, to synthesise the multi-dimensional implications of URM on rural development from the existing literature, the authors conducted a systematic review by drawing from 58 relevant case studies on an international scale. A systematic review is an

approach that allows gathering relevant literature to validate and upscale insights systematically (Pullin et al., 2009). Although in most cases, studies diversify in terms of the context, actors, main processes, scale, and resolution, systematic reviews can be used to synthesise and upscale these findings to provide more generalised insights transferrable across places (Rudel, 2008). This study aims to establish a comprehensive evaluation framework to analyse the complexity and multidimensional impacts of URM on rural development based on five predefined goals derived from the thematic analysis to address the following research questions:

RQ1: What are the overall implications of URM on rural development (both positive and negative)?

RQ2: How do different types of URM impact rural development?

RQ3: What are the differences in the implications of URM on rural development across regions or countries globally?

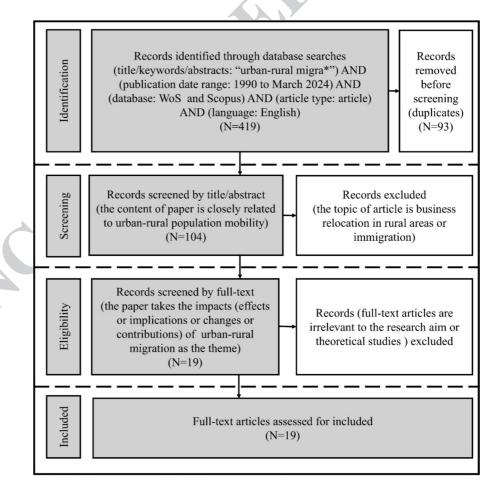
Method 168

Literature search strategy

Following PRISMA methodology guidelines for literature review (Page et al., 2021), the authors employed a systematic literature review to identify relevant studies related to URM and rural development. Consistent with the PRISMA statement, the article selection process involved four steps: identification, screening, eligibility, and inclusion (Fig. 1).

At the identification stage (Table 1), the term 'urban-to-rural migra*' was used to search titles, keywords, and abstracts in Scopus and Web of Science (WoS) databases, covering literature from 1990 to March 2024. This search yielded 67 articles from WoS and 352 from Scopus. After transferring all articles to Zotero for management, 93 duplicates were removed, leaving 326 articles. The screening stage involved reviewing titles and abstracts for relevance

Fig. 1 The PRISMA Flowchart showing the systematic approach for selecting articles reviewed





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Table 1 Search Terms (Title, Abstract, and Keyword) in Scopus and Web of Science databases

Database	Search terms
Database Scopus	TITLE-ABS-KEY ("urban-to-rural migra*") AND (EXCLUDE (PUBYEAR, 1966) OR EXCLUDE (PUBYEAR, 1967) OR EXCLUDE (PUBYEAR, 1977) OR EXCLUDE (PUBYEAR, 1979) OR EXCLUDE (PUBYEAR, 1980) OR EXCLUDE (PUBYEAR, 1982) OR EXCLUDE (PUBYEAR, 1984) OR EXCLUDE (PUBYEAR, 1985) OR EXCLUDE (PUBYEAR, 1985) OR EXCLUDE (PUBYEAR, 1986) OR EXCLUDE (PUBYEAR, 1987) OR EXCLUDE (PUBYEAR, 1988) OR EXCLUDE (PUBYEAR, 1988) OR EXCLUDE (PUBYEAR, 1989)) AND (LIMIT-TO (DOCTYPE, "ar")) AND (EXCLUDE (SUBJAREA, "MULT") OR EXCLUDE (
Web of Science	SUBJAREA, "MATH") OR EXCLUDE (SUBJAREA, "CHEM") OR EXCLUDE (SUBJAREA, "BIOC") OR EXCLUDE (SUBJAREA, "ENGI") OR EXCLUDE (SUBJAREA, "COMP") OR EXCLUDE (SUBJAREA, "MEDI") OR EXCLUDE (SUBJAREA, "ENER") OR EXCLUDE (SUBJAREA, "PSYC")) AND (LIMIT- TO (LANGUAGE, "English")) 1. I did three separate pieces of research
web of Science	with 'Title', 'ABS', and 'KEYs', and I

- applied the suggested string category
- 2. Then I combined them: 'TITLE' AND 'ABS' AND 'KEYs'. Result: 0 source
- 3. And I also combined them: TITLE OR ABS OR KEYs. Result:97
- 4. I took the last result (97) and 'refined' with the view of peer-reviewed academic articles (there are no book chapters, books, or conference papers), The language was 'refined' with English. Result:
- 5. 'Excluded' areas like Computer Science or Pharmacology Pharmacy or Engineering electrical Electronic or Information Science Library Science or Critical Care Medicine or Gastroenterology Hepatology or Physics Applied or Anesthesiology or Audiology Speech language Pathology etc. Result: 67

to urban-to-rural population mobility, excluding studies on business relocation and immigration. This pro-187 cess resulted in 104 relevant articles. 188

During the eligibility and inclusion stage, arti-189 cles were screened based on full-text reviews, focusing on those discussing the effects of urban-to-rural migration (URM). The inclusion criteria required studies to cover rural areas where URM occurred, measure at least one impact of URM, and be empirical with quantitative or qualitative data. Theoretical studies and those unrelated to URM impacts were excluded. Finally, 19 articles met these criteria and were included in the review.

Data extraction

Thematic synthesis was conducted on the sample articles. A thematic synthesis is an approach used to synthesise both qualitative and quantitative research to address research questions and it helps to uncover the interconnectedness of the findings presented, identify patterns and discern any gaps or inconsistencies in the literature (Thomas & Harden, 2008). By utilizing the themes extracted from the works of literature, reviewers go beyond the individual article findings and integrate them to reflect on their impacts on the research question. Therefore, the selected 19 articles were synthesised manually to determine commonalities and disparities, screen out the impacts of URM and classify them. Table 2 shows the implications of the urban-to-rural migrants on five aspects of rural development through thematic analysis.

The thematic synthesis identified and classified the implications of urban-to-rural migration (URM) on rural development as positive or negative. Positive outcomes include beneficial effects on agriculture, economy, society, demography, and ecology, while negative outcomes involve detrimental effects or stakeholder dissatisfaction. Each outcome in a study was recorded as a separate case. For example, Bosworth and Willet (2011) reported two positive outcomes ('gross population increase' and 'income and employment') and three negative outcomes ('physical and human capital accumulation', 'commodification of rural landscape', and 'conflicts with residents'), resulting in five cases. The 19 articles analysed yielded a total of 58 cases. Table 3 summarizes the literature and cases, detailing research methods, countries studied, content areas (agriculture, society, economy, ecology, and population), and the degree of impact (positive and negative) on rural development.

To ensure the validity and reliability of the findings, the authors took two measures: First, this study included only impacts with a certain strength

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Table 2 Multi-dimensional impacts coding and descriptive themes of URM impacts on rural development

Multi-dimensional impacts coding	Descriptive themes	Outcome
Social development	Rural gentrification	The process of in-migration of a new middle class with a particular aesthetic or cultural dis position in rural areas, accompanied by house rehabilitation, construction, lifestyle and class structure change, such as holding volunteer programmes or rising property prices and inequality
	Cultural inheritance	Local culture protection and inheritance
	Community cohesion	The relationship between urban-to-rural migrants and local residents, such as embeddeness in rural life or group segregation
	Urban-to-rural integration	Urban-to-rural integration
Economic development	Entrepreneurship	Increase or decrease in the number of enter- prises or self-employment in the local commu nity after URM
	Income and employment	Increase or decrease in farm or off-farm income after URM (income); increase or decrease in demand for farm or off-farm labour after URM (employment)
	The commodification of rural landscape	Forms of consumption of the rural landscapes, goods and services with urban lifestyle materially and culturally, such as rural tourism, boutiques, special stores, clubs, second home investment, etc
	Social capital accumulation	Endowment and embeddedness of local com- munity resources or not after URM, such as physical and human capital accumulation and infrastructure development
Sustainable population	Gross population increase	Population growth or decrease
	Population structure	Population ageing or young generation increase
Agricultural development	The new agrarian food landscape	The diversity of agricultural development, such as change of structure (organic farm development) and the number of land uses (small-scale farm increases)
	Agricultural land and property distribution	The transfer of farms and residences in rural areas
Ecological development	Environment concerns, behaviours and activities	Improving environmental concerns, behaviours and activities

Source Bosworth (2012), Phillips (2010), Tonts and Greive (2002), Dilley et al. (2024), Sandström (2023), Feng et al. (2024), Suh (2019), Bu (2017), Butt (2013), Stockdale and Macleod (2013), Bosworth and Willett (2011), Ingel (2010), Blekesaune et al. (2010), Costello (2007), Walford (2007), Bossuet (2006), Jones et al. (2003), Paniagua (2010), Curry et al. (2001), Lewis (2000), Findlay et al. (2000), Ma (1999) and Jacob (1996)

of evidence, assessed using Thapa's five-point scale (1–5) for rigour and correlation of methods and results (Table 4). Impacts meeting at least the third grade were selected. Second, two trained and experienced reviewers conducted literature sharing and coding. Any conflicts were resolved through discussion.

Data statistical analysis

The authors used Yin et al.'s (2022) data statistics approach, conducting descriptive statistics and employing Fisher's exact test to evaluate the significance of URM's positive impacts across different variables. Fisher's exact test, suitable for small-sample analysis, is necessary when over 20% of cases



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Table 3 Information on 58 cases

No	Literature	Strategy of	Coding	Descriptive the	mes		Typology of	Country
		inquire		Content	Positive effect	Negative effect	urban–rural migration	
1	Blekesaune et al. (2010)	Quantitative	Agricultural development	Agricultural land and property distribution (for aspiring farmers)	√		Back-to-the- land migra- tion	Norway
2			Agricultural development	Agricultural land and property dis- tribution (for recreation seekers)		V	50"	
3			Economic development	Income and employment	V		Amenity migration	
1	Bossuet (2006)	Qualitative	Economic development	Social capital accumula- tion (Infra- structures develop- ment)	V		Commuting migration	France
Š			Social development	Rural gentrifi- cation (Ris- ing property prices and inequality)		\checkmark		
5			Social devel- opment	Community cohesion (Group seg- regation)		\checkmark		
7		B	Economic development	Social capital accumula- tion (Infra- structures develop- ment)	$\sqrt{}$			

Table 3 (continued)

No	Literature	Strategy of	Coding	Descriptive the	mes	Typology of	Country	
		inquire		Content	Positive effect	Negative effect	urban–rural migration	
8	Bosworth and Willett (2011)	Qualitative	Economic development	Social capital accumu- lation (Physical and human capital accu- mulation)		V	Business migration	UK
9			Social devel- opment	Community cohesion (Conflicts with resi- dents)		\checkmark	200	
10			Economic development	Social capital accumu- lation (Physical and human capital accu- mulation)				
11			Sustainable population	Gross population increase	V			
12			Economic development	Income and employment				
13	Bu (2017)	Qualitative	Economic development	The com- modification of rural landscape	V		Business migration	South Korea
14			Sustainable population	Gross popula- tion increase	$\sqrt{}$			
15			Economic development	Entrepreneur- ship	$\sqrt{}$			
16		< C	Economic development	Social capital accumula- tion (Infra- structures develop- ment)	\checkmark			
17	Butt (2013)	Quantitative	Agricultural development	Agricultural land and property distribution		$\sqrt{}$	Retirement migration	Australia
						Recreation migration Commuting migration		

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Table 3 (continued)

No	Literature	Strategy of inquire	Coding	Descriptive themes			Typology of	Country
				Content	Positive effect	Negative effect	urban–rural migration	
18	Costello (2007)	Mixed methods/ Qual-Quant methods	Social development	Rural gentrifi- cation (Ris- ing property prices and inequality)		\checkmark	Amenity migration	Australia
9			Social devel- opment	Community cohesion (Conflicts with resi- dents)		√ 	0,	
20	Curry et al. (2001)	Qualitative	Economic development	Entrepreneur- ship	$\sqrt{}$		Amenity migration	Australia
21			Economic development	Income and employment	√			
22			Economic development	The commodification of rural landscape				
23			Agricultural development	The new agrarian food land-scape	V		Retirement migration	
24			Ecological protection	Environment concerns, behaviors, and activi- ties	\checkmark			
25		2	Social development	Rural gentrifi- cation (Ris- ing property prices and inequality)		$\sqrt{}$		
26	Dilley et al. (2024)	Mixed methods/ Qual-Quant methods	Economic development	Income and employment	$\sqrt{}$		Amenity migration	Japan
27			Economic development	Social capital accumu- lation (Physical and human capital accu- mulation)	\checkmark			
28			Social devel- opment	Urban–rural integration	$\sqrt{}$			
29			Social development	Rural gen- trification (Volunteer programs)	$\sqrt{}$			
30			Economic development	Entrepreneur- ship	\checkmark			



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 Table 3 (continued)

No	Literature	Strategy of	Coding	Descriptive themes			Typology of	Country
		inquire		Content	Positive effect	Negative effect	urban–rural migration	
31	Findlay et al. (2000)	Quantitative	Economic development	Income and employment	V		Business migration	UK
32			Economic development	Entrepreneur- ship	\checkmark			
33	Ingle (2010)	Qualitative	Economic development	Entrepreneur- ship	\checkmark		Business migration	South Africa
34			Economic development	Income and employment	\checkmark			
35			Social devel- opment	Rural gentrifi- cation (Ris- ing property prices and inequality)		√	P	
36			Economic development	Social capital accumula- tion (Infra- structures develop- ment)	√ S			
37	Jacob (1996)	Mixed methods/ Qual-Quant methods	Ecological protection	Environment concerns, behaviors, and activi- ties	V		Back-to-the- land migra- tion	Canada
38	Jones et al. (2003)	Quantitative	Ecological protection	Environment concerns, behaviors, and activi- ties			Green migration	United States
39	Lewis (2000)	Quantitative	Social devel- opment	Rural gentrifi- cation (Ris- ing property prices and inequality)		$\sqrt{}$	Commuting migration	UK
40		1	Economic development	The com- modification of rural landscape	$\sqrt{}$			
41	Ma (1999)	Quantitative	Economic development	Income and	\checkmark		Business migration	China
42) '	Economic development	Social capital accumu- lation (Physical and human capital accu- mulation)	\checkmark			
43			Economic development	Entrepreneur- ship	\checkmark			

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Table 3 (continued)

No	Literature	Strategy of	Coding	Descriptive themes		Typology of	Country	
		inquire		Content	Positive effect	Negative effect	urban–rural migration	
44	Paniagua (2010)	Qualitative	Social devel- opment	Community cohesion	$\sqrt{}$		Business migration	Spain
45			Economic development	Income and employment	$\sqrt{}$			
46	Sandström (2023)	Qualitative	Agricultural development	The new agrarian food land-scape	$\sqrt{}$		Back-to-the- land migra- tion	Sweden
47	Stockdale and Macleod (2013)	Mixed methods/ Qual-Quant methods	Economic development	Income and employment		V	Retirement migration	UK
48			Economic development	Entrepreneur- ship		$\sqrt{}$		
49			Sustainable population	Population structure (population aging)		V		
50			Economic development	Social capital accumula- tion (Infra- structures develop- ment)	0	\checkmark		
51			Social development	Rural gen- trification (Volunteer programs)	$\sqrt{}$			
52	Suh (2019)	Mixed methods/ Qual-Quant methods	Economic development	Income and employment	$\sqrt{}$		Commuting migration	South Korea
53		O	Agricultural development	The new agrarian food land-scape	$\sqrt{}$			
54	76		Social devel- opment	Community cohesion	$\sqrt{}$			
55			Ecological protection	Environment concerns, behaviors, and activi- ties	$\sqrt{}$			
56			Sustainable population	Gross popula- tion increase	$\sqrt{}$			
57			Social development	Rural gen- trification (Volunteer programs)	$\sqrt{}$			
58	Walford (2007)	Quantitative	Sustainable population	Gross popula- tion increase	$\sqrt{}$		Amenity migration	UK



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Table 4 Strength of evidence of an outcome presented in a case and its interpretation

Strength of evi- dence	Interpretation
5	The methods used to assess the impacts are explained in the methods section and the analyses of the results are presented. The reader can get the same conclusions based on the results and could replicate the study based on the methods
4	Methods are explained and results shown but some of the results are not explained. Some of the conclusions do not match the results
3	The methods used are explained but certain aspects necessary for the replication of the study (e.g., sample, the study area boundaries, etc.) are not provided. The reader could not replicate the study if s/he wanted
2	The results are presented and discussed but the methods of how they get these results are not explained or vice-versa. The reader does not know how the authors got the results
1	The impacts are described in the discussion but not explained in the results and the methods used were not explained. The reader does not know how the authors get the conclusions

Source Yin et al. (2022)

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have expected frequencies below 5 (Bewick et al., 2003). Particularly, when over 20% of cases possess expected frequencies below 5, specifically those with expected frequencies below 1, employing Fisher's exact tests becomes necessary due to inadequate approximation offered by the Chi-squared test (Kim, 2017). In this study, since over 20% of variables had such low frequencies, a one-tailed Fisher's exact test was applied to each impact coding and descriptive theme to determine if the outcomes were significantly positive or negative.

In this study, the authors employed the reference distribution method, wherein half of the sum of positive and negative cases was utilised. For instance, in analysing economic development with a total of 32 cases, 27 cases manifested positive outcomes, while 5 cases exhibited negative outcomes. Subsequently, Fisher's exact test was conducted to ascertain whether the frequency of positive outcomes (n=27) significantly exceeded that of negative outcomes (n=5). A reference distribution comprising 16 positive and 16 negative cases was established for this analysis. The same procedure was repeated for all explanatory variables, with corresponding reference distributions crafted accordingly for each test. These analyses were performed using IBM SPSS Statistics software (Version 21).

Furthermore, the authors calculated the odds ratio (OR) to investigate the extent of URM's impact on rural development. The OR value of each variable was the ratio of positive to negative outcomes in each case. The 95% confidence intervals were computed

for the OR values. When the OR exceeds 1, it indicates a higher likelihood of positive outcomes occurring, with increasing OR values corresponding to a greater probability of positive impacts. Furthermore, within the realm of the 'new agrarian food landscape', negative impacts were occurring with a frequency of 0. To ensure accuracy, these data had to be continuity corrected by replacing the '0' with '0.5' and including it in the calculation.

Typological difference analysis

This study compared the urban-to-rural migration's implications in different types of URM. Six types of urban-to-rural migration (URM) were identified and classified based on migration motivations (Table 5).

Results 298

Several characteristics were identified from the reviewed articles and cases, explored in sequence below.

Publication numbers and years

The articles were collected from 14 journals in the fields of geography, social sciences, demography, agricultural economic studies, environmental studies, economics and development studies (Fig. 2). The three leading journals in terms of literature



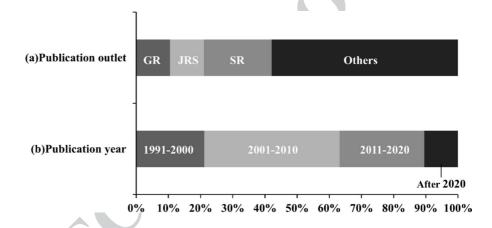
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Table 5 Typology of URM

Classification criterion	Description
Commuting migration	Moving to peri-urban places within regular access to urban areas with personal reasons or urban ailments
Amenity migration	Migration to rural areas with sightseeing views pursuing a rural lifestyle
Green migration	Migration to live up to ecological values
Retirement migration	Movement of retired migrants from urban areas to rural areas
Business migration	Migration for rural entrepreneurship
Back-to-the-land migration	Migration to adopt a primarily agrarian lifestyle by individuals from non-farming migration

Source Bosworth and Willett (2011), Champion et al. (2009), Curry (2001), Ingle (2010), Jacob (1996), Sandström (2022) and Stockdale and MacLeod (2013)

Fig. 2 Percentage of articles by publication outlet (a) and publication year (b). SR, Sociologia Ruralis; GR, Geographical Research; JRS, Journal of Rural Studies



volume were *Sociologia Ruralis* (n=4), *Geographi*-309 *cal Research* (n=2) and *Journal of Rural Studies* 310 (n=2), together accounting for 42.1% of the pub-311 lished articles. The number of publications ini-312 tially rose, peaking in 2010 (n=3), before declining 313 between 2003 and 2011. The majority of articles were 314 concentrated within the years 2001–2010, represent-315 ing approximately half of the total publications.

316 Geographical and methodological distributions

The authors compared the implications of URM in developed and developing countries. According to the United Nations, Department of Economic and Social Affairs (2025), the following countries in this study are developed countries: Australia, the United States, Canada, Spain, Norway, France, Sweden, the United Kingdom, South Korea, and Japan. In contrast, China and South Africa are classified as developing

The 58 cases were distributed in 12 countries globally. More than two-thirds of the cases (74%) were concentrated in Asian and European countries, including Spain, Norway, France, Sweden, the UK, China, South Korea, and Japan. The distribution of cases in economic development was uneven, with 23 cases in developed countries and 6 in developing countries. Only one case focused on social development in a developing country. All cases related to agricultural development (n=9), ecological protection (n=4), and sustainable population (n=5) were observed in developed countries. Methodologically, seven articles used quantitative approaches, seven employed qualitative approaches, and five utilized mixed methods (Fig. 3).

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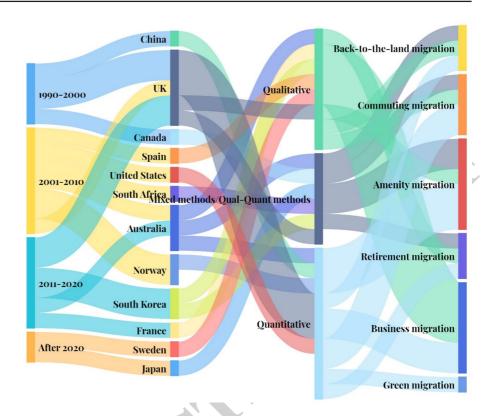
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countries.

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Fig. 3 Spatiotemporally, methods and types of URM used in the selected studies



341 Typological distribution

As for the types of the URM, these included business migration (n=6), amenity migration (n=6), commuting migration (n=4), retirement migration (n=3), back-to-the-land migration (n=3), and green migration (n=1). Additionally, several articles explored multiple types of migration. For instance, Butt (2013) investigated retirement, recreation, and commuting migration simultaneously.

350 Case distribution of multi-dimensional implications

As Fig. 4 summarizes of the 58 cases collected in 19 351 articles, the number of cases of economic develop-352 ment topped the list at 48.3%, followed by 15 cases 353 assessing social development (25.9%), agricultural 354 development (10.3%), demographic sustainabil-355 ity (8.6%) and ecological development (6.9%). This 356 shows that related research focused more on the 357 impacts of URM on economic and social development but less on rural demography, agriculture, and ecol-359 ogy. In the case of economic development, income 360 and employment (17.2%) and entrepreneurship (12.1%) accounted for a large proportion of all cases. In the case of social development, rural gentrification (14.0%) and community cohesion (8.6%) attracted the most attention. In the case of agricultural development, the new food landscape (5.2%) was more concerned. In the case of demographic sustainability, gross population increase (5.2%) was the main concern. In the case of ecological protection, the authors only focused on environmental concerns, behaviours, and activities (6.9%).

Findings

The researchers present descriptive statistics and Fisher's exact test analysis in the sections below to address the three research questions.

RQ1: What are the overall implications of URM on rural development (both positive and negative)?

Figure 5 highlighted that 43 out of the 58 cases reported positive outcomes, while 15 cases showed negative impacts, indicating that URM played a more



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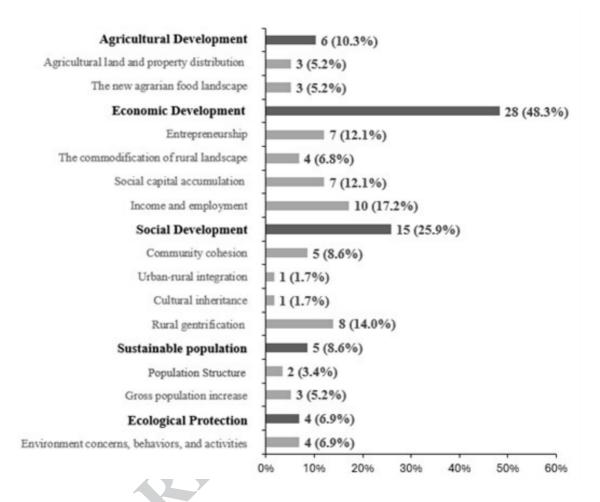


Fig. 4 Distribution of the cases following multi-dimensional impacts coding and descriptive themes. The number represents the number of cases; the percentage indicates the proportion

of coding and descriptive themes cases in the total number of cases (58 cases)

positive role in rural development. Statistically, the likelihood of positive outcomes was 2.87 times higher than a negative effect (P < 0.01, OR = 2.87) (Table 6). 383 In terms of economic development, posi-384 tive impacts were reported in a higher number of 385 cases compared with negative impacts. The posi-386 tive impacts were significantly significant (82.1%, 387 P < 0.05); the likelihood of observing positive 388 impacts was 4.6 times higher than negative impacts 389 (OR=4.60). URM played a positive role in rural 390 economic development. There were more positive 391 than negative impacts on four economic descriptive themes, such as entrepreneurship (85.7%), the commodification of rural landscape (75.0%), social capital accumulation (71.4%), and income and employment (90%). However, four themes of the positive impacts were statistically non-significant.

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In terms of social development, the authors observed a lower proportion of cases reporting positive impacts than negative impacts (46.7%), community cohesion (40%), and rural gentrification (37.5%). In the case of cultural inheritance and urban-to-rural integration, URM played a positive role in them.

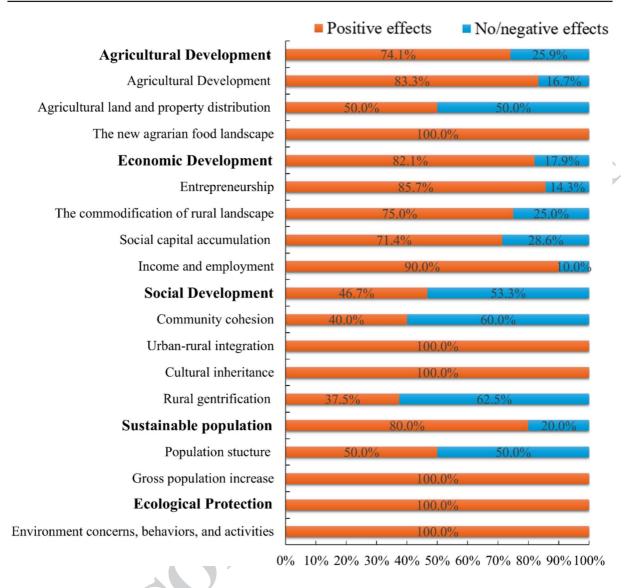


Fig. 5 The positive and negative impacts of URM across coding and descriptive themes. The percentage represents the proportion of positive or negative cases in all cases (58 cases)

The differences were all statistically non-significant (P > 0.05).

As for agricultural development, there were more positive than negative impacts (83.3%), but the data were statistically non-significant. As for the theme of the new agrarian food landscape (100%), all cases reported that URM was beneficial to new agrarian food landscape development. In the case of agricultural land and property distribution, the positive case was equal to the negative case (50%).

As for demographic sustainability, 80% of the cases showed that the URM was beneficial to the

sustainable population. In the case of gross population increase, all cases exhibited that URM promoted population growth in rural areas (100%). As for the population structure, the positive cases were equal to the negative cases (50%). The positive impacts of the coding and themes were all statistically non-significant (P > 0.05). In terms of ecological protection, all cases showed that URM promotes environmental protection in rural areas

Table 6 The *P*-value is the result of Fisher's exact tests for the outcomes of multidimensional impacts coding and themes

Multi-dimensional impacts coding and descriptive themes	P-value	OR (95% CI)
All cases	0.008**	2.87 (1.31–6.26)
Agricultural development	0.273	5.00 (0.34-72.77)
Agricultural land and property distribution	0.833	1.00 (0.02-50.40)
The new agrarian food landscape	0.214	8.00 (0.25-257.73)
Economic development	0.023*	4.60 (1.36–15.55)
Entrepreneurship	0.182	1.32 (0.45-79.50)
The commodification of rural landscape	0.500	3.00 (0.15-59.89)
Social capital accumulation	0.378	2.50 (0.27-22.79)
Income and employment	0.070	9.00 (0.81-100.14)
Social development	0.569	0.88 (0.21-3.67)
Community cohesion	0.608	0.67 (0.05-8.16)
Urban-to-rural integration	0.667	2.00 (0.02-212.47)
Cultural inheritance	0.667	2.00 (0.02-212.47)
Rural gentrification	0.500	0.60 (0.08-4.40)
Demographic sustainability	0.348	4.00 (0.24-66.19)
Population structure	0.833	1.00 (0.02-50.40)
Gross population increase	0.286	6.00 (0.155-231.83)
Ecological protection	0.214	8.00 (0.25-257.73)
Environment concerns, behaviours and activities	0.214	8.00 (0.25-257.73)

significant at P < or = 0.05. The OR is the likelihood of observing positive outcomes compared to negative outcomes, the 95% confidence interval (95% CI) was calculated

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**represents statistically significant at P < or = 0.01; *represents statistically

(100%); however, the outcome was non-significant (P > 0.05). 426

RQ2: How do different types of URM impact rural development? 428

The authors compared the URM implications in six types, including amenity migration, back-tothe-land migration, business migration, commuting migration, green migration, and retirement migration, as defined in Table 5. The impacts of six types of urban-to-rural migration on rural development are summarized as follows (Fig. 6): The proportion of positive implications outweighed negative ones in all types of URM, and statistically significant results were all observed (Table 6). The frequency of positive implications was higher in green migra-439 tion (100%), amenity migration (84.6%), business migration (80%), commuting migration (75%), and back-to-the-land migration (75%) compared to retirement migration (37.5%).

Positive cases in agricultural development were more frequently reported in four types of URM. In economic development, amenity and commuting migration both showed 100% positive implications, with business migration at 86.7%. Conversely,

the frequency of negative implications of economic development far outweighs the positive side in retirement migration, with the odds of negative impact being three times that of positive impact. For social development, business and retirement migration consistently reported positive implications, while commuting and amenity migration had lower frequencies of positive outcomes at 25% and 33%, respectively. Business, commuting, and amenity migration supported sustainable populations, whereas retirement migration had a 100% frequency of negative implications. In ecological protection, all cases reported 100% positive implications.

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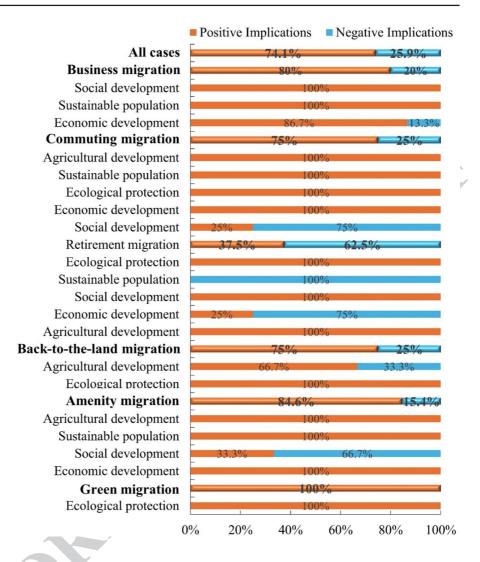
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What are the differences in the implications of URM on rural development across regions or countries globally

As Fig. 7 shows, the proportion of positive outcomes outweighed negative ones globally, although this is a statistically significant result only in the

Fig. 6 Typological differentiation of URM implications



developed countries. The frequency of positive outcomes in developing countries (85.71%, p > 0.05) was higher compared with developed countries (72.55%, p < 0.05).

As for economic development, positive cases were reported more frequently globally, and statistically significant results were observed in both developed countries and developing countries (p<0.05). Notably, developing countries exhibited the highest proportion of positive outcomes, reaching 100%. In terms of social development, a higher number of negative outcomes was reported in developed countries (53.85%) and developing countries (100%), but the difference was not statistically significant. In the cases of ecological development, sustainable population, and agricultural development, no cases were reported

in developing countries, while developed countries reported positive outcomes in a higher proportion of cases (100%, 80%, and 66.67%, respectively), but the difference was not statistically significant (P > 0.05).

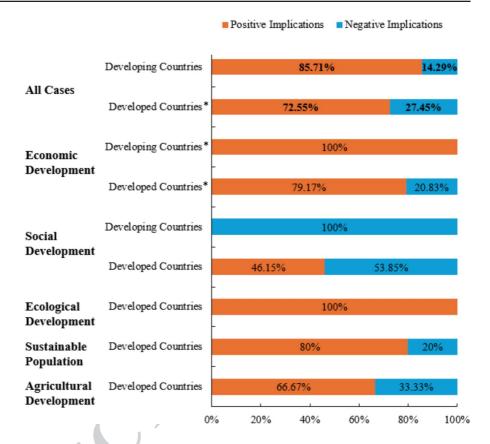
Discussion

The process of URM implications on rural development

Some scholars argue that URM impacts rural development negatively. Excessive commercialization and increased competition can arise from rural commodification, and certain urban-to-rural migrants, such as retirees, may focus more on personal needs



Fig. 7 Spatial differentiation of URM implication. The percentage represents the proportion of positive or negative cases in all cases. *represents the results of Fisher's exact test statistically significant at *p* < 0.05



than economic development (Bu, 2017; Herslund, 2012; Stockdale & MacLeod, 2013; Bosworth & Willett, 2011). However, the cases of economic development were generally with more positive outcomes than negative outcomes. (1) URM has boosted rural enterprises and increased income, employment, and social capital while promoting rural commodification. Investors were attracted by a significant growth potential in rural areas due to accessible, low-cost land, abundant natural resources, growing job opportunities, and strong informal, cooperative networks (Fortunato, 2014; Phillips, 2005; Stockdale, 2010). Indeed, the URM brought financial capital and advanced information, operation, and management technology to rural areas and fostered the development of rural entrepreneurship. (2) The URM plays roles as consumers, increasing demand for rural goods and services. Furthermore, rural areas are evolving 'up-market' with high-quality accommodations, entertainment facilities, special restaurants, shopping centres, and other amenities to provide middle-class migrants with urban lifestyle demands. (3) The flow of urban-to-rural migrants has stimulated

the rural real estate market, driving up land prices and consequently increasing income from housing rentals for residents. This process exemplifies neo-endogenous growth, characterised by the enhancement of local social capital rather than external domination (Bosworth & Finke, 2020; Bosworth, 2010).

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In agricultural development, the influx of migrants to rural regions has sparked tension over land use, manifesting as conflicts with residents in agricultural activities (farming, horticulture, and animal husbandry), especially in the back-to-the-land migration (Butt, 2013). Besides, the trend of real estate purchases in rural areas leads to increasing conflicts related to duty-bound settlement on the property, agricultural land, and local taxes, placing additional pressure on local authorities (Blekesaune et al., 2010). However, URM significantly reshapes the agrarian landscape and optimises the spatial configuration of cultivated land. The URM stimulates the gloomy agriculture sectors via innovative farming practices, such as organic farming, hobby farms, and horticulture. These initiatives revitalise abandoned farms and rejuvenate agriculture (Curry et al., 2001; Sandström,

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2023; Suh, 2019; Wilbur, 2014). Migrants in rural areas driven by a 'back-to-the-land' ethos, retirees, and those with non-agrarian backgrounds seek self-sufficiency and an idyllic lifestyle, prioritising spiritual fulfilment (Sareklint, 2017).

Many newcomers move to the countryside for the beauty of the landscape, and they tend to be highly socially selective, such as wealthy groups, leading to a progressive gentrification of the countryside, particularly through competition for scarce housing (Phillips, 1993). The demands and priorities of well-off migrants might overshadow local residents' needs, causing tension and disagreements (Bosworth & Willett, 2011). However, the URM promotes social development through community cohesion and social integration in the local community. (1) Newcomers are reasonably integrated into the local community, participate in collective events and festivals, and form mutual aid organisations with residents. (2) URM actively participates in political activities and volunteers in local groups and charities for infrastructure and facilities improvement and traditional character maintenance (Dilley et al., 2024; Jenkins, 2000; Stockdale & Macleod, 2013). (3) Moreover, URM promotes the integration of human resources, capital, goods, information, and technology between urban and rural areas, enhancing social capital, cooperation, mutual benefits, and win-win outcomes in rural areas (Davoudi & Stead, 2000).

URM affects both the gross population and the demographic structure of rural areas. Some scholars note that the process of URM has impacted the changes in structure by gaining several elderly with retirees moving into the rural areas (Stockdale & Macleod, 2013). This retirement migration, driven by personal needs, contributes little to rural economic development and can worsen rural ageing, straining limited age-friendly infrastructure and services. However, young migrants attracted to rural areas due to convenient low-cost transportation, global economic downturns, the rejection of city life and the pursuit of an idyllic lifestyle have revitalised areas previously marked by depopulation and ageing (Bu, 2017; Hugo, 2005; Kim, 2019; Suh, 2019). These well-educated, skilled, and innovative individuals enhance local human resources and transfer knowledge, injecting vitality into local development (Haartsen & Stockdale, 2018).

Due to the growing awareness to protect the environment, the emergence of environmental organisations, environmental-friendly statements, and environmental protection activities by in-migrants can help accelerate the green landscape, protecting nature and narrowing the rural-urban gap in environmental values in rural areas (Curry et al., 2001; Jacob, 1996; Jones et al., 2003; Suh, 2019). Green migrants spontaneously organise and join environmental protection agencies, thereby increasing their influence on residents. They introduce new ideas, donate funds, and conduct various conservation activities. For example, in-migrants opposed timber sales in America during the 1970s to promote environmental sustainability over short-term financial benefits. Besides, implementing ecological restoration measures increased vegetable coverage and landscape diversity.

Typological differentiation of URM implications on rural development

Different types of URM are equipped with different levels of financial resources, know-how resources, and extra-local connectivity resources that will directly impact rural development. Therefore, the implications of URM may vary greatly. The positive implications of URM were remarkable in business and commuting migration, especially in terms of economic development and sustainable population, which may be motivated by the rich human, natural resources, and low cost of setting up the businesses. The influx of financial capital, spending power, and more paid employment opportunities, boost the local economy and strengthen the long-established businesses in rural areas. Besides, the most significant characteristic of current urban-to-rural migrants is their youth, and the influx of young migrants has improved the population structure in rural areas (Kim, 2009).

Retirement migration has negative effects on economic, and social development and sustainable population. In the Western context, retiree migrants are portrayed as a wealthier group who may have invested in farming and established small businesses or self-employed. However, their focus on self-sufficiency and an idyllic lifestyle, prioritising spiritual fulfilment, they do not significantly contribute to agricultural and economic regeneration in rural areas. In China, retirement urban-to-rural



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migration has been largely involuntary. Many older migrants, who initially moved from rural to urban areas for work following the elimination of migration restrictions in the late 1970s have been forced 640 to return to their hometowns due to working conditions changed (i.e., retirement or dismissal), per-642 sonal working capability declined (i.e., suffered 643 injuries), family obligations (i.e., need to take care of elders and children), and other reasons (Liu et al., 2020). The involuntary exit from the labour 646 market has resulted in limited entrepreneurial activity, job creation, and consumption within the rural 648 economy. Moreover, the contradiction between the increasing demand for specific services for older 650 people and the limited availability of services pro-651 vided becomes a major challenge in the future with 652 the influx of retirement migration in remote rural 653 areas. Additionally, retirement migration exacerbates the demographic imbalances in a depopulated and ageing rural society.

Spatial differentiation of URM implication on rural 657 development 658

URM's different evolution patterns and outcomes are determined by local objectives and demands, as well as geographic conditions, natural resources endowments, socio-economic development, and policy implementation of rural areas. Given that countries are at different stages of development, urbanization, and rural transformation (Li et al., 2019), and financial support, cooperation among urban-to-rural migrants, government and civil society, professional technical innovation, formal organizations will directly impact the implementation process. Therefore, the impacts of URM may vary greatly across different countries.

Overall, the positive impacts of URM were remarkable in both developed and developing countries, particularly in economic development. Urbanto-rural migrants contribute to rural economies through financial accumulation, employment generation, entrepreneurship, and infrastructure improvements, fostering increasingly diverse livelihoods. However, the means of livelihood diversification vary across countries. In developing countries, such as China and South Africa, diversification primarily involves supplementing traditional farmers' activities with new ones, such as agro-products processing

and agriculture tourism. In contrast, in developed countries, urban-to-rural migrants establish a new foundation for the rural economy where local agriculture merely is a part of the mix. One example is the remote Jeju Island, Korea of Woljeong-Ri coastal village, which is not only a rural area where people pursue an idyllic lifestyle, but also an all-year-round destination that offers a mix of exotic leisure and entertainment experiences. It has been transformed by urban-to-rural migrants through a wide range of innovative and specialist services activities like guesthouses, recreational pensions, restaurants, and cafes based on the existing tourism infrastructure and natural coastal views (Curry et al., 2001). Besides, the famous exotic shore and well-developed entertainment facilities attract more visitors and investors to stay longer. The growth of tourism has also meant an increase in demand for locally produced agriculture and fishery products. New actors in emerging industries, along with newly established networks, have led to a comprehensive transformation of the village's social capital, particularly in terms of external bridging connections (Nordin & Westlund, 2009).

The rapid urbanization and industrialization of developed countries have driven counter-urbanization, where rural repopulation outpaced urban growth in the 1970s (Hugo and Smailes, 1985). The influx of middle-class migrants with urban lifestyles gradually replaced the local villagers, a process known as rural gentrification (Phillips, 1993). While rural gentrification contributes to the commodification of the rural landscape and ecological conservation, it also exacerbates the conflicts and inequalities between new migrants and local communities (Curry et al., 2001; Suh, 2019; Bossuet, 2006; Dilley et al., 2024). The study found that URM has more negative social impacts in both developed and developing countries. Notably, these impacts are pronounced in developed countries due to the larger influx and long-standing history of middle-class migration to rural areas. Moreover, one key way of rural gentrification is the uneven circulation of capital, which further exacerbates the negative impacts of URM on rural social development, particularly through conspicuous consumption, increasing privatization of resources, and housing affordability issues (Phillips, 1993; Costello, 2007).

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731 Conclusion

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The literature review, based on 58 cases from 19 732 articles dealing with the implications of URM pub-733 lished from 1990 until March 2024, has provided 734 a comprehensive, interdisciplinary analysis of the 735 multi-dimensional impacts of urban-to-rural migra-736 tion on rural development across different migration 737 types globally. This review demonstrated that URM AQ5 is a double-edged sword in rural development. In gen-739 eral, the implications of overall rural development 740 and economic development were significantly more 741 positive, and the positive impacts in terms of social 742 and agricultural development, sustainable population, 743 and ecological protection were not statistically sig-744 nificant. From the perspective of typology differen-745 tiation, business and commuting migration contribute 746 significantly to economic development and popula-747 tion sustainability, and amenity and back-to-the-land migration promote ecological and cultural preservation. The spatial differentiation analysis highlights 750 the various outcomes of URM across different coun-751 tries. URM had a higher positive impact in developed 752 countries than that in developing countries. Our syn-753 thesis demonstrated that URM plays an important 754 role in rural development, with more positive than 755 negative cases. A06

The rising trend of URM highlights development opportunities; however, the challenges posed by the negative impacts of URM prompt policymakers to create diverse strategies for mitigation.

- Inequality and marginalisation: Prioritising newcomers leads to high inequality, with socially marginalised rural residents facing deepening exclusion and precariousness (Sherman, 2021).
 The main reason is that post-productivism landscapes focus on consumption rather than production, with new residents' different consumption habits and land-use activities undermining community cohesion (Salamon, 2003; Sherman, 2021).
- 2. Excessive commercialisation: Urban capital transforms rural areas into 'consumption theatres' and 'local commodities' (Leiss et al., 2018; Phillips, 1993). Affluent urban migrants seek not only traditional and idyllic lifestyles but also to express their middle-class identity through symbolic consumption (Warde, 2014).

3. Ageing population: Young outmigration and retirement migration accelerate rural ageing, worsening the ageing boom (Hash et al., 2014). This trend overwhelms the ability to provide specific services and goods in remote rural areas.

Although systematic literature reviews are recognized as straightforward methods that yield valuable results, they have limitations that may affect their findings. First, only English-language articles were reviewed, potentially overlooking relevant studies in other languages. Second, this could exclude pertinent information and studies during the selection process; for example, the features of samples and background variables reported in the empirical studies may be overlooked. Further research exploring URM should consider the multi-dimensional implications on rural development and may apply qualitative methods to gain an in-depth understanding of the processes and dynamics involved.

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Declarations

Conflict of interest The authors have no conflicts of interest to declare.

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