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Does the Accessibility of the Built Environment Affect the Willingness of Rural Residents to Relocate Their Homes

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Abstract

With the construction of new urbanization, more and more rural residents have the idea or behavior of relocating their residence to towns/cities where it is more convenient to live, work, and educate, however, few scholars have studied the residential choice behavior of rural residents from the perspective of accessibility. This study explored the relationship between built environment accessibility and rural residents' willingness to relocate from a microscopic perspective, using rural residents in 28 rural villages in eight districts of Chengdu, Sichuan Province as the study population. The team conducted a five-day household research in villages and obtained 678 research data. The results of the study found that the percentage of rural residents with the intention to relocate varied significantly across socio-demographic variables, while distance differences in the objective built environment and satisfaction with the accessibility of the current residence may affect rural residents' intention to relocate.

Keywords

Accessibility; Willingness to relocate; Rural

The study of residential choice behavior in regional science was first proposed by William Alonso in 1964. He also summarized that three factors affect people's residential choice behavior: transportation (including work, daily leisure shopping, and travel to the city center), housing conditions, and family and personal characteristics (Baraklianos et al., 2018). Bayoh et al. pointed out that work location, accessibility, and personal income are important determinants of family housing choice (Bayoh, Irwin, & Haab, 2006). According to existing research at home and abroad, the factors affecting residential choice include: personal attributes, family income, accessibility, quality of surrounding schools, and convenience of public transportation (Chen, Chen, & Timmermans, 2008; De Vos & Alemi, 2020; Guo & Peeta, 2020; Hu et al., 2012; Lee, 2018; Letdin & Shim, 2019; Liu, Li, & Wang, 2020; Turvey, 1964). Accessibility is defined as the degree to which a location enables an individual to participate in different types of activities in different locations. It is a measure of the connectivity between a location and other locations in the region (Wang et al., 2020). It is an important indicator for analyzing and evaluating the rationality of public service facilities and spatial planning layout (Wu & Zhao, 2015). At the theoretical level, accessibility is a key determinant of residential choice model (Yang & Yang, 2016).

Accessibility research is more mature abroad in terms of theory, measurement methods, and practical applications. While research on place of residence is abundant both domestically and internationally, studies specifically targeting the place of residence selection behavior of rural residents are limited. Currently, more research is being conducted on the impact of transportation factors, such as commuting and rail transit, on place of residence selection, thus amplifying travel behavior factors. Domestically, accessibility...

Literature on residential choice behavior as a primary factor is scarce, and almost no scholars have studied the

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residential choice behavior of rural residents. Therefore, this paper studies the relocation intentions of rural residents from the perspective of accessibility.

1. Research Methods and Data Sources

1.1 Sample Village Selection

This study uses the city center (Tianfu Square) of Chengdu as the reference point and selects villages in the geographical areas of the four directions of southeast, northwest and southwest surrounding the center for research, including rural areas of Pengzhou City, Chongzhou City, Jianyang City, Qingbaijiang District, Pidu District, Wenjiang District, Xindu District and Longquanyi District.

1.2 Questionnaire Design

This survey included socio-demographic characteristics such as gender, age, and annual household income; objective built environment data, specifically accessibility data, which used the Aowei positioning system to mark the location of each respondent’s home, the school attended by their children, the nearest bus stop, hospital, market, park, supermarket, and workplace; and measured the driving distance (in kilometers) from each respondent’s home to these locations using software. The survey also included satisfaction with the accessibility of their current residence. Respondents were asked, “Are you satisfied with the accessibility of your current residence? How satisfied are you?” Similar to the seven accessible locations included in the objective built environment, satisfaction with the accessibility of the current residence was assessed using a five-point Likert scale, ranging from “completely inconvenient (1 point)” to “very convenient (5 points).” The survey team officially launched a five-day door-to-door questionnaire survey on July 27, 2021, collecting questionnaires through a distributed approach.

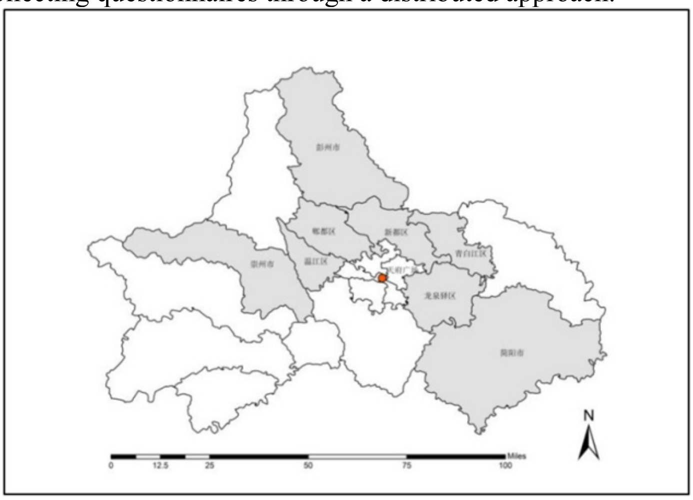

Figure 1. Location of the Key Site within Regional Administrative Boundaries.

Table 1. Sociodemographic Characteristics

variable	category	quantity	percentage	Number of people who are willing to relocate	percentage
gender	male	268	39.53%	63	38.18%
	female	410	60.47%	102	61.82%
age	30 years and under	50	7.37%	14	8.48%
	31-40 years old	145	21.39%	39	23.64%
	42-50 years old	160	23.60%	40	24.24%
	51-60 years old	282	41.59%	67	40.61%
	60 years and older	41	6.05%	5	3.03%

Table 1 Continued

Annual household income	Less than 50,000 yuan	218	32.15%	64	38.79%
	50,000-100,000 yuan	296	43.66%	81	49.09%
	100,000-150,000 yuan	121	17.85%	8	4.85%
	150,000-200,000 yuan	38	5.60%	11	6.67%
	More than 200,000 yuan	5	0.74%	1	0.61%
Number of children aged 0-18 in the family	none	188	27.73%	62	37.58%
	1 person	372	54.87%	76	46.06%
	2 or more	118	17.40%	27	16.36%

1.3 Data Acquisition

This study ultimately collected 695 questionnaires. After removing invalid questionnaires such as those with missing or random answers, 678 valid questionnaires remained, resulting in a valid questionnaire rate of 97.6%. The questionnaires also passed the consistency test. The socio-demographic information is shown in Table 1.

2. Rural Residents' Willingness to Relocate

2.1 Sociodemographic Characteristics

Statistical results show that 63 men and 102 women expressed a willingness to relocate. Compared to rural residents under 60 years old, the number of those expressing a willingness to relocate gradually increases with age, with the largest number (40.61%) being rural residents aged 51-60. 145 rural residents (over 80%) had an annual family income below 100,000 yuan. Compared to families with children, rural residents with children were more likely to relocate, with the largest number (46.06%) having only one child. See Table 1 for details.

2.2 Objective Built Environment

Among rural residents who intend to relocate, the average distances from their homes to schools, bus stops, hospitals, markets, parks, supermarkets, and their workplaces were 2.184, 2.756, 1.961, 1.714, 1.850, 1.917, and 0.756, respectively. Among rural residents who do not intend to relocate, the average distances from their homes to schools, bus stops, hospitals, markets, parks, supermarkets, and their workplaces were 1.195, 2.325, 1.165, 1.748, 0.298, 0.143, and 2.465, respectively. This indicates that differences in the distance of the objective built environment may also affect rural residents' willingness to relocate.

2.3 Satisfaction with Accessibility to Current Residence

The accessibility satisfaction scores of each household's current residence were calculated by summing the satisfaction scores of each respondent for locations such as schools, bus stops, hospitals, markets, parks, supermarkets, and workplaces. By comparing the average accessibility satisfaction scores of rural residents who have the intention to relocate with those who do not, it was found that the average accessibility satisfaction score of the former was 18 points, while the average accessibility satisfaction score of the latter was 29 points. This suggests that rural residents with low accessibility satisfaction scores for their current residence may be more likely to have the intention to relocate.

3. Conclusion

With the rapid development of society, people's overall living standards have greatly improved. Therefore, when choosing a new place to live, people often opt for areas with higher levels of supporting facilities and services, and greater convenience. This paper conducts an empirical analysis through a questionnaire survey and field visits to rural areas in eight districts of Chengdu, Sichuan Province. The results show that there are significant differences in relocation intentions based on gender, age, annual family income, and the number of children aged 0-18 in the family.

Differences in the distance to the objective built environment and satisfaction with the accessibility of the current residence may also influence rural residents' relocation intentions. Therefore, rural residents will consider these factors to some extent when choosing a new place to live. Taking the actual situation in rural Chengdu, Sichuan Province as an example, this paper hopes to provide reliable reference opinions for future rural government land use planning and better meet the needs of rural residents.

References

Baraklianos, I., Bouzouina, L., Bonnel, P., & Aissaoui, H. (2018). Does the accessibility measure influence the results of residential location choice modeling? *Transportation*, *47*(3), 1147-1176.

Bayoh, I., Irwin, E. G., & Haab, T. (2006). Determinants of residential location choice: How important are local public goods in attracting homeowners to central city locations? *Journal of Regional Science*, *46*(1), 97-120.

Chen, J., Chen, C., & Timmermans, H. J. P. (2008). Accessibility trade-offs in household residential location decisions. *Transportation Research Record: Journal of the Transportation Research Board*, *2077*(1), 71-79.

De Vos, J., & Alemi, F. (2020). Are young adults car-loving urbanites? Comparing young and older adults' residential location choice, travel behavior and attitudes. *Transportation Research Part A: Policy and Practice*, *132*, 986-998.

Guo, Y., & Peeta, S. (2020). Impacts of personalized accessibility information on residential location choice and travel behavior. *Travel Behavior and Society*, *19*, 99-111.

Hu, S., Xu, J., Zhang, X., & Cao, H. (2012). Evaluation of the equalization of educational facility layout based on time accessibility: A case study of the planning of Huai'an New City. *Planner*, (1), 70-75.

Lee, H. (2018). Are millennials coming to town? Residential location choice of young adults. *Urban Affairs Review*, *56*(2), 565-604.

Letdin, M., & Shim, H. S. (2019). Location choice, life cycle and amenities. *Journal of Regional Science*, *59*(3), 567-585.

Liu, Y., Li, C., & Wang, Y. (2020). Heterogeneous housing and location selection: Urban migration patterns. *Urban Development Research*, *27*(1), 80-87+97.

Turvey, R. (1964). Location and land use. *American Economic Review*, *54*(4), 844.

Wang, Y., Wu, K., Qin, J., Wang, C., & Zhang, H. (2020). Examining spatial heterogeneity effects of landscape and environment on the residential location choice of the highly educated population in Guangzhou, China. *Sustainability*, *12*(1), 1-18.

Wu, N., & Zhao, S. (2015). Impact of transportation convenience, housing affordability, location, and schooling in residence choice decisions. *Journal of Urban Planning and Development*, *141*(1), 1-10.

Yang, F., & Yang, J. (2016). The impact of transportation accessibility on place of residence: A case study of Chengdu. *Urban Planning International*, *14*(1), 21-28.