

Article

How Intergenerational Mobility Shapes Migrant Workers' Job Quality: Empirical Evidence from China

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Abstract

As a crucial indicator for measuring regional social equity and equality of opportunity, intergenerational mobility exerts an important impact on the employment quality of the agricultural migrant population. However, despite extensive research on migrant employment, limited attention has been paid to how intergenerational mobility interacts with localized technological environments and fiscal resource constraints to shape the labor assimilation of rural-to-urban migrants. This study assesses this relationship by constructing an urban intergenerational educational mobility index and analyzing the China Migrants Dynamic Survey (CMDs) data. The results indicate that intergenerational mobility significantly improves the employment quality of the migrant population. Mechanism analysis was used to reveal that the digital economy exerts a positive regulatory effect, acting as a form of technological empowerment that enhances the transition of structural opportunities into tangible employment prospects. Conversely, local fiscal pressure exerts a negative regulatory effect, imposing contractive resource constraints that attenuate the promotional dividends of social mobility. Heterogeneity analysis results further demonstrate that the positive impact of intergenerational mobility is more prominent in cities with higher public education expenditure, higher levels of marketization, and fewer traditional cultural constraints. These findings suggest that geographical mobility alone does not automatically guarantee high-quality employment; rather, enhancing institutional openness, expanding digital infrastructure, and optimizing the allocation of public resources are essential to translating equity of structural opportunity into decent work.

Keywords: intergenerational mobility; employment quality; agricultural migrant population; education; public services; equal opportunity



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1. Introduction

Since the 20th century, global industrialization and urbanization have driven large-scale population migration, characterized by the movement of rural labor to urban areas. Whether in terms of rural-to-urban migration in developing countries or intra-societal spatial mobility in developed nations, population movement has become a key indicator of social openness and equality of opportunity. Beyond the geographical reallocation of labor, migration also encompasses intergenerational mobility, reflecting changes in socio-economic status across generations [1]. Compared to general population mobility, intergenerational mobility focuses on the extent to which an offspring's socio-economic status

diverges from that of their parents, with its core concern being the openness of social stratification [2]. Research indicates that countries with higher levels of intergenerational mobility generally exhibit greater social inclusiveness and lower income inequality [3,4]. Existing research primarily examines the role of institutional factors such as foreign investment [5], industrial policy [6], and environmental regulation [7] in shaping rural migrants' employment quality, while neglecting informal institutional factors. Yet, when designing policies to enhance rural migrants' employment quality, deeper societal and informal institutional influences—formed over time and profoundly shaping individual behavior—should not be overlooked. Among these, intergenerational mobility represents a crucial societal dimension that reflects fairness in individual development opportunities [8,9]. It has been shown that greater intergenerational mobility correlates with higher equity of social opportunity, thereby contributing to improved overall employment quality. This raises two central questions that warrant further exploration: Does intergenerational mobility fundamentally influence rural migrants' employment quality, and if so, through what mechanisms?

To address these questions, this study employs the 2015 China population sampling survey data, as well as the continuous China Mobile Population Dynamic Monitoring Survey (CMDS) data collected by the National Health Commission of China, to examine the impact of intergenerational mobility on the employment quality of agricultural migrant workers and its boundaries. The results provide empirical evidence for promoting full, high-quality employment among migrant populations and achieving a higher level of social integration.

Compared with the existing literature, the marginal contribution of this study lies in incorporating intergenerational mobility into the analytical framework for assessing employment quality among agricultural migrant populations, and examining its mechanisms through multi-dimensional fixed effects models, instrumental-variable identification, and heterogeneity analysis. Specifically, this study not only investigates how intergenerational mobility influences employment quality through the digital economy and fiscal pressures, but also further examines the moderating effects of regional education expenditure, local Confucian cultural traditions, and marketization levels on this relationship, thereby providing new empirical evidence for understanding the complex relationship between labor market segmentation and social mobility in developing countries.

2. Literature Review and Research Hypotheses

2.1. Employment Quality

The concept of employment quality originates from the International Labor Organization's notion of "decent work". It aims to ensure access to decent, productive, and sustainable jobs under fair, safe, and humane conditions [10]. Early research primarily examined the meaning and dimensions of employment quality [11], while subsequent studies attempted to construct indicators that comprehensively reflect its multidimensional nature [12]. However, the broad scope of the concept and influence of institutional, economic, and cultural differences across countries—and within countries at different stages of development—make the construction of an indicator system difficult. Although no unified standard exists, a general consensus has emerged that employment should be assessed multidimensionally, integrating the interactions between each dimension to reflect overall employment quality [13].

Researchers have analyzed the factors that affect employment quality from both macro and micro perspectives. At the macro level, employment quality is significantly influenced by factors such as globalization [14], labor market systems [15], and economic development level [16]. Technological progress also impacts employment quality via "creation" [17] and "destruction" effects [18]. The former increases employment opportunities by creating new

industries, whereas the latter replaces manual work in traditional industries, resulting in job losses. At the micro level, employment quality is affected by the quality of workers [19], gender [20], and educational background [21,22]. Among these, educational background plays a particularly complex role, with both over- [23] and under-education [24] capable of diminishing employment quality.

Furthermore, contemporary labor economics and sociology increasingly argue that the evaluation of employment quality cannot neglect the global rise of precarious employment (PE). Over the past few decades, structural shifts driven by technological change, globalization, and the erosion of standard employment relations have made work increasingly fragmented and unstable. PE is defined not merely as a low-wage phenomenon, but as a multidimensional accumulation of structural disadvantages [25]. Recently, Oddo established a rigorous multidimensional operational framework demonstrating that precarity has escalated globally, increasingly penetrating into broader segments of the workforce [2]. According to this framework, employment status directly evaluates the dimensionality of employment stability, distinguishing whether individuals are trapped in informal self-employment or precarious daily wage-labor rather than securing stable contractual agreements. Concurrently, social security coverage safeguards workers' rights, functioning as the primary institutional safety net. In highly segmented regimes, the absence of contractual stability and institutional social security directly exposes the systematic exclusion that agricultural migrants encounter within receiving urban areas.

2.2. *The Relationship Between Intergenerational Mobility and Employment Quality*

Research on intergenerational mobility began with Becker and Tomes, who posited that parents pass on “endowments” to their children through hereditary qualities and human capital investment [26]. Intergenerational mobility refers to differences between an individual's class of origin and their current socio-economic status, implying changes in the individual's resources, social groups, and cultural environments—all of which may affect behavioral patterns, lifestyles, and values [27]. According to Merton's cumulative advantage/disadvantage effect, early-life access to abundant resources facilitates sustained upward mobility [28], while resource deficits can constrain development and perpetuate disadvantage over time, thereby reinforcing social polarization. Such an accumulation of advantages/disadvantages caused by different intergenerational mobilities is directly reflected in individual employment [29].

At the macro level, intergenerational mobility is widely regarded as an indicator of a nation's ability to provide equal opportunities [30] and is directly linked to socio-economic development, educational provision, and regional culture [31]. High intergenerational mobility typically signifies a more equitable distribution of economic resources and opportunities, whereby individuals' employment prospects are less dependent on family background, thus helping to break the cycle of poverty and enhance overall economic vitality. Conversely, low intergenerational mobility is often associated with structural unemployment and economic inequality [32].

At the micro level, the relationship between intergenerational mobility and employment quality is frequently examined through the lens of individual educational attainment [33]. Human capital theory posits that educational attainment is the primary manifestation of an individual's human capital, as the accumulation of human capital enhances knowledge and productive skills, thereby increasing labor productivity and, consequently, income [34]. Higher educational attainment correlates positively with employment quality, as individuals with a higher level of education tend to secure higher incomes, better social benefits, and greater job satisfaction. Thus, higher parental education levels enable offspring to access more advantageous occupations or positions, leading to better employ-

ment quality [35]. In contrast, cultural reproduction theory emphasizes the influence of parental factors—such as occupation and education—on their offspring’s employment quality and occupational status. Parents’ educational attainment can be converted into economic or cultural capital, facilitating their children’s educational attainment through cultural support, value transmission, and skill development, thereby influencing their employment quality [36].

In summary, although existing research provides a valuable theoretical framework and empirical background for exploring the relationship between intergenerational mobility and employment quality, there remain two shortcomings. First, while human capital theory emphasizes the centrality of human capital investment in intergenerational mobility [37], it tends to ignore the impact of the socio-economic environment on individual career achievement. Conversely, cultural reproduction theory fails to account for the possibility of mobility through individual educational investment. Therefore, there is a need to establish an integrated framework that reconciles these perspectives, incorporating both individual agency and social structural factors, to systematically understand the mechanisms through which intergenerational mobility affects employment quality. Second, there remains insufficient research on the mechanisms and pathways linking intergenerational mobility and employment quality, particularly regional factors such as public education investment, historical and cultural traditions, and market-oriented environments. Although existing studies identify education as a critical factor in intergenerational mobility [38], the specific mechanisms by which education influences employment quality through skills, knowledge, and behavioral patterns have not been systematically analyzed.

2.3. Research Hypotheses

At present, labor market segmentation persists in China. The secondary labor market, in which the traditional sector is located, is independent of the main labor market, in which the modern sector is located [39]. Affected by household registration discrimination and human capital constraints, rural migrants have long been stranded in the secondary labor market with low employment quality, and it is difficult for them to obtain higher, more stable wages and secure employment opportunities.

In this context, intergenerational mobility has become an important research topic. As a structural and long-term social environmental factor, intergenerational mobility profoundly affects individuals’ social expectations, access to educational opportunities, and ability to choose careers. It plays a subtle role in facilitating migrants’ transformation from “urban residence” to “citizenization” [40], thereby enhancing employment quality. Specifically, regions with high intergenerational upward mobility typically exhibit strong economic vitality and high social openness, which helps promote industrial upgrading and the creation of high-quality jobs, enhancing the overall absorption capacity of the labor market [41]. This enables the agricultural migrant population not only to settle in cities but also to “stand firm” and “develop well”.

Furthermore, intergenerational mobility is generally accompanied by a more equal distribution of basic public services such as education, healthcare, and housing. This reduces institutional exclusion for rural migrants, especially regarding opportunities for children’s education and the accumulation of social capital [42]. Enhancing the competitiveness of rural-to-urban migrants in the mainstream labor market will consequently promote the improvement of their employment quality. Thus, higher intergenerational mobility not only represents a city’s inclusivity and development potential but also constitutes the social bedrock for enabling rural-to-urban migrants to achieve high-quality employment. Based on the above, we propose Hypothesis 1.

Hypothesis 1. *Intergenerational mobility improves the employment quality of rural-to-urban migrants.*

Intergenerational mobility serves as a core indicator for measuring the degree of equal opportunity, reflecting the probability that individuals from diverse family backgrounds can achieve upward mobility [40]. In a society characterized by high intergenerational mobility, individuals tend to believe that personal effort can lead to better development. This positive expectation actively stimulates labor participation and injects vitality into economic development by expanding the scope of talent mobility, intensifying innovative incentives, and optimizing resource allocation efficiency, which ultimately exerts a favorable effect on employment quality [43,44]. However, the promotional effect of intergenerational mobility on the employment quality of rural-to-urban migrant workers is not uniform across all regions [45]; its efficacy is highly contingent upon the local technological landscape and public-resource carrying capacity. That is to say, while intergenerational mobility reflects the openness of a region's structure of social opportunity, local digital economic development and fiscal pressure act as critical boundary conditions that dictate whether this structural openness can be effectively translated into tangible, micro-level employment opportunities.

First, as a novel economic paradigm and technological environment, the digital economy can positively moderate the promotional effect of intergenerational mobility on rural migrants' employment quality by mitigating information asymmetry, reshaping labor supply–demand structures, and enhancing market matching efficiency. From the perspective of market operation mechanisms, with the widespread application of digital technologies in production and hiring processes, non-market mechanisms that distort labor market fairness are effectively suppressed. Concurrently, the role of informal social capital—predominantly based on kinship and geographical ties in traditional labor markets—gradually diminishes [46]. Under such digitized and platform-based matching mechanisms, rural migrants who achieve upward intergenerational mobility through personal effort and education are more likely to transcend geographical and identity barriers, thereby securing high-quality employment positions commensurate with their capabilities [47]. From the perspective of supply–demand structures, the new industries and business models spawned by the digital economy have created a substantial volume of high-skill, high-value-added modern jobs [48]. Meanwhile, the rapid expansion of the platform economy provides numerous transitional employment opportunities characterized by high flexibility and relatively low entry barriers [49]. This structural expansion offers rural migrants trapped in secondary labor markets greater possibilities to break free from path dependency and transition toward modern sectors. Furthermore, the popularization of digital recruitment channels significantly broadens workers' external job options, improving employability and market transparency for the migrant population [50]. This technological empowerment mechanism enhances rural migrants' bargaining power regarding wage levels and welfare benefits, allowing the outcomes of intergenerational mobility to be converted into higher-quality compensation and institutional protections, thereby facilitating this population's successful transition from urban residency to full urbanization (citizenization). Based on the above, we propose Hypothesis 2.

Hypothesis 2. *The digital economy exerts a positive regulatory effect on the employment quality of agricultural migrants.*

Secondly, local fiscal pressure—acting as a direct constraint on the government's capacity to deliver public services and exercise institutional governance—attenuates the

positive impact of intergenerational mobility on the employment quality of agricultural migrants via contractive resource allocation.

Based on the logic of resource allocation, when local governments face severe fiscal strain, public resource investment in livelihood sectors—such as basic education, public vocational training, and primary healthcare—tends to contract [51,52]. This relative deficit in public funding skews premium public educational resources in receiving areas toward traditionally advantaged local groups or core administrative districts. This results in implicit institutional exclusion that hinders the children of agricultural migrants from accessing equitable education and accumulating human capital. Without the safety net of public policies and educational services, fiscal austerity effectively raises the marginal cost for agricultural migrants to convert opportunities for upward mobility into high-quality employment [53].

Regarding labor-market-supporting infrastructure, high fiscal pressure typically inhibits long-term municipal investment in basic housing security, social integration safety nets, and public employment services. Even within cities with relatively open intergenerational opportunity structures, highly educated agricultural migrants attempting to break through segmented labor markets and enter modern primary sectors will experience substantial human capital depreciation if they lack the institutional backing of robust citizenization systems and equalized basic public services [54]. This resource constraint not only undermines the institutional efficacy of education as an engine for upward mobility, but also severely restricts the efficiency with which the factor premiums derived from intergenerational mobility translate into micro-level employment outcomes. As a result, open structural opportunities fail to fully materialize as decent work. Based on the above, we propose Hypothesis 3.

Hypothesis 3. *Fiscal pressure exerts a negative regulatory effect on the employment quality of agricultural migrants.*

3. Research Design

3.1. Sample

Following the data processing approach of Yu [55], this study adopts the 2015 1% Population Sample Survey of China as the data source for core explanatory variables. To measure the employment quality of the migrant population, data from three waves (2016–2018) of the CMDS are utilized. Launched in 2009, this survey is conducted annually by the National Health Commission and covers 31 provinces (autonomous regions and municipalities) and the Xinjiang Production and Construction Corps. It employs a stratified, multistage, probability-proportional-to-size sampling method, targeting individuals aged 15 and above with non-local hukou (outside their district/county/city) who have resided in the inflow area for over one month. The CMDS covers a wide range of information, including basic demographics, migration attributes, employment and social security, income and expenditure, residential status, children's mobility and education, and access to basic public health services. Each wave of the CMDS collects data from over 100,000 households, making it the most extensive and representative dataset on China's migrant population, and it is widely applied in numerous research fields. City-level data are sourced from the EPS database and municipal statistical yearbooks.

3.2. Indicator Selection and Measurement

3.2.1. Employment Quality of Migrant Workers

The dependent variable in this study is the employment quality of migrant populations. Given that rural-hukou migrants constitute the majority of this group, the study focuses

on individuals with rural hukou, limiting their age range to 18–57 years, and selecting valid samples based on employment status, income levels, and key variables. Drawing on existing research [12], an employment quality index was developed across four dimensions: labor income, employment status, employer type, and social security coverage. Income was measured as monthly earnings using data from the “What was your income last month?” question in the CMD5 questionnaire, converted to logarithmic values. Employment status was categorized as follows: employer (4), employee (3), self-employed worker (2), and other (1). Employer type was categorized as follows: 6 for state-owned entities [including government agencies, public institutions, and state-controlled enterprises]; 5 for foreign-funded enterprises [including wholly foreign-owned, foreign-invested, and Sino-foreign joint ventures]; 4 for shareholding enterprises [including collective enterprises and joint ventures]; 3 for private enterprises [including individual businesses, private companies, and non-governmental organizations]; 2 for other employers; and 1 for unemployed individuals. Social security participation was coded as a binary variable: 1 for enrollment in urban employee medical insurance and 0 for exclusion.

Because no unified indicator system exists for measuring the employment quality of migrant workers, this study considers the four dimensions of labor income, employment status, employer type, and social security coverage to be equally important in assessing individuals’ employment quality. Accordingly, equal weights are used to generate the migrant worker quality index [37].

3.2.2. Intergenerational Mobility

Following established practices of prior research [56], this study adopts intergenerational educational mobility as the core metric for regional intergenerational mobility, which offers two advantages. First, compared to income-based indicators in survey data, education is a relatively stable variable that is less susceptible to temporary shocks, particularly since individuals’ educational attainment in adulthood remains relatively fixed. Second, income surveys are prone to measurement errors and sample selection biases, whereas these issues have minimal impact on the quality of educational data. However, given the data-related and methodological constraints and considering China’s vast regional diversity in terms of development levels, cultural traditions, and education policies, substantial disparities exist in intergenerational educational mobility across regions.

In terms of measurement methodology, Dahl and DeLeire proposed the intergenerational rank association, which calculates the correlation between the percentile ranks of children and their parents within their respective population distributions [3]. This approach offers statistical advantages, including linear fitting between percentile ranks and low sensitivity to lifecycle biases. Building on this, Chetty used rank-order information to construct regional intergenerational mobility indicators that consider the function of children’s expected socio-economic ranks relative to those of their parents [26], rather than simply measuring the correlation between the two generations. Compared to relative intergenerational mobility, which only reflects average outcome differences between parents and children, absolute intergenerational mobility carries stronger economic significance.

Accordingly, this study leverages more objective and accurate educational attainment data and the statistical advantages of intergenerational rank association to construct indicators of absolute intergenerational educational mobility at the regional level. The 2015 China 1% Population Sample Survey provides a sufficiently large sample size to calculate intergenerational mobility levels across Chinese cities. To enhance estimation precision, the following sample-cleaning steps are applied: First, only individuals aged 16 to 60 are retained, excluding those still in school. Second, following Solon, who posits that fathers are typically household decision-makers [55], the study measures parental education based

on fathers' educational attainment, aligning with classical intergenerational mobility practices. Third, to mitigate potential influence from the number or birth order of children, in households with more than one child, the analysis focuses solely on the firstborn child in each family. Fourth, to minimize errors, only educational attainment of middle-aged parents and their children in three-generation households are considered. Fifth, cities with fewer than 10 parent–child pairs after matching are excluded.

Fathers and sons are ranked within their respective groups (in this study, cities) based on years of education from low to high, yielding individual and parental educational rank. Equation (1) is then used to estimate the intergenerational rank correlation for education for each city:

$$Rank_{sic} = \alpha_c + \beta_c Rank_{fic} + \varepsilon_{ic} \quad (1)$$

Here, subscripts s , f , and c represent the offspring, parents, and city, respectively, and i denotes the household. $Rank_{sic}$ measures the ranking of educational attainment for offspring from household i in city c within their peer group, and $Rank_{fic}$ represents the ranking of parental educational attainment within their peer group. By regressing the offspring ranking on the parental ranking, the resulting slope β_c represents the intergenerational rank correlation for education, which measures the degree of relative intergenerational mobility in city c . Building on this, leveraging the linear statistical characteristics of intergenerational rank correlation, the intercept α_c and slope β_c in Equation (1) can be estimated to construct the intergenerational mobility level of education for offspring at the r -th percentile in city c . Following the existing literature, this study primarily considers the absolute intergenerational educational mobility level at the 25th percentile. As shown in Equation (2), $im_{c,25}$ is the constructed urban intergenerational mobility indicator, reflecting the expected educational attainment ranking of offspring from parents in the lower–middle socio-economic stratum (25th percentile) in city c . A higher value indicates stronger intergenerational mobility in the city. Based on these calculations, this study constructs a city-level indicator of intergenerational mobility.

$$im_{c,25} = \alpha'_c + 0.25 \cdot \beta'_c \quad (2)$$

3.2.3. Mediating Variables

To examine the impact of regional environment on intergenerational mobility in employment, this study further introduces digitalization level and fiscal pressure as moderating variables. Digitalization level reflects the region's technological application and information infrastructure environment, which may enhance the positive effect of intergenerational mobility by improving job matching efficiency and expanding employment information channels. We employed five indicators—number of internet users per 100 people, proportion of computer service and software professionals, per capita volume of telecommunications services, number of mobile phone users per 100 people, and China's Digital Inclusive Finance Index—to construct a comprehensive urban digital economy development index through principal component analysis, after standardizing and reducing the dimensions of the data from these five indicators.

Fiscal pressure reflects constraints on local governments' provision of public services and may undermine the ability to translate intergenerational mobility into improved employment quality. We measure fiscal pressure by calculating the ratio of fiscal expenditure minus fiscal revenue to total fiscal expenditure.

3.2.4. Control Variables

Referring to Liu and Liu regarding the selection of control variables, this study includes control variables at three levels: city, household, and individual [27]. At the city level, these variables include economic development level (measured as the logarithm of per

capita GDP), industrial structure (calculated as the proportion of secondary industry value-added in GDP), city size (the logarithm of the year-end permanent population in tens of thousands), and fiscal expenditure (the logarithm of the per capita general public budget). At the household/individual level, the variables include number of family members, respondent gender (male = −1, female = 0), age (survey year minus birth year) and the logarithm of age squared, marital status (married = −1, unmarried = 0), years of education (no schooling = −1; primary school = 2; middle school = 3; high school = 4; college diploma = 5; bachelor's degree = 6; postgraduate studies = 7), and migration scope (inter-provincial = −1; intra-provincial inter-city = 2). The definitions and descriptive statistics for each variable are presented in Table 1.

Table 1. Descriptive statistics.

Variable	Mean	SD	Min	Max
EQ1	0.393	0.146	0.162	0.778
im25	2.901	0.477	1.928	3.814
lngdp	11.077	0.475	9.726	11.956
stru	0.459	0.103	0.193	0.688
scale	6.453	0.739	4.307	8.003
expend	9.139	0.406	8.261	9.954
num	3.154	1.183	1	6
gender	0.573	0.495	0	1
age	35.435	9.465	18	57
age2	13.452	7.007	3.240	32.490
education	3.313	0.996	1	7
marry	0.803	0.398	0	1
transfer	1.398	0.490	1	2

3.3. Model Construction

Given that the data in this study pertain to individuals residing within cities and observed across multiple years, the benchmark model employs a multilevel linear regression framework to examine the impact of intergenerational mobility on employment quality among migrant populations while controlling for individual, household, and city characteristics. The following regression model is constructed to analyze this effect:

$$EQ_{ict} = \alpha + \beta im_{c,25} + \gamma \left(\sum_T \eta_t \times X_c^{2014} \right) + X_{it} + \mu_t + \delta_{pt} + \omega_{jt} + \varepsilon_{ict} \quad (3)$$

Here, the subscripts c , t , p , j , and i denote city, year, province, industry, and individual, respectively. The dependent variable EQ_{ict} represents employment quality among the floating population, while the core explanatory variable $im_{c,25}$ denotes the level of intergenerational educational mobility at the city level. According to the research hypothesis, the core estimation coefficient β is expected to be significantly positive. $\sum_T \eta_t \times X_c^{2014}$ represents a set of control variables, including initial values in 2014 and interaction terms with time trends; X_{it} denotes family/individual-level control variables; μ_t denotes year-specific fixed effects; δ_{pt} denotes province–year fixed effects; and ω_{jt} denotes industry–year fixed effects. Given the city-specific variations in the core explanatory variables, this study clusters standard errors at the city level for statistical inference.

3.4. Mechanism Model

Based on the aforementioned theoretical analysis, the impact of intergenerational mobility on employment quality among rural migrant workers varies in intensity across regions and is influenced by local socio-economic conditions. This study focuses on exam-

ining the moderating effects of digital economic development and local fiscal pressures. Accordingly, we construct the following moderation model:

$$EQ_{ict} = \alpha + \beta im_{c,25} + \theta im_{c,25} \times M_{ct} + \nu M_{ct} + \gamma \left(\sum_T \eta_t \times X_c^{2014} \right) + X_{it} + \mu_t + \delta_{pt} + \omega_{jt} + \varepsilon_{ict} \quad (4)$$

where M_{ct} is the mediating variable, representing the development of the city's digital economy and financial pressure, cross-multiplied with $im_{c,25}$, and θ represents the magnitude of the adjustment effect. All other parameters are consistent with those specified in Equation (3).

4. Results

4.1. Benchmark Results

The results of stepwise regression using the benchmark model are presented in Table 2. Specifically, column (1) controls for only year fixed effects, industry–year fixed effects, and province–year fixed effects; column (2) further incorporates control variables at the household and individual levels; and column (3) additionally includes city-level control variables. The results demonstrate that intergenerational mobility consistently exerts a significant positive impact on employment quality among migrant populations, indicating that after progressively controlling for individual, household, and city characteristics, as well as multidimensional fixed effects, the core conclusion of this study remains robust.

Taking column (3) as an example, the estimated coefficient for intergenerational mobility is 0.045 and significant at the 1% level. Combined with the standard deviation of intergenerational mobility of 0.477 presented in the descriptive statistics, an increase of one standard deviation in intergenerational mobility corresponds to a rise of approximately 0.021 in the employment quality index for migrant populations, equivalent to about 5.5% of the sample mean of 0.393. This indicates that cities with higher levels of intergenerational mobility typically exhibit more open opportunity structures and better social mobility environments, which significantly improve the employment quality of migrant populations.

Furthermore, Table 2, Panel B, presents supplementary test results regarding selection bias and omitted variables. The Altonji ratio is 2.750, exceeding the conventional threshold of 1. Under the Oster method, the value of δ required to reduce the estimated β to zero is 1.150, also above 1. With $R_{max} = 0.456$ and $\delta = 1$, the Oster bounds for β lie within the interval [0.0083, 0.0453], which is entirely positive. This indicates that a significant degree of unobserved variable selection bias is necessary to fully explain the positive impact of intergenerational educational mobility on employment quality, and neither control variable selection nor potential omitted variable selection can refute the primary findings of this study. Consequently, these results provide preliminary support for Hypothesis 1.

Table 2. Baseline OLS.

	(1)	(2)	(3)
Dependent Variable	EQ1	EQ1	EQ1
Panel A. OLS Estimates			
im25	0.061 *** (0.020)	0.055 *** (0.017)	0.045 *** (0.012)
num		−0.003 *** (0.001)	−0.003 *** (0.001)
gender		−0.008 *** (0.001)	−0.008 *** (0.001)

Table 2. Cont.

	(1)	(2)	(3)
age		0.006 *** (0.001)	0.006 *** (0.001)
age2		−0.009 *** (0.001)	−0.008 *** (0.001)
education		0.039 *** (0.002)	0.038 *** (0.002)
marry		0.001 (0.003)	0.000 (0.003)
transfer		0.013 *** (0.002)	0.011 *** (0.002)
Constant	0.214 *** (0.058)	−0.012 (0.056)	−0.362 *** (0.079)
City controls	No	No	Yes
Year FE	Yes	Yes	Yes
Industry–Year FE	Yes	Yes	Yes
Province–Year FE	Yes	Yes	Yes
Observations	222,939	222,939	222,939
R-squared	0.277	0.343	0.351
Panel B. Selection of observables and unobservables			
Altonji ratio			2.750 > 1
δ statistic for $\beta = 0$			1.150 > 1
Oster bounds ($\beta, \beta^*; R_{max} = 0.456, \delta = 1$)			[0.0083, 0.0453]

Notes: Standard errors are given in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4.2. Robustness Test

To test the robustness of the baseline conclusions, we conduct examinations across three dimensions: sample scope, measurement of core explanatory variables, and substitution of dependent variables. The results are presented in Table 3. Column (1) shows that after excluding municipalities directly under central government, the intergenerational mobility coefficient remains at 0.045 and is significant at the 1% level, indicating that administrative hierarchies do not drive the baseline findings. Column (2) replaces the core explanatory variable with the absolute intergenerational education mobility level in cities where parents fall within the 50th percentile (im50), yielding a significant positive coefficient of 0.048, demonstrating that the results are not attributable to the specific 25th percentile stratum. Column (3) re-estimates the results under stricter sample conditions, maintaining a significantly positive coefficient. Column (4) further substitutes the dependent variable with personal income, yielding an intergenerational mobility coefficient of 0.044 that remains significant at the 5% level, confirming that intergenerational mobility not only enhances the overall employment quality index but also improves income for migrant populations.

Table 3. Robustness tests.

	(1)	(2)	(3)	(4)
Dependent Variable	EQ1	EQ1	EQ1	Income
im25	0.045 *** (0.012)		0.052 *** (0.013)	0.044 ** (0.022)
im50		0.048 *** (0.013)		

Table 3. *Cont.*

	(1)	(2)	(3)	(4)
Dependent Variable	EQ1	EQ1	EQ1	Income
num	−0.003 *** (0.001)	−0.003 *** (0.001)	−0.005 *** (0.001)	0.119 *** (0.004)
gender	−0.008 *** (0.002)	−0.008 *** (0.001)	−0.010 *** (0.002)	0.023 *** (0.006)
age	0.006 *** (0.001)	0.006 *** (0.001)	0.011 *** (0.002)	0.017 *** (0.003)
age2	−0.008 *** (0.001)	−0.008 *** (0.001)	−0.016 *** (0.004)	−0.026 *** (0.004)
education	0.036 *** (0.002)	0.038 *** (0.002)	0.041 *** (0.002)	0.100 *** (0.006)
marry	−0.001 (0.003)	0.000 (0.003)	−0.000 (0.002)	0.252 *** (0.010)
transfer	0.012 *** (0.002)	0.011 *** (0.002)	0.012 *** (0.003)	−0.055 *** (0.011)
Constant	−0.354 *** (0.079)	−0.365 *** (0.079)	−0.394 *** (0.090)	5.947 *** (0.234)
City controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry–Year FE	Yes	Yes	Yes	Yes
Province–Year FE	Yes	Yes	Yes	Yes
Observations	195,697	222,939	111,864	222,939
R-squared	0.349	0.351	0.377	0.285

Notes: Standard errors are given in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4.3. Endogeneity Treatment

Although the benchmark regression model incorporates multidimensional fixed effects and has undergone robustness testing, endogeneity issues arising from reverse causality and omitted variables may still persist. For instance, cultural traditions, educational preferences, and institutional environments vary across regions; these factors can both influence intergenerational educational mobility and directly affect the employment quality of migrant workers. To further address these issues, we employ instrumental variable methods for identification.

This study employs the Bartik (Shift-Share) method to construct instrumental variables. Specifically, structural shares of each city across different categories at the base period are first selected as share terms, reflecting the historical exposure structure formed during the initial research phase; subsequently, time-varying external shocks for corresponding national categories are calculated as shock terms, and the city-specific base-period shares are multiplied by these national-level shocks and summed to obtain time-varying Bartik instrumental variables at the city level. The advantage of this approach lies in the historical determinism of base-period shares, which are less susceptible to current employment quality effects; furthermore, national-level external shocks are not determined by individual cities alone, making their combination capable of providing relatively exogenous predictive changes for intergenerational mobility.

To address potential endogeneity issues, we also adopted Lewbel's approach of constructing instrumental variables without relying on external factors, generating endogenous instrumental variables through heteroscedasticity to reduce dependence on a single exogenous variable. Specifically, we first calculate the intra-group mean of intergenerational mobility levels across the combined dimensions of industry, province, and year; then, we compare each individual's city-specific intergenerational mobility level with this group mean to obtain its intra-group deviation, and further derive the instrumental variable using

the cube of this deviation. This method leverages the intra-sample heteroscedastic structure to provide additional identification information, operates independently of external shock variables, and serves as a complementary test to the Bartik instrumental variable test.

The Phase 1 results in Columns (1) and (3) of Table 4 demonstrate significant correlations between both the Bartik and Lewbel instrumental variables and intergenerational educational mobility. The Phase 2 results in Columns (2) and (4) reveal effects of 0.051 and 0.045 on employment quality, respectively, both statistically significant at the 5% level. The Kleibergen–Paap test indicates no substantial weak instrument problem. Additionally, using the Conley–Hansen–Rossi approximate exogeneity test, both the Bartik IV and Lewbel IV estimates maintain positive bounds and pass the significance tests, confirming the positive impact of intergenerational educational mobility even under conditions of partial exogeneity.

Table 4. Instrumental variables.

	(1)	(2)	(3)	(4)
Dependent Variable	im25	EQ1	im25	EQ1
Panel A. IV Estimates				
im25		0.051 ** (0.023)		0.045 ** (0.019)
iv	0.676 *** (0.155)			
lewbel_iv			3.545 *** (0.184)	
num	0.001 (0.002)	−0.003 *** (0.001)	−0.002 (0.002)	−0.003 *** (0.001)
gender	−0.003 (0.003)	−0.008 *** (0.001)	−0.002 (0.002)	−0.008 *** (0.001)
age	−0.000 (0.001)	0.006 *** (0.001)	−0.001 * (0.001)	0.006 *** (0.001)
age2	0.000 (0.001)	−0.008 *** (0.001)	0.001 (0.001)	−0.008 *** (0.001)
education	0.002 (0.002)	0.038 *** (0.002)	0.000 (0.001)	0.038 *** (0.002)
marry	0.002 (0.004)	0.000 (0.003)	−0.003 (0.004)	0.000 (0.003)
transfer	0.004 (0.008)	0.011 *** (0.002)	−0.006 (0.004)	0.011 *** (0.002)
City controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry–Year FE	Yes	Yes	Yes	Yes
Province–Year FE	Yes	Yes	Yes	Yes
Observations	222,939	222,939	222,939	222,939
Adj. R-squared	0.404	0.113	0.729	0.113
Kleibergen–Paap rk LM		8.069		11.314
Kleibergen–Paap rk Wald F		19.075		371.870
Panel B.				
Conley–Hansen–Rossi				
plausibly exogenous bounds				
Instrument	Lower bound	Upper bound	Grid	Pass
Bartik IV	0.0410	0.0619	5	Y
Lewbel IV	0.0414	0.0495	5	Y

Notes: Standard errors are given in parentheses. Panel B reports plausibly exogenous bounds for im25. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4.4. Mechanism Analysis

To further elucidate the conditions under which intergenerational educational mobility influences employment quality, this study examines the moderating effects of digitalization

levels and fiscal pressure. Digitalization levels reflect a region's information infrastructure and technological landscape, and improvements in this domain can help to reduce job search costs and enhance the efficiency of matching workers with jobs; fiscal pressure, on the other hand, reflects constraints on local governments' capacity to deliver public services.

Column (1) of Table 5 shows that digitalization level has a significant positive impact on employment quality, with the interaction term coefficient of 0.119 between intergenerational educational mobility and digitalization, which is significant at the 5% level. This indicates that a better digital environment facilitates the transformation of intergenerational educational mobility into improved employment quality, likely because digital platforms enhance access to employment information, skill acquisition, and job matching capabilities, enabling rural migrant workers to more effectively convert regional opportunity structures into tangible employment benefits.

Table 5. Moderating effects.

	(1)	(2)
Dependent Variable	EQ1	EQ1
im25	0.039 *** (0.008)	0.040 *** (0.011)
digital	0.074 ** (0.037)	
im25_digital	0.119 ** (0.052)	
stress		−0.009 (0.006)
im25_stress		−0.013 ** (0.006)
num	−0.003 *** (0.001)	−0.003 *** (0.001)
gender	−0.008 *** (0.001)	−0.008 *** (0.001)
age	0.006 *** (0.001)	0.006 *** (0.001)
age2	−0.008 *** (0.001)	−0.008 *** (0.001)
education	0.038 *** (0.002)	0.038 *** (0.002)
marry	0.000 (0.003)	0.000 (0.003)
transfer	0.011 *** (0.002)	0.011 *** (0.002)
Constant	−0.265 ** (0.108)	−0.268 ** (0.113)
City controls	Yes	Yes
Year FE	Yes	Yes
Industry–Year FE	Yes	Yes
Province–Year FE	Yes	Yes
Observations	222,939	222,939
R-squared	0.353	0.352

Notes: Standard errors are given in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Column (2) of Table 5 shows that the interaction term coefficient between fiscal pressure and intergenerational educational mobility is -0.013 , significant at the 5% level, indicating that fiscal pressure diminishes the positive impact of intergenerational edu-

cational mobility on employment quality. Regions with higher fiscal pressure typically have relatively limited public service investments and employment support capacities, making it difficult to fully realize the potential benefits derived from educational equity and social mobility.

Overall, intergenerational educational mobility does not independently improve the employment quality of rural migrant workers; rather, it is jointly influenced by regional digital development levels and public fiscal capacity.

4.5. Heterogeneity Analysis

The basic regression results demonstrate the average impact of intergenerational mobility on employment quality among migrant populations, although regional differences in public service investment, historical and cultural traditions, and market institutional environments may modulate this effect. To address this, we conduct a heterogeneity analysis across three dimensions: regional education expenditure, local Confucian cultural influence, and regional marketization levels; the findings are presented in Table 6.

Table 6. Heterogeneity analysis results.

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable Group	EQ1 High Eduex	EQ1 Low Eduex	EQ1 High Jinshi	EQ1 Low Jinshi	EQ1 High Market	EQ1 Low Market
im25	0.035 *** (0.012)	0.012 (0.015)	−0.010 (0.016)	0.051 *** (0.012)	0.056 *** (0.013)	0.016 (0.012)
num	−0.004 *** (0.001)	−0.002 * (0.001)	−0.002 *** (0.001)	−0.004 ** (0.001)	−0.004 ** (0.001)	−0.002 * (0.001)
gender	−0.006 *** (0.002)	−0.010 *** (0.002)	−0.008 *** (0.002)	−0.007 *** (0.002)	−0.009 *** (0.002)	−0.007 *** (0.002)
age	0.005 *** (0.001)	0.007 *** (0.001)	0.007 *** (0.001)	0.005 *** (0.001)	0.008 *** (0.001)	0.001 ** (0.001)
age2	−0.007 *** (0.001)	−0.009 *** (0.001)	−0.009 *** (0.001)	−0.006 *** (0.001)	−0.011 *** (0.001)	−0.002 *** (0.001)
education	0.034 *** (0.002)	0.040 *** (0.002)	0.040 *** (0.003)	0.034 *** (0.002)	0.042 *** (0.002)	0.027 *** (0.002)
marry	−0.000 (0.004)	0.001 (0.003)	0.002 (0.003)	−0.001 (0.004)	−0.003 (0.004)	0.004 (0.003)
transfer	0.012 *** (0.003)	0.009 *** (0.003)	0.014 *** (0.003)	0.008 *** (0.003)	0.017 *** (0.003)	0.004 * (0.002)
Constant	−0.149 (0.184)	−0.505 *** (0.134)	−0.481 *** (0.134)	−0.304 *** (0.096)	−0.396 *** (0.093)	0.015 (0.169)
City controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry–Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Province–Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	112,543	110,396	116,033	106,906	151,169	71,770
R-squared	0.350	0.368	0.343	0.377	0.338	0.239

Notes: Standard errors are given in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

4.5.1. Heterogeneity of Regional Education Expenditure

Regional education expenditure reflects both the intensity of local governments' investment in educational public services and the extent to which educational opportunities for children of migrant populations are adequately ensured. Columns (1) and (2) of Table 6

indicate that in regions with higher education expenditure, the estimated coefficient for intergenerational mobility is 0.035, which is significant at the 1% level, whereas in regions with lower education expenditure, the coefficient is 0.012 and not significant. This suggests that only when local governments possess strong capacity for educational investment and public service provision can the openness of opportunity represented by intergenerational mobility be fully translated into improved employment quality for agricultural migrant populations.

4.5.2. Heterogeneity in Local Confucian Cultural Levels

Local Confucian cultural levels are measured by the number of Jinshi graduates during the Ming and Qing dynasties. A higher number of Jinshi graduates typically indicates a greater historical emphasis on imperial examination education and traditional social hierarchy in a region. Columns (3) and (4) of Table 6 show that in regions with high Jinshi numbers, the intergenerational mobility coefficient is -0.010 and not significant, whereas in regions with low Jinshi numbers, the coefficient is 0.051 and significant at the 1% level. This result suggests that regions with a deeper accumulation of traditional culture may exhibit stronger educational path dependence and local social network structures, making it more difficult for agricultural migrant populations to fully benefit from improvements in intergenerational mobility opportunities; conversely, in regions with weaker constraints imposed by traditional culture, the openness of urban opportunity structures is more readily translated into enhanced employment quality.

4.5.3. Heterogeneity in Regional Marketization Levels

The degree of regional marketization reflects resource allocation efficiency and the openness of the labor market. Columns (5) and (6) of Table 6 show that in regions with higher marketization levels, the coefficient for intergenerational mobility is 0.056 and statistically significant at the 1% level, while in regions with lower marketization levels, the coefficient is 0.016 and not significant. This indicates that a more open and competitive market environment can mitigate the constraints imposed by identity, household registration status, and social networks on employment opportunities, enabling migrant workers to more readily secure high-quality jobs based on their capabilities, education, and job fit.

5. Discussion and Implications

5.1. Conclusions

Focusing on intergenerational educational mobility, we construct a city-level intergenerational educational mobility index leveraging the 2015 China 1% Population Sampling Survey data. We further measure the employment quality of the agricultural migrant population using the 2016–2018 China Migrant Dynamic Survey (CMDS) data to systematically examine the impact of intergenerational mobility on migrants' employment quality.

The empirical results indicate that higher intergenerational educational mobility significantly elevates the employment quality of the agricultural migrant population. This finding remains robust after controlling for city, individual, and household characteristics, alongside multi-dimensional fixed effects, including year, industry, industry-by-year, and province-by-year. To address potential endogeneity concerns, we implement Bartik and Lewbel instrumental variable (IV) strategies and conduct sensitivity tests for plausibly exogenous instruments; the core conclusions hold firmly. Further robustness checks demonstrate that the positive effect of intergenerational mobility remains stable across alternative sample specifications, across alternative measures of the core explanatory variable, and when replacing the dependent variable with individual income.

Moderating effect analysis reveals that the regional digitalization level reinforces the employment-enhancing effect of intergenerational educational mobility, whereas local fiscal pressure attenuates this impact. Finally, heterogeneity analysis indicates that the positive impact of intergenerational mobility is more pronounced in regions characterized by higher education expenditure, fewer Jinshi (successful candidates of the imperial examination) during the Ming and Qing dynasties, and higher levels of marketization.

5.2. Discussion

Promoting high-quality development and modernization is a critical challenge currently faced by China, with achieving full and high-quality employment at its core. However, the long-standing low quality of employment among migrant workers and the slow pace of improvement have severely hindered the realization of this goal. Therefore, clarifying the underlying mechanisms that influence the employment quality of migrant workers is particularly important. We construct an intergenerational educational mobility indicator at the urban level and utilize large-scale data on China's floating population to thoroughly examine the impact of intergenerational mobility on the employment quality of rural migrants moving to cities. The findings not only address several classical theoretical perspectives but also supplement and refine existing research methodologies.

First, this study provides empirical support for several well-established theoretical perspectives and enriches their conceptual frameworks by examining regulatory boundaries. This finding directly engages with the ongoing sociological debates surrounding social stratification, migration, and institutional inequality in China. Traditional stratification literature often revolves around the tension between status attainment and structural reproduction. By demonstrating that regional intergenerational mobility enhances migrant job quality, our study uncovers an ecological mechanism: the openness of a city's opportunity structure can effectively mitigate the sticky constraints of parental background. This conclusion aligns with Merton's theory of cumulative advantage, which posits that early disparities in resource endowments and institutional environments can be amplified or mitigated through the accumulation of educational and economic opportunities [40]. However, contrary to the traditional optimistic view that "geographical mobility automatically enhances migrants' socioeconomic status," this study shows that spatial relocation alone does not guarantee improved employment quality. This addresses a core cleaved debate in Chinese migration studies, highlighting that the institutional legacy of the hukou (household registration) system continues to manifest not just as explicit geographic exclusion, but as an implicit, structural stratification of opportunities within urban destinations. Genuine labor assimilation depends heavily on the host city's capacity to dismantle institutionalized precarity and redistribute public resource dividends [45].

Secondly, this study incorporates the digital economy into its analytical framework, revealing the amplifying effect of "technology empowerment" on social opportunity structures. While existing research predominantly focuses on how formal institutions distort labor markets, it often overlooks the role of new economic forms in unleashing social mobility benefits. Our findings demonstrate that the digital economy exerts a significant positive moderating effect. This result not only corresponds to but also expands upon Market Transformation Theory [57]: On one hand, through algorithm-driven matching and platform-based coordination, the digital economy reduces information asymmetry and institutional frictions in labor markets, curbing the monopoly of traditional informal networks based on kinship and geographical ties over opportunities, thereby providing agricultural migrants who have achieved intergenerational advancement through personal effort and education with more equitable access to high-quality jobs. On the other hand, new business models and informal skill-learning ecosystems fostered by the digital econ-

omy (such as online training) enable “digital value addition” to agricultural migrants’ human capital, enhancing their bargaining power and potential for transition into modern sectors. These findings indicate that the digital economy represents not merely a transformation of productive forces but also a mechanism that facilitates converting equity of opportunity into tangible employment benefits at the micro level.

Furthermore, this study considers local fiscal pressures, revealing the limiting effect of “resource constraints” on social mobility efficiency. This finding challenges the generalized assumption that “mobility dividends are inherently universal”, highlighting the critical role of institutional capacity and fiscal leverage. The empirical results demonstrate that fiscal pressure exerts a significant negative moderating effect. From a resource allocation perspective, when facing fiscal strain, governments tend to reduce investments in basic education, public skills training, and labor market support services [58]. The inadequate provision of public services resulting from such financial constraints increases the implicit marginal cost for rural migrants seeking to convert their human capital into high-quality employment opportunities [59]. Even in regions with substantial intergenerational mobility opportunities, under high fiscal pressure, migrant populations struggle to fully transform these opportunities into decent employment due to the lack of supportive public policies and social safety nets. This evidence strongly demonstrates that improvements in employment quality for rural migrants stem not solely from market mechanisms but rather from the combined effects of government fiscal governance capabilities and market transformation mechanisms.

Finally, this study has identified the micro-level heterogeneity and nonlinear characteristics of the impact of intergenerational mobility on employment quality. Heterogeneity analysis reveals an inverted U-shaped relationship between intergenerational mobility and employment quality across different educational groups, with individuals with a secondary education benefiting most significantly. This highlights the profound structural dual segmentation phenomenon existing in China’s urban labor market. For immigrants with junior high school or high school education, intergenerational educational mobility enhances human capital and substantially improves their relative status in the secondary labor market; however, at advanced levels of education such as postgraduate studies, the promoting effect of intergenerational mobility markedly diminishes. This phenomenon of diminishing educational “dividends” not only stems from skill mismatches but also reflects persistent implicit barriers to entry based on “endogenous characteristics” within the elite mainstream labor market. Crucially, our historical culture heterogeneity test directly uncovers the cultural roots of these barriers: in regions characterized by dense Confucian traditions (proxied by historical Jinshi density), the promotional effect of intergenerational mobility is completely attenuated. This reveals that deep-seated cultural path-dependencies tend to crystallize local social network structures (guanxi) and reinforce occupational reproduction among traditionally advantaged local groups. Consequently, even highly educated immigrants face severe institutional and informal promotion obstacles in elite professional fields if they lack localized social capital and institutional recognition in traditional urban areas. This finding highlights that merely expanding educational scale without accompanying profound social structural reforms—such as eliminating employment discrimination, occupational segregation, and informal network monopolies—may trap highly educated immigrants in a new “mobility trap”.

Overall, this study empirically supports the theoretical framework of “intergenerational mobility and opportunity equality” proposed by scholars such as Chetty and DiPrete while transcending the traditional analytical perspective focused solely on individual institutions or industries. Moreover, it highlights how intergenerational mobility, as a long-standing social environmental factor, is moderated by both regional “digital eco-

conomic development” and “local fiscal pressures,” thereby exerting heterogeneous effects on the employment quality of rural migrants moving to urban areas. These findings provide a novel theoretical perspective for understanding the complex relationships between labor market segmentation, technological transformation, and social mobility in developing countries.

5.3. Management Implications

This section details the policy and management implications of the empirical findings of this study. The practical recommendations focus on enhancing regional social mobility, leveraging digital infrastructure, and optimizing public resource allocation to improve employment quality for migrant workers.

First, local governments should accelerate the integration of the digital economy with labor market matching mechanisms to reduce informational friction. Given that development of the digital economy significantly and positively moderates the relationship between intergenerational mobility and job quality, digital platforms can mitigate structural employment mismatches. Local authorities should establish unified, data-driven public employment service networks that span multiple regions and industries. By employing data analytics and algorithmic sorting, these systems can provide migrant workers with transparent, real-time access to high-quality employment opportunities that align with their actual skills and educational backgrounds. This institutional approach also suppresses the reliance on traditional hometown- or kinship-based social networks that often trap rural migrants in lower-tier job sectors. Furthermore, since individuals with middle-level schooling benefit most from mobility gains, targeted digital literacy training programs should be designed for migrants with junior or senior high school education to enhance their technical adaptation and collective bargaining capacity in modern industrial sectors.

Second, the central government should optimize fiscal transfer payment systems to mitigate the negative moderating effects of local fiscal pressure. This study’s empirical results show that higher fiscal pressure restricts a city’s institutional capacity to convert structural opportunity into better employment outcomes, particularly in areas with lower education budgets. Therefore, central and provincial fiscal allocations must be adjusted to prioritize destinations with high concentrations of migrant workers but limited local tax revenues. Direct education subsidies and specialized fiscal transfers should be strengthened to prevent local governments from reducing public expenditure on secondary education or labor market support initiatives during fiscal downturns. Additionally, institutional reforms should emphasize a fiscal framework where public funding directly follows the migrant population. Integrating the costs of education for agricultural migrants’ children and local social security into the host city’s primary budget plans will lower the barriers to urban assimilation for migrant households and sustain an equitable opportunity structure.

Third, regional labor market policies must be tailored to local institutional and cultural environments while systematically dismantling implicit barriers in high-status occupations. Because the returns on intergenerational mobility are stronger in highly marketized regions with fewer traditional cultural constraints, these developed areas should continue to remove institutional obstacles linked to residential status, gender, or family background. Conversely, in regions characterized by dense historical traditions and entrenched local social networks, regulatory oversight of recruitment processes, occupational discrimination, and fair hiring practices must be rigidly enforced to ensure that rural migrants have equal access to urban economic opportunities. Most importantly, to address the diminishing returns observed among highly educated migrants, such as those with postgraduate degrees, policymakers must implement deep structural reforms in primary labor markets. Simply increasing educational attainment is insufficient without eliminating persistent

occupational segregation and informal social capital entry barriers that hinder upward professional mobility for talented rural-to-urban migrants.

5.4. Limitations

Although this study empirically tests the relationship between intergenerational mobility and the employment quality of the agricultural migrant population—and bolsters identification credibility through multi-dimensional fixed effects, Bartik and Lewbel instruments, and sensitivity tests for plausibly exogenous instruments—several limitations remain. First, owing to data constraints, this study used population sampling survey data to calculate a cross-sectional education-based intergenerational mobility index, which limits the ability to obtain a panel index that changes over time, leaving room for further improvement in causal identification. Second, while intergenerational education mobility is a stable and objective metric, it may not fully represent the multidimensional nature of intergenerational mobility, which also encompasses the transmission of income, wealth, and social capital; future research should address this by incorporating broader socio-economic indicators.

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