

Original Research Articles

On the impact of government employment services on the quality of re-employment of unemployed fishermen in Yangtze River –A case study in Xiantao City of Hubei Province, China

Linsheng Chen¹, Yawen Hu^{1a}, Siyuan Zhang^{1b}, Shiwei Xu¹, Yilei Ren², Fei Li^{3c}, Dan Wu⁴, Zifei Liu^{3,5}

¹ College of Economics and Management, Shanghai Ocean University, ² School of Economics and Management, Tongji Zhejiang College, ³ Key Laboratory of Healthy Freshwater Aquaculture, Zhejiang Institute of Freshwater Fisheries, ⁴ Faculty of economics and management, National University of Malaysia, ⁵ Research Center of Fisheries Development Strategy, Chinese Academy of Fishery Sciences

Keywords: Transition to Employment, Employment Capital, Employment Services, Unemployed Fishermen

<https://doi.org/10.46989/001c.122781>

Israeli Journal of Aquaculture - Bamidgheh

Vol. 76, Issue 3, 2024

In the transition period of the Yangtze River fishing ban policy, the retrenched fishermen are in an inferior position in the employment market due to the lack of their own employment capital, and it has become a problem to switch to employment. Based on the study of employment quality and employment capital theory, this paper uses the PLS-SEM model to process the questionnaire data on the effect of government employment services on the quality of fishermen's re-employment based on the establishment of government employment services-quality analysis system and questionnaire design and collection. The total effect of government employment services on re-employment quality was 0.685. The indirect effect of government employment services on the quality of re-employment through the mediating variable of employment conditions was smaller than the direct effect of government employment services on the quality of employment. This research may provide a basis for solving the problems of high-quality re-employment for unemployed fishermen and sustainable livelihoods for fishermen.

INTRODUCTION

The Yangtze River is one of the most significant rivers in China and globally, with its basin holding immense ecological and economic importance. The wetlands, forests, lakes, and other ecosystems within the Yangtze River Basin play a crucial role in water resource regulation, climate regulation, soil conservation, and water quality purification. The Yangtze River is a vital freshwater fishery hub in China, boasting abundant fishery resources such as fish, shrimp, and crab. The fishery industry in the Yangtze River Basin not only meets the dietary needs of local residents but also significantly contributes to China's overall freshwater fishery production. Early intensive and rough fishing has degraded the ecological function of the Yangtze River basin and severely depleted its biological resources. The ten-year ban on fishing in the Yangtze River has helped restore biodiversity within the Yangtze River basin. In the starting year, the fishing ban on the Yangtze River has made remarkable progress, but the significant contradiction be-

tween fishermen and the fishing retreat policy still exists, and there are many difficulties and problems that need to be solved. An important reason for the contradiction lies in the lack of sustainable livelihoods for fishermen following the decommissioning policy and the difficulty of reemployment, which is similar to the negative economic impact of the 1992 cod moratorium along Canada's East coast, which affects 40000 fishers and related workers. The pressure of living can lead to illegal fishing by laid-off fishermen not conscious of ecological protection in such situations. The current employment dilemma of fishermen, who are mostly impacted by the fishing ban process, is directly related to the sustainability of the effectiveness of the Yangtze River fishing ban.

So far, the follow-up studies on the policy of the Yangtze River fishing ban are not sufficient; a few literature discussed the reemployment of laid-off fishermen, inferring the reasons for difficulties to fishermen's aging, low education level and narrowed skills.^{1,2} To solve the problems of declining fishery resources and excess fishery labor, devel-

a Yawen Hu contributed equally to this work and was considered the first co-author.

b Corresponding author: Siyuan Zhang, E-mail: syz99sh@163.com.

c Corresponding author: Fei Li, E-mail: lifeibest1022@163.com.

oped countries such as the United States, Japan, and South Korea have started to take relevant measures to encourage fishermen to switch to other industries, such as aquaculture, recreational fisheries, marine tourism, etc.³⁻⁵ During the fishing ban in Yangtze River, the government has made clear provisions for the reemployment of fishermen with the support of labor agencies, and training institutions. Fishermen are in a relatively disadvantageous position in terms of education, self-development, working experience and access to recruitment informations. The government's provision of job services is a major support to solve the problem of the Yangtze River fishermen's transition of re-employed. The academics also generally agree that the government can speed up and improve the quality of reemployment, and that the government should play an important role to solving such problems. Florian Kraus et al. systematically analyze the effectiveness of public employment policies in "Is the Public Employment Program Effective in East Germany".⁶ Martin Rosenfeld and Woong Lee point out that the establishment of public Job services is definitely justified and effective as they can avoid wasting resources and can push the poor quality private job agencies out.⁷ Li Xiaohui et al. state that the government should play a leading role in the process of employment support for "lost fishermen".⁹ Furthermore, Li Guoxuan and Yu Li prove that the government's lack of concern is the main reason for employment difficulties.¹⁰

Current studies have mainly focused on analyzing the effects of public job services on workers' employment rate, employment duration, and occupational mobility, and there is a lack of discussions of the effects on workers' employment quality.¹¹⁻¹³ Related research in China is still mainly the theoretical analysis, lacking the empirical research for in-depth analysis. In general, there is very little research on the mechanism of how the employment policy inclination impact the group of unemployed fishermen. Based on the above analysis, This paper selects Xiantao City, a fish and rice township in Hubei Province, to conduct a survey of fishermen in the field to understand the basic situation of fishermen and their actual status after being laid off from fishing. The structural equation model was developed to investigate the intrinsic mechanism of government employment services on the quality of fishermen's re-employment to more accurately assess the effect of government employment services in influencing the re-employment quality of unemployed fishermen. By revealing the main paths of local governments to improve the quality of fishermen's re-employment, we provide a basis for decision-making to achieve efficient transformation of subsequent government employment services.

The subsequent structure of this article is as follows. The second section consists of theoretical analysis and research hypotheses. The third section presents the research design. The fourth section entails empirical analysis. The final section encompasses research conclusions and discussion.

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESIS

THEORETICAL FRAMEWORK

The specific impact of government employment services on employment conditions lies in the increase of employment capital. Arthur & Rousseau argue that by the fluctuation of employment demand, employers place more emphasis on material-based transactional relationships with employees rather than long-term contractual relationships. The responsibility of workers' career management will gradually shift from the employer to the workers themselves, who must enrich their own employment capital to improve their employability.¹⁴ Meanwhile, combined with the employment capital theory derived from Pierre Bourdieu's capital theory by Chinese scholars.^{15,16} This study shows that the employment capital enhanced by government employment services mainly includes human capital and social capital. Human capital and social capital are the two external resources that can bring benefits to individuals' work.¹⁷ Government employment services such as job training and job matching for ex-fishermen can significantly improve the human capital and social capital of ex-fishermen, which will directly improve the employment conditions of individuals. The sum of the value of physical (e.g., health quality, cultural reserve, skill level) and mental capabilities possessed by workers themselves is defined as the human capital possessed by workers, specified knowledge and skills will bring higher returns and earnings in the labor market.¹⁸ The level of human capital possessed by an individual worker determines, to a certain level, his or her position in the job market. There exists obvious differences in the employment opportunities, employment processes and employment outcomes for workers with different levels of human capital. Individuals with high levels of human capital have more employment opportunities, higher job matching, higher productivity, which ultimately transforms into higher employment incomes, lower work intensity and higher quality employment, followed by better job promotion rates and career growth. Gary Becker emphasizes the role of education and training in human capital formation.¹⁹ Compared to general education, professional skills training is a more direct and effective human capital building factor for low-level workers to be employed or to improve the quality of employment, and can compensate for the disadvantages of workers' previous general education.^{20,21}

Pierre Bourdieu defines social capital as a collection of actual and potential resources that can be used by individuals to achieve instrumental goals, and the more it is used, the greater the value of social capital it implied.²² Many studies have demonstrated the positive effects of social capital on individual job searching in the labor market.²³⁻²⁶ Social capital plays a role in the quality of employment mainly through human resources and information resources.²⁷ Human resources refer to the support of employment through direct communication with employers, such as helping to recommend a job, arranging to meet rel-

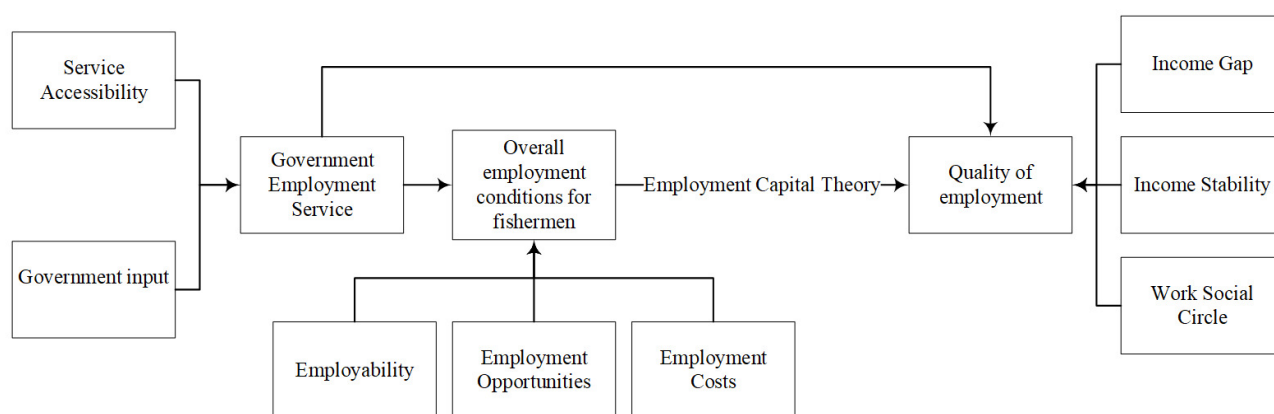


Figure 1. Theoretical model

evant people who might have suitable job opportunities, or directly providing a job, to enhance their employment quality. Many scholars have confirmed in their research that a large number of job seekers can gain a competitive advantage through social network recommendations to achieve employment,^{28,29} and employees who get jobs through recommendations also have higher job satisfaction and better job qualifications.³⁰⁻³² Information resources refer to general knowledge about job opportunities, job requirements, etc. There are different degrees of information asymmetry in the job market. By using information resources, job seekers can reduce the time and cost of searching for the relevant information of job post, get more comprehensive understanding of employers, reduce information barriers with potential employers, increase the possibility of job matching, and increase the probability of diversified employment opportunities for workers.³³

In summary, based on the employment capital theory, the impact of the government's behavior to encourage the re-employment quality of fishermen will follow "government employment services → employment conditions → employment quality". The government's attention to fishermen's reemployment will increase the quality of employment services, and the quality of employment services will have an important impact on the quality of fishermen's reemployment. The following theoretical model is established, as shown in [Figure 1](#) below.

RESEARCH HYPOTHESIS

The core of employment support is to accumulate capital for individuals through education,³⁴ which mainly includes human capital and social capital. By increasing human and social capital, the employment conditions of individual fishermen can be improved, thus improving the individual employment quality. Fearnside's study on the employment of dislocated farmers suggests that the root cause of their inability to achieve employment and sustainable income is their own lack of capability to meet the requirements of jobs offered by employers.³⁵ Since the re-employment dilemmas and personal characteristics of fishermen and dislocated farmers are similar, the lack of human capital is

one factor that makes it difficult for fishermen to find a job. The training provided by the government can help fishermen's skills, improve their knowledge structure, enhance their technical skills, enhance their productivity, and job competency, therefore enhancing their human capital. The more knowledge and skills fishermen have, the better the employment conditions, the higher the productivity from work, the better incomes and the working environment, and ultimately, the improvement of employment quality.

Social capital can provide workers with valuable employment information and substantial assistance to facilitate high-quality employment, higher job satisfaction, and better job qualifications.^{36,37} Phung Thi Thao uses the construction of the information-sharing mechanism of the job market as a perspective to propose new thinking about the reasons for the difficulties of landless farmers in finding jobs, pointing out that imperfect information platforms, insufficient information dissemination, and narrow employment channels prevent landless farmers from achieving employment.³⁸ Government employment matching assistance can significantly enhance the relationship and information resources in the social capital of the unemployed fishermen in their job search process and improve the employment conditions at the social level of the fishermen. Government employment matching services are divided into two aspects: first, the government can reduce the time and cost of searching for information by releasing employment information and applications guidance, help fishermen to screen, identify, and interpret information, reduce the information disadvantage of ex-fishermen, and improve job matching; second, the government can directly provide placement jobs or conduct employment orientation sessions to promote fishermen's re-employment. Fishermen and enterprises are linked together through the government's social network, which can generate trust in a short period of time, and trust can reduce moral hazard. In economic transactions, the higher the trust gained by economic agents, the lower the risk of strategic default,³⁹ and then it is easier for both parties to reach a contractual relationship. The government's employment matching support can help fishermen achieve employment directly or indirectly and improve the quality of fishermen's employment.

Accordingly, the following hypothesis is proposed in this paper:

H1: *Government employment services can significantly improve the overall employment conditions of fishermen.*

H2: *Improving the overall employment conditions of fishermen can significantly improve the fishermen's re-employment quality.*

The main body dealing with the employment problem of the unemployed groups such as landless farmers and fishermen is government.⁴⁰⁻⁴² During the investigation, the local government actively solves the employment problems of the fishermen who have retired from fishing by transferring some people to new employment, promising some people resettlement, and starting their own businesses. As analyzed above, the government can actively organize a series of employment services, such as employee skills training and employment information dissemination, to improve the human capital and employment capital of the unemployed fishermen, thus changing their disadvantageous position in the job market and finally achieving the goal of improving the quality of fishermen's employment.

In summary, therefore, the following hypothesis is proposed in this paper:

H3: *Government employment services can significantly improve the quality of fishermen's re-employment.*

RESEARCH METHODOLOGY

DATA SOURCES

To study the factors affecting fishermen's re-employment, a household survey of rural fishermen in Xiantao City, Hubei Province, was conducted in the summer of 2022. The first step of the questionnaire survey was based on the data of the official website of Xiantao City to count the fishermen who were landed by the ban on fishing. In the second step, all fishermen were taken as the research objects. There were 982 fishermen in Xiantao City, 140 people withdrew from the labor market, and 842 unemployed fishermen successfully switched to employment. There are 4 streets and 15 towns in Xiantao City, and a proportional random sample of questionnaires to the laid-off fishermen in these areas was distributed. The survey covers basic personal information, current work situation, and the acceptance of government employment services for fishermen who switched to employment. The fishermen's age range is large, their occupations are diverse, and their evaluation of government employment services is different. The sample selection generally represents the actual situation of the reemployment of the laid-off fishermen along the Yangtze River basin in Xiantao City. During the course of our investigation, we explicitly informed participants in advance about the research objectives, social value, potential benefits, and possible privacy risks. We conducted the specific survey only after obtaining informed consent from the participants. Furthermore, our research focused on the employment status of fishermen who have ceased fishing activities. Hence, it did not involve any minor participants or human experimentation. Based on these considerations,

the ethical risks associated with this study are minimal. Finally, 457 questionnaires were obtained from the survey, excluding 32 invalid papers (incomplete responses, inconsistent answers, and patterned responses), 425 valid questionnaires were obtained, and the questionnaire efficiency rate was 93.00% (Table 1).

We obtained vector data of administrative divisions, rivers, lakes, etc. from local geographic data centers, imported them into ArcGIS software, and drew the final map. Figure 2 presents a geographical information analysis and visualization of the primary research areas.

MODEL SETTING

In the process of field questionnaire visits, most of the unemployed fishermen who have achieved reemployment are working as low-end laborers in small factories, and those who are engaged in aquaculture are constrained by technical management and have large-scale loss problems. In order to specifically study the influence of governmental actions on the quality of re-employment of fishermen, this paper uses structural equation modeling to analyze the influence mechanism of governmental re-employment services on the quality of re-employment of rural ex-fishermen. By using Smartpls 3.0 to model, fit and analyze the results of a sample of 425 fishermen who achieved re-employment, the mechanism of government actions to encourage re-employment on the re-employment of ex-fishermen is analyzed.

The structural equation model in this paper is a PLS-SEM model. The PLS algorithm can exclude the influence of data volume and its distribution on the operation results, and it seems to be more reliable compared with other algorithms. The structural equation model established in this paper is an exploratory architecture, so this paper chooses to use the formative structural model as the base model.

The structural equation model is as follows:

Causal relationships between latent variables:

$$\eta = \alpha + \Gamma\xi + \zeta$$

η are endogenous latent variables, which in this paper refer to government employment services, employment conditions of fishermen, and quality of employment of fishermen; α are exogenous latent variables, which in this paper refer to government inputs, accessibility of employment services; Γ is a constant term; ξ is the path coefficient; and ζ is the residual.

Relationship between latent and measured variables:

$$\eta = \Pi_y y + \delta_y$$

$$\xi = \Pi_x x + \delta_x$$

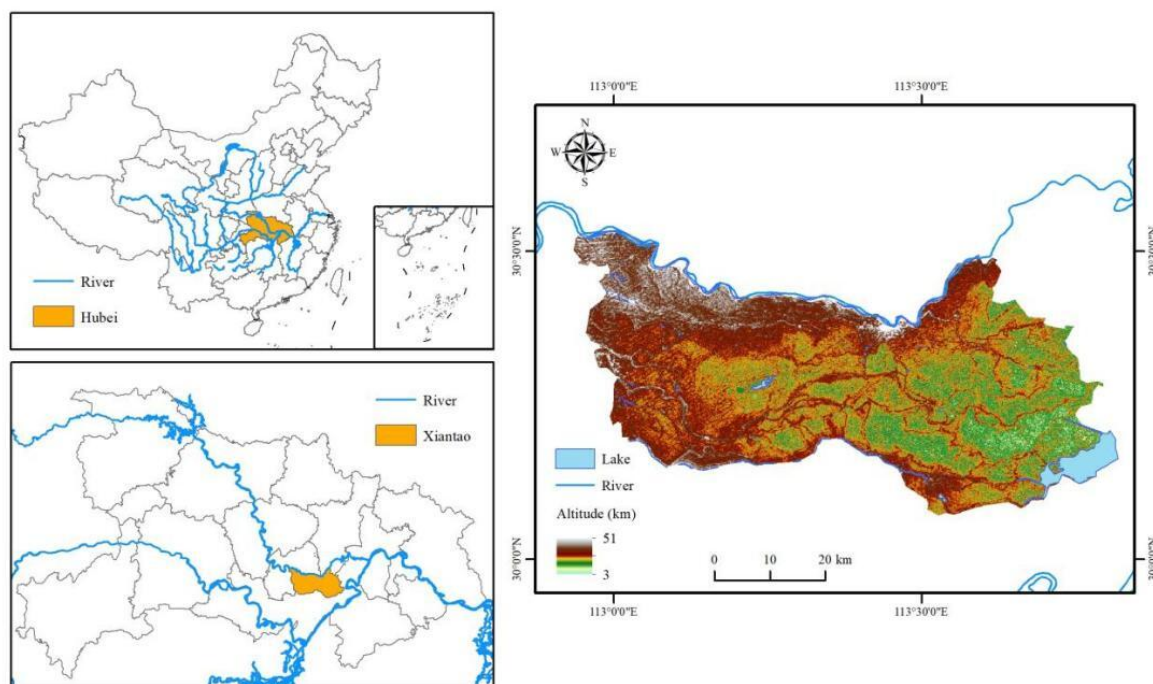
y are endogenous latent variables η the measured variables; x are exogenous latent variables ξ the measured variables; Π is the multiple regression coefficient matrix of y , x ; δ is the matrix regression residual term.

VARIABLE SETTINGS AND MEASUREMENT

1. **Government Employment Services** : The Regulations on Labor Market Management state that government employment provides public welfare em-

Table 1. Sample Composition Table

Items	number	proportion
Total number of fishermen	982	100%
Fishermen who have withdrawn from the labor market	140	14.26%
Unemployed fishermen who have successfully transitioned to employment	842	85.74%
Total number of questionnaires	457	100%
Number of invalid questionnaires	32	7%
Number of valid questionnaires,	425	93%

**Figure 2. Distribution map of data source regions: Xiantao City**

ployment assistance such as training, employment guidance, employment information dissemination, and job placement to workers. In the process of government employment services, what needs to be paid attention to can be summarized into two parts: the specific employment service situation of the government, and the financial expenditure required in providing employment services. The concept of accessibility was first applied to the field of public health services, and later it was introduced to the fields of public education and public cultural services. Scholars have mainly constructed measurement models for accessibility from the perspectives of “appropriateness” and “service use”. In this paper, we mainly refer to the previous study,⁴³ and use the three perspectives of accessibility, adaptability and affordability as the exogenous latent variables of government employment service accessibility. In terms of accessibility, whether the content of employment services can meet the employment needs is taken as the observation question; in terms of adaptability, the fishermen’s knowledge and satisfaction of employment

services is taken as the observation question; in terms of affordability, whether there are obstacles in the process of receiving government re-employment services is taken as the observation question, and 1-5 ordered variables are set for all three observation questions.

In terms of government input, government employment services require a certain amount of capital input. In terms of financial capital, considering the fishermen’s actual employment service access, whether they receive government employment subsidy is set as the observation question, and 0-1 question is set; because the specific human capital invested by the government cannot be specifically counted, human capital input is set as whether the government takes regular employment return visits to fishermen as the observation question, and 0-1 question is set.

The quality of government employment services was developed from three aspects: cognitive evaluation, affective attitude, and behavioral participation, which corresponded to the questions of whether they understood government policies to encourage employment, whether they had par-

ticipated in government employment training or employment orientation, and whether they thought government training courses and employment orientation were helpful, all three of which were ordered variables.

2. **Employment conditions of fishermen** : Regarding the mediating variable “fishermen’s employment conditions”, the three aspects of human capital, social capital, and employment cost are set as 0-1 variables.

The sum of the value of physical (e.g., health quality, cultural reserve, skill level) and mental capabilities the workers possess is defined as the human capital the workers possess. Unlike the number of ordinary human capital investments as the evaluation indicator of human capital, which is provided by the employment training received by fishermen for the public good of the government, this paper focuses on the outcome of the improved employability in terms of knowledge, technology, and quality acquired by fishermen. Employability, as human capital that affects career success or failure, is not only a microscopic individual ability but also a manifestation of external employment opportunities.⁴⁴ Occupational skills certificates can directly reflect the level of knowledge and skills that workers have for a certain occupation. Therefore, in this paper, the objective variable of “whether or not a skill certificate is obtained” is used as a measure of the improvement of the human capital of fishermen after government training, and the variables 0-1 are set.

The definition and measurement of social capital is controversial and has been widely discussed. Based on the viewpoint of Linnan, this paper defines social capital as “the resources that individuals can access and use in the social network they are in”.⁴⁵ The measurement of social capital is mainly based on two aspects: storage and use.⁴⁶ In this paper, we refer to Beihai Tian et al.⁴⁷ to determine the social capital by asking “Which channel has played a decisive role in getting this job?” To determine social capital, the increase in employment opportunities is used as a criterion for determining changes in social capital of fishermen, and the 0-1 variable is set for the question “whether employment opportunities have increased after receiving employment services”. This covers the main results of social capital in the job search process and can also measure the social capital used by fishermen in the job search process from the perspective of usage, which is more accurate.

Social capital helps fishermen to obtain higher quality employment information to reduce the cost of employment opportunity acquisition, while the increase of human capital after employment training further increases the possibility of human-job matching, which can make fishermen’s employment cost decrease, and employment cost is the main consideration when fishermen look for employment, which includes all costs such as employment information acquisition and employment opportunity seeking. Therefore, when the employment condition factors are constructed, the employment cost is considered in the model factors.

3. **Quality of employment** : In economic interpretation, quality of employment refers to the situation in which workers combine their means of production to produce labor and receive remuneration. However, scholars do not limit themselves to the merits of the income situation, but assess the employment quality of employed people by establishing an employment quality evaluation system. How to measure employment quality: the widely accepted fact is that employment quality is a multidimensional phenomenon.⁴⁸⁻⁵¹ Qin examines it from a micro perspective and considers employment quality as the accessibility of employment opportunities for workers based on quantitative employment rates, job characteristics, etc.⁵² The evaluation of employment quality is comprehensive in nature and assesses the quality of employment in terms of both the subjective satisfaction of the employed person with the position and the characteristics of the employed position.

After retreating from fishing, fishermen leave their familiar production and living environment. The sudden change of habitat forces fishermen to passively participate in switching to production and employment, and their original production skills cannot be brought into play in the new environment. The objective conditions of retreating fishermen make employment unstable and the risk of unemployment high, so this paper takes job stability as the consideration indicator; the stability of work is strong and can provide a sense of security. Wage income is the core issue that affects the quality of employment,⁵³ fishermen’s landed employment is re-employment, and the difference in income before and after retiring from fishing is used as the consideration indicator for wage income, which is more accurate. Studies have shown that social interaction and interpersonal circle construction can effectively improve migrants’ survival skills in the new environment and also help migrants gradually adapt to the urban lifestyle and achieve real social integration.⁵⁴ The changes in social circle connections brought about by the new job are also considered an important part of employment quality when fishermen give up fishing, and their work environment is shifted from fishing boats to a more complex environment. All three questions were set up with 1-5 ordered variables.

Table 2 shows the basic information of latent variables and their observed variables.

EMPIRICAL RESULTS AND ANALYSIS

MEASUREMENT MODEL EVALUATION

Structural equation models are divided into reflective and formative indicator models. For formative indicator models, it is not necessary to ensure the reliability and validity as reflective indicators, but it is important to ensure the validity.⁵⁵ In this paper, the weight values generated during the measurement model analysis using SmartPLS 3.0 software were used to analyze the validity of the formative in-

Table 2. Variable settings and description

System of indicators for latent variables and their observed variables				
latent variable	Indicators	Indicator Description	Average value	Standard deviation
Government Input (INT)	Government return visit (INT1)	Does the government make regular return visits to fishermen	0.74	0.44
	Employment funding (INT2)	Whether fishermen receive government employment subsidy funds	0.56	0.49
Accessibility of employment services (KJX)	Availability (KJX1)	Whether the content of employment services can meet employment needs	3.29	1.13
	Accessibility (KJX2)	Service process with or without obstacles	3.21	1.09
	Adaptability (KJX3)	Fishermen's knowledge and satisfaction with employment services	3.03	1.34
Employment service capacity (JYFW)	Cognitive evaluation (JYFW1)	Whether fishermen can actually feel the employment services	3.00	1.39
	Emotional attitude (JYFW2)	Whether fishermen think government employment services are effective	3.02	1.11
	Behavioral Engagement (JYFW3)	Whether fishermen participate in employment service activities such as government employment training or introduction sessions	3.08	1.10
Conditions of employment for fishermen (JYTJ)	Employability (JYTJ1)	Whether to obtain skill certificates after receiving employment services	0.45	0.50
	Employment Opportunities (JYTJ2)	Whether employment opportunities have increased after receiving employment services	0.47	0.50
	Employment Costs (JYTJ3)	Whether the cost of employment (time to find a job, cost of obtaining a job, etc.) is reduced after receiving employment services	0.63	0.48
Quality of employment of fishermen (JYZL)	Stability (JYZL1)	Stability of new jobs	3.12	1.24
	Income gap (JYZL2)	Change in income compared to income before retreat	2.99	1.20
	Social Relationship (JYZL3)	How closely you relate to the people around you after taking up a new job	2.98	1.08

indicator model designed for the study. The results of the validity test of the measurement model are shown in [Table 3](#).

In terms of weights, the weight values of all observed variables are greater than 0.2, and the indicators are significant at the 1% level, indicating that the observed variables selected by the model have reference value. As seen in [Table 4](#), the vast majority of indicators passed the significance test, indicating that the measured indicators can reflect the latent variables well. Adaptability did not pass the significance test, which may be due to the limited investment of the government in promoting and explaining the employment service policy, and the limited access of fishermen themselves to understand the policy and their own employability, and their lack of understanding and adaptation to the government employment service, so the adaptability indicator did not pass the significance test.

In addition, to prevent serious multicollinearity in the model, the variance inflation factor (VIF) was applied for

evaluation, and the results of the covariance test in [Table 3](#) show that the VIF value of each index is much less than 5, the model does not have serious multicollinearity, and the analysis results are stable.

STRUCTURAL MODEL EVALUATION

This paper uses endogenous variables to be explained degree R^2 , predictive correlation model Q^2 , goodness of fit, path coefficients, and statistical effects f^2 several aspects to evaluate the structural model. The coefficient of determination of endogenous latent variables R^2 , greater than 0.7 represents a strong explanatory power of the model, reaching a moderate explanatory power around 0.33, and less than 0.19 represents a poor explanatory power. From [Table 5](#), it can be seen that the employment services R^2 is 0.533 and the adjustment R^2 to 0.531; the employment conditions of R^2 is 0.521, adjusted R^2 to 0.520; the quality

Table 3. Results of the validity test of the measurement model

Variables	INT	JYFW	JYZB	JYZL	KJX
Availability (KJX1)					0.829***
Accessibility (KJX2)					0.812***
Adaptability (KJX3)					0.068
Government return visit (INT1)	0.701***				
Employment service funds (INT2)	0.802***				
Employability (JYTJ1)			0.831***		
Employment Channel (JYTJ2)			0.823***		
Finding Costs (JYTJ3)			0.757***		
Cognitive evaluation (JYFW1)		0.778***			
Emotional attitude (JYFW2)		0.95***			
Behavioral Engagement (JYFW3)		0.767***			
Income stability (JYZL1)				0.747***	
Income gap (JYZL2)				0.851***	
Social Relationship (JYZL3)				0.77***	

Note: *, **, *** indicate significant at the 10%, 5%, and 1% levels, respectively

Table 4. Results of the covariance test of the measurement model

	VIF
Availability (KJX1)	1.144
Accessibility (KJX2)	1.174
Adaptability (KJX3)	1.032
Government return visit (INT1)	1.019
Employment service funds (INT2)	1.019
Employability (JYTJ1)	1.447
Employment Channel (JYTJ2)	1.477
Finding Costs (JYTJ3)	1.39
Cognitive evaluation (JYFW1)	1.7
Emotional attitude (JYFW2)	2.036
Behavioral Engagement (JYFW3)	1.614
Income stability (JYZL1)	1.437
Income gap (JYZL2)	1.585
Social Relationship (JYZL3)	1.262

Table 5. Coefficient of determination of endogenous latent variables R^2

	R^2	After adjustment R^2
JYFW	0.533	0.531
JYTJ	0.521	0.52
JYZL	0.541	0.539

of employment R^2 is 0.541, adjusted to 0.539. R^2 is 0.539, which has a moderate explanatory effect, indicating that the model has good explanatory power.

For predicting correlations, the main focus is on the Q^2 values, using other latent variables to predict the observed variables to assess the quality of the model, and in general $Q^2 > 0$ indicates that the model has predictive relevance. In Table 6, the employment services' Q^2 is 0.373, that of employment capital Q^2 is 0.329, and the employment quality Q^2 is 0.328, indicating that the path model has predictive relevance to the forecasting surface. Regarding model goodness of fit, SRMR was applied, and X^2 was squared over df (chi-squared degrees to assess the model goodness of fit. It was tested that the SRMR of the saturated model = 0.033 < 0.080, the SRMR of the estimated model = 0.034 < 0.100 for the saturated model $X^2/df = 0.320$, and the estimated model's $X^2/df = 0.330$, all of which are less than 5, indicating that the goodness of fit of the model is good and the overall fitness of the model is good.

The path coefficient reflects the correlation between each facet of the model and the other facet, and the normalized path coefficient can be used to measure the model quality. The higher the path coefficient converges to 1, the higher the degree of positive correlation between the two facets; the higher the path coefficient converges to -1, the higher the degree of negative correlation between the two facets. In terms of path coefficient estimation, it can be seen from Table 4 that the p-values of path coefficients for each path are less than 1%, indicating that the path coefficients for each path are significant. The path moderating effect f^2 is an important indicator reflecting the effects of exogenous variables, mediating variables on endogenous variables, and the interaction effects between endogenous variables,⁵⁶ and f^2 Larger values indicate stronger explanatory power.⁵⁶ The values can be divided into three types: small (0.02), moderate (0.15), and large (0.35). In terms of employment services, the statistical effects of employment service accessibility and government input are moderate, but the statistical effect of employment service accessibility is slightly higher than that of government input, which,

Table 6. Effect of government actions on the quality of reemployment of farm households

Effect	Paths	Coefficient	f^2
Direct effect	INT→JYFW	0.397***	0.193
	KJX→JYFW	0.407***	0.203
	JYFW→JYZB	0.722***	1.086
	JYFW→JYZL	0.404***	0.171
	JYZB→JYZL	0.389***	0.158
Indirect effects	INT→JYFW→JYZB	0.286***	
	INT→JYFW→JYZB→JYZL	0.111***	
	INT→JYFW→JYZL	0.160***	
	KJX→JYFW→JYZB	0.293***	
	KJX→JYFW→JYZL	0.164***	
	KJX→JYFW→JYZB→JYZL	0.114***	
	JYFW→JYZB→JYZL	0.280***	
Total effect	JYFW→JYZL	0.685***	

Note: 1. The indirect effect of employment services on employment quality is obtained by multiplying the coefficients of "employment services → employment conditions" and "employment services → employment quality."

2. The total effect of government employment services on employment quality is the sum of the direct and indirect effects of employment services on employment quality.

on the one hand, stems from the fact that direct capital investment in government employment services is less on unemployed fishermen, and government employment subsidies are generally paid annually, and the budget and expenditure of government financial subsidies are relatively stable, with relatively fixed standards and limited support. On the other hand, it takes some time for the return visit to seek opinions to be adopted for improvement. In terms of employment quality, the statistical effect of employment services is higher than the statistical effect of employment conditions, which partly stems from the fact that government employment services will include job placement, which can achieve a higher quality of conversion to employment even if fishermen do not upgrade their employment capital.

In terms of direct effect, the significant positive effect of government employment services on fishermen's employment conditions ($r = 0.722$, $p < 0.01$) indicates that government employment services enable the improvement of fishermen's employment conditions, hypothesis H1 holds, which is consistent with existing studies and the view that the role of government is unjustifiable in government responsibility theory.⁵⁷ The positive effect of fishermen's employment conditions on employment quality ($r = 0.389$, $p < 0.01$) indicates that the improvement of fishermen's employment conditions can lead to the improvement of fishermen's employment quality, which is consistent with hypothesis H2, which holds, and combined with the external weight coefficient, the greater weight of employability on fishermen's employment quality, which is consistent with the hypothesis of human capital theory.

In terms of total effect, the total effect of government employment services on fishermen's employment quality is 0.685, with a p-value less than 0.01. The effect of gov-

ernment employment services on fishermen's employment quality is significant, and hypothesis H2 is valid. In terms of direct and indirect effects, the indirect effect of government employment services on employment quality ($r = 0.280$, $p < 0.01$) is smaller than the direct effect of government employment services on employment quality ($r = 0.404$, $p < 0.01$), which shows that the effect of government employment services on employment quality is mainly reflected through the direct effect of employment services on employment quality. The reason for the small indirect effect is the occasional nature of employment services provided by the government, irregular and sporadic employment service training and job matching makes the government's ability to enhance the employment conditions of fishermen weaken; secondly, the impact on employment quality through employment conditions also needs to be transformed, in which the social market plays a great influence,⁵⁸ employment intentions and social market etc. weaken the impact on the employment quality of fishermen; while the government will provide unemployed fishermen with The direct effect of employment services increases as the government matches a certain number of jobs with high overall job quality, resulting in a significant increase in the quality of employment for the fishermen who are placed in jobs. As shown in [Figure 3](#), the paper puts government employment services, fishermen's employment conditions, and employment quality in the same framework to visualize the single path and the combined mechanism of government employment services on fishermen's employment quality. The main impact mechanism is that government employment services directly affect fishermen's employment conditions and re-employment quality, and an indirect effect on fishermen's re-employment quality through changes in employment conditions. The to-

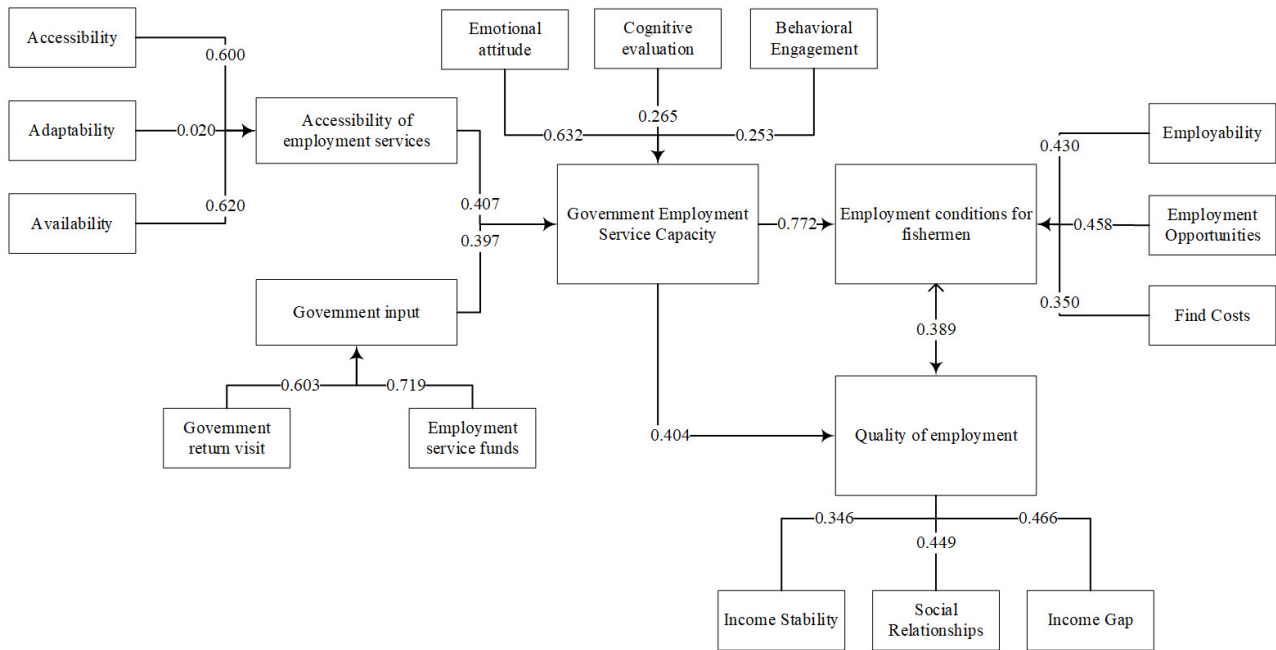


Figure 3. Parameter estimation of the impact of government employment services on the quality of re-employment of fishermen

tal effect of government employment services on fishermen's re-employment quality is obtained by the sum of the direct and indirect effects of government actions on fishermen's re-employment quality.

CONCLUSION AND DISCUSSION

In this paper, based on the fact that the lack of employment capital of the unemployed fishermen makes the reemployment of the unemployed fishermen by their own efforts problematic, and considering the possibility that the government's efforts to change employment can increase the reemployment quality of the unemployed fishermen, we will incorporate the employment capital theory into the structural equation modeling approach and collect questionnaires from the unemployed fishermen in Xiantao City, Hubei Province to investigate the effect of the government's reemployment quality on the reemployment quality of the fishermen. The mechanism of government re-employment quality on fishermen's re-employment quality was studied. The results show that (1) fishermen's employment conditions can effectively and positively improve fishermen's re-employment quality, and the re-employment services provided by the government after the Yangtze River fishing ban can not only effectively enhance fishermen's re-employment conditions but also promote fishermen's re-employment quality with fishermen's employment capital as a mediating variable. The view of this paper is consistent with the view of Wang and other scholars that government training has a significant impact on their income level and employment quality, but the research in this paper is not limited to employment training but focuses on the role of a series of employment services such as government employment information dissemination and job pro-

vision, and includes the social capital channel to influence fishermen's employment quality in the study, and finds the positive effect of this channel. (2) The difference between the direct and indirect effects of government reemployment services is another major finding of this paper. according to the results of the PLS-SEM model, the direct effect of government reemployment services is greater than its indirect effect through fishermen's employment conditions. Hui Jia et al. argue from the perspective of dislocated farmers themselves and the government that dislocated farmers lack long-term vision in vocational education and training. The lack of long-term vision in vocational education and training and the lack of timeliness and intensity of the training provided by the government makes it difficult for dislocated farmers to find good jobs in the job market.⁵⁹ Likewise, the lack of ability of employment services to improve the employment conditions of fishermen, their willingness to work, and the role of employment influences such as the social market that make it difficult for fishermen to find good jobs in the job market may be the reason why the government causes the direct effect of government reemployment services to be greater than its indirect effect, and is something that needs further research in the future.

The conclusions drawn in this study may offer valuable insights for addressing livelihood issues faced by retired fishermen in the Yangtze River Basin and other regions. This is due to several factors: the year-round fishing ban policy in key water areas of the Yangtze River Basin encompasses the mainstream and significant tributaries of the Yangtze River, the two lake basins, and the basin's reservoirs, affecting a total of 332 counties and cities. Xiantao City, exemplifying high-quality government practices under this policy, can serve as a model for other cities aiming to facilitate the reemployment of fishermen. Additionally,

in Europe, fishermen from the North and Baltic Seas have successfully resolved their livelihood issues through government-provided entrepreneurship loans, technical support, and other measures. Similarly, the Senegalese government offers economic support and vocational training in Africa, enabling many unemployed fishermen to transition successfully into crop cultivation and animal husbandry.

At the same time, the existing research⁶⁰ argues that the transfer to re-employment will be influenced by other factors such as individual factors, family factors, and market, and whether there is a joint role in terms of individual factors, family factors, and governmental behavioral factors, and the size of the joint role is also worth our attention to further research. The reasons affecting fishermen's livelihoods are complex. Subsequent studies could integrate various factors to explore configuration conditions. Additionally, similar future research may examine samples from different countries and regions. Due to variations in geography and policies, variables for evaluating policy effectiveness may need to be adjusted or reconstructed. Therefore, future research must start from reality and adaptively discuss fishermen's livelihood issues. Thirdly, due to objective constraints, this article only selected Xiantao City as a representative case, extracting samples for study. Subsequent research could sample from other typical areas in the Yangtze River Basin to analyze heterogeneous sample outcomes.

ACKNOWLEDGMENTS

This research was funded by the Open Project Foundation from Key Laboratory of Freshwater Aquaculture Genetic and Breeding of Zhejiang Province, Zhejiang Institute of Freshwater Fisheries (ZJK202206); and Science and Re-

search Start-up Funding project for High-level and scarce talent from Shanghai Technical institute of electrics and information: Research on Artificial Intelligence Reshaping the Digital Economy Skills of Fintech Industry Cluster in Shanghai: A Knowledge Graph-based View Valve (GCC2023015).

AUTHORS' CONTRIBUTION

Conceptualization: Linsheng Chen (Equal), Yawen Hu (Equal). Methodology: Linsheng Chen (Equal), Yawen Hu (Equal), Fei Li (Equal). Formal Analysis: Linsheng Chen (Equal), Shiwei Xu (Equal). Investigation: Linsheng Chen (Equal), Yawen Hu (Equal), Siyuan Zhang (Equal), Yilei Ren (Equal), Fei Li (Equal), Zifei Liu (Equal). Writing – original draft: Yawen Hu (Lead). Writing – review & editing: Siyuan Zhang (Equal), Shiwei Xu (Equal), Yilei Ren (Equal). Supervision: Shiwei Xu (Equal), Dan Wu (Equal), Zifei Liu (Equal). Funding acquisition: Linsheng Chen (Equal), Fei Li (Equal), Shiwei Xu (Equal). Resources: Yawen Hu (Equal), Siyuan Zhang (Equal), Shiwei Xu (Equal), Fei Li (Equal), Dan Wu (Equal).

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data supporting this study's findings are available from the corresponding author upon reasonable request.

Submitted: July 23, 2024 CST. Accepted: August 05, 2024 CST.

Published: August 29, 2024 CST.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

REFERENCES

1. Hu X. A study on sustainable livelihoods of unemployed fishermen in the Yangtze River basin--a survey based on the Guangyuan section of the Jialing River. *Western China*. 2022(03):90-96.
2. Liu LT, Yi W, Liu ZF, Yang WB, Deng W. Some issues that fishermen need to face in retiring fishing in key waters of Yangtze River basin--a field study based on Xiangyin and Hanshou counties in Dongting Lake area. *China Fisheries Economy*. 2019;37(04):13-19.
3. Rybarczyk H, Elkaim B, Ochs L, et al. Analysis of the trophic network of a macrotidal ecosystem: the Bay of Somme (Eastern Channel). *Estuarine, Coastal and Shelf Science*. 2003;58(3):405-421. doi:[10.1016/S0272-7714\(02\)00294-9](https://doi.org/10.1016/S0272-7714(02)00294-9)
4. Kim SU. A Study on the change of OOL of Rural People and Directions for Rural Development. *Journal of Agricultural Education and Human Resource Development*. 2002;34(3):71-90.
5. Thorpe A, Ibarra AA, Reid C. The New Economic Model and Marine Fisheries Development in Latin America. *World Development*. 2000;28(9):1689-1702. doi:[10.1016/S0305-750X\(00\)00045-0](https://doi.org/10.1016/S0305-750X(00)00045-0)
6. Kraus F, Puhani PA, Steiner V. Do Public Works Programs Work?: Some Unpleasant Results from the East German Experience. *ZEW Discussion Papers*. Published online 1998.
7. Rosenfel M. The economic Theory of Institutional Change and the Emergence of Public Activities: The Case of Public Services in Germany. *Zeitschrift für Wirtschafts und Sozial wissenschaften*. Published online 1997. doi:[10.3790/schm.117.2.291](https://doi.org/10.3790/schm.117.2.291)
8. Lee W. *Public Employment Offices and the Labor Market in the United State Between 1890 and 1940*. NBER Labor Market Intermediation Conference Working Paper; 2007.
9. Li X, Wu S. Measures to promote the re-employment of "lost sea" fishermen in China[J]. *Journal of Dalian Maritime University (Social Science Edition)*. 2016;15(03):35-39.
10. Li G, Yu L. Research on policy support for re-employment of landless farmers. *China Market*. 2020;(29):10-13.
11. Koning P. The effectiveness of Public Employment Service workers in the Netherlands. *Empirical Economics*. 2009;37(2):393-409. doi:[10.1007/s00181-008-0237-7](https://doi.org/10.1007/s00181-008-0237-7)
12. Ravn R, Nielsen K. Employment Effects of Investments in Public Employment Services for Disadvantaged Social Assistance Recipients. *European Journal of Social Security*. 2019;21(1):42-62. doi:[10.1177/1388262719836797](https://doi.org/10.1177/1388262719836797)
13. Mergele L, Weber M. Public employment services under decentralization: Evidence from a natural experiment. *Journal of Public Economics*. 2020;182. doi:[10.1016/j.jpubeco.2019.104113](https://doi.org/10.1016/j.jpubeco.2019.104113)
14. Arthur MB, Rousseau DM. *The Boundary Less Career: A New Employment Principle for a New Organizational Era*. Oxford University Press; 1996. doi:[10.1093/oso/9780195100143.001.0001](https://doi.org/10.1093/oso/9780195100143.001.0001)
15. Ge X, Wang Y. Analysis of identity factors of migrant workers' employment capital. *Productivity Research*. 2010;(9).
16. Guo S. Investigation and analysis of the employment capital situation of landless farmers in Anyang City. *Journal of Anyang Normal College*. 2011;(01):91-95.
17. Luthans F, Youssef CM. Human, Social, and Now Positive Psychological Capital Management: Investing in People for Competitive Advantage. *Organizational dynamics*. 2004;(2):143-160. doi:[10.1016/j.orgdyn.2004.01.003](https://doi.org/10.1016/j.orgdyn.2004.01.003)
18. Schultz TW. Investment in Human Capital. *American Economic Review*. 1961;51(January 1961):1-17.
19. Gary SB. Part 2:investment in human beings investment in human capital:a theoretical analysis. *Journal of Political Economy*. 70(5):9-49. doi:[10.1086/258724](https://doi.org/10.1086/258724)
20. Friedlander D, Greenberg DH, Robins PK. Evaluating government training programs for the eco-nomically disadvantaged. *Journal of Economic Literature*. 1997;35(4):1809-1855.
21. Malammudo PEC. General education versus vocational training:Evidence from an economy in transition. *The review of economics and statistics*. 2010;92(1):43-60. doi:[10.1162/rest.2009.11339](https://doi.org/10.1162/rest.2009.11339)
22. Bourdieu. The Contingent Value of Social Capital. *Administrative Science Quarterly*. 1997;42:39-365. doi:[10.2307/2393923](https://doi.org/10.2307/2393923)

23. Newman RBK. Getting a Job: A Study of Contacts and Careers. *Contemporary Sociology*. 1996;25(3):391-392. doi:[10.2307/2077488](https://doi.org/10.2307/2077488)
24. Coleman JS. Social Capital in the Creation of Human Capital. *The American Journal of Sociology*. 1988;94. doi:[10.1086/228943](https://doi.org/10.1086/228943)
25. Lin N. Social Networks and Status Attainment. *Annual Review of Sociology*. 1999;25. doi:[10.1146/annurev.soc.25.1.467](https://doi.org/10.1146/annurev.soc.25.1.467)
26. Brady G. Network Social Capital and Labour Market Outcomes:Evidence for Ireland. *Economic and Social Review*. 2015;02:163-195.
27. Granovetter M. *Getting a Job: A Study of Contacts and Careers*. University of Chicago press; 2018.
28. Bian Y, Huang X, Zhang L. Information and Favoritism: The Network Effect on Wage Income in China. *Social Networks*. 2015;(40). doi:[10.1016/j.socnet.2014.09.003](https://doi.org/10.1016/j.socnet.2014.09.003)
29. Zhu M, Yang Y. Employment structure of migrant workers and its changing trend in recent years. *Population Studies*. 2017;41(05):89-100.
30. Burks S, Cowgill B, Hoffman M, Housman M. The Value of Hiring through Referrals. *Quarterly Journal of Economics*. 2013;(130). doi:[10.2139/ssrn.2266809](https://doi.org/10.2139/ssrn.2266809)
31. Pieper JR. Uncovering the Nuances of Referral Hiring: How Referrer Characteristics Affect Referral Hires' Performance and Likelihood of Voluntary Turnover. *Personnel Psychology*. 2015;68. doi:[10.1111/peps.12097](https://doi.org/10.1111/peps.12097)
32. Bian Y, Huang X. Beyond the strength of social ties: Job search networks and entry-level wage in urban China. *American Behavioral Scientist*. 2015;59(8):961-976. doi:[10.1177/0002764215580608](https://doi.org/10.1177/0002764215580608)
33. Obukhova E, Zhang L. Social Capital and Job Search in Urban China: The Strength of Strong Ties Hypothesis Revisited. *Chinese Sociological Review*. 2017;49. doi:[10.1080/21620555.2017.1307689](https://doi.org/10.1080/21620555.2017.1307689)
34. Cai LY. The responsibility of undergraduate education and its fulfillment in education out of poverty. *Higher Education Management*. 2017;11(6):26-31.
35. Fearnside PM. Land-Tenure Issues as Factors in Environmental Destruction in Brazilian Amazonia: The Case of Southern Pará. *World Development*. 2001;29(8):1361-1372. doi:[10.1016/S0305-750X\(01\)00039-0](https://doi.org/10.1016/S0305-750X(01)00039-0)
36. Pieper JR. Uncovering the Nuances of Referral Hiring: How Referrer Characteristics Affect Referral Hires' Performance and Likelihood of Voluntary Turnover. *Personnel Psychology*. 2015;68. doi:[10.1111/peps.12097](https://doi.org/10.1111/peps.12097)
37. Sanders JM, Nee V. Immigrant Self-Employment: The Family as Social Capital and the Value of Human Capital. *American Sociological Review*. 1996;61(02):231-249. doi:[10.2307/2096333](https://doi.org/10.2307/2096333)
38. Thao PT. Measures of Yongfu province for the employment of the people who need to be expropriated for the development of industrial areas and Service industries. *D Ho Chi M ins National School of administration*. Published online 2009:39-40.
39. Turvey CG. Alternative estimates of weighted implied volatilities from soybean and live cattle options. *The Journal of Futures Markets*. 1990;(4). doi:[10.1002/fut.3990100404](https://doi.org/10.1002/fut.3990100404)
40. Blundell R, Dearden L, Meghir C, Sianesi B. Human capital investment: The returns from education and training to the individual, the firm and the economy. *Fiscal Studies*. 1999;20(1):1-23. doi:[10.1111/j.1475-5890.1999.tb00001.x](https://doi.org/10.1111/j.1475-5890.1999.tb00001.x)
41. Farne S. *Políticas Activas Del Mercado de Trabajo En Colombia, Mexico yPeru*. CEPAL
42. Michaelidcs M, Benus. Are self-employment training programs effective? Evidence from project GATE. *Labor Economics*. doi:[10.1016/j.labeco.2012.04.004](https://doi.org/10.1016/j.labeco.2012.04.004)
43. Cui N, Liang X. Research on the accessibility of public cultural services based on governance perspective]. *Zhejiang Sociology*. 2021(10).
44. Forrier A, Sels L, Stynen D. Career mobility at the intersection between agent and structure A conceptual model. *Journal of Occupational & Organizational Psychology*. 2009;82(4):739-759. doi:[10.1348/096317909X470933](https://doi.org/10.1348/096317909X470933)
45. Lin N. *Social Capital: A Theory of Social Structure and Action*. Cambridge University press; 2001. doi:[10.1017/CBO9780511815447](https://doi.org/10.1017/CBO9780511815447)
46. Li S, Liu Z. Can social capital affect migrant workers' occupational mobility--an analysis based on the perspective of class change. *Journal of China University of Geosciences (Social Science Edition)*. 2023;23(02):1-14.

47. Tian B, Lei H, She H, Liu D. What is more important than human capital and social capital: A reexamination of the factors influencing migrant workers' occupational mobility: A combined perspective based on the status structure view and network structure view. *China Rural Observation*. 2013;(01).
48. Clark AE. Your Money or Your Life: Changing Job Quality in OECD Countries. *British Journal of Industrial Relations*. 2005;43(3):377-400. doi:[10.1111/j.1467-8543.2005.00361.x](https://doi.org/10.1111/j.1467-8543.2005.00361.x)
49. Green F. Demanding Work: The Paradox of Job Quality in the Affluent Economy. *Industrial and Labor Relations Review*. 2006;33(4):498-500. doi:[10.1177/0730888406294125](https://doi.org/10.1177/0730888406294125)
50. Davoine L, Erhel C, Guergoatlariviere M. Monitoring quality in work: European employment strategy indicators and beyond. *International Labour Review*. 2010;147(2-3):163-198. doi:[10.1111/j.1564-913X.2008.00030.x](https://doi.org/10.1111/j.1564-913X.2008.00030.x)
51. Antn J.I., de Bustillo R.M., Fernandez-Macias E., Esteve F. *Measuring More than Money: The Social Economics of Job Quality*. Edward Elgar; 2012.
52. Jianguo Q. Exploration of employment quality evaluation index systemJ. *Journal of Guangdong Administrative College*. 2011;23(02):76-80.
53. Wei N, Xiaotian F. Employment quality, social interaction and migrant workers' willingness to enter households - a survey based on migrant workers in the Pearl River Delta and Yangtze River Delta. *Agricultural Economic Issues*. 2016;37(06):34-42.
54. Dong L, Deng W. Social adaptation dilemma and social exclusion of ecological migrants--a survey based on Kunlun ethnic cultural village in Golmud City, QinghaiJ. *Journal of Northern University for Nationalities (Philosophy and Social Science Edition)*. 2017;(03):40-44.
55. Huang ZG, Chen XN, Li JY. Research on the mechanism of the impact of ecological migration policy on farm household income - a structural equation modeling analysis based on formative indicators. *Resource Science*. 2018;40(02):439-451.
56. Xie JH, Yang GQ, Xu YG, Wang G. Mechanisms and empirical analysis of the impact of farmland improvement on farm household income and well-being. *Agricultural Technology and Economics*. 2020;(12):38-54.
57. Vogel P. Designing Active Labor Market Policies to Tackle Youth Unemployment. In: Palgrave Macmillan UK; 2015. doi:[10.1057/9781137375940_7](https://doi.org/10.1057/9781137375940_7)
58. Zhong R, Qu S. Labor market segmentation, inequality in employment opportunities and urban-rural wage differentials--a study based on China General Social Survey (CGSS) data. *Journal of Beijing University of Technology and Business (Social Science Edition)*. 2019;34(06):88-104.
59. Jia H, Zhao Q, Tian X, et al. The Influencing Mechanism of Three-Dimensional Capital on the Employment of Land Expropriated Farmers Based on Structural Equation ModelJ. *Journal of Service Science and Management*. 2019;12(5):665-681. doi:[10.4236/jssm.2019.125046](https://doi.org/10.4236/jssm.2019.125046)
60. Muehlemann S, Pfeifer H, Walden G, et al. The financing of apprenticeship training in the light of labor market regulations. *Labour Economics*. 2010;17(5):799-809. doi:[10.1016/j.labeco.2010.04.006](https://doi.org/10.1016/j.labeco.2010.04.006)