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# Mandarin's Impact on Poverty Alleviation: An Empirical Study Based on Economic and Social Interaction Dimensions

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#### **Abstract**

This paper studies the effect of Mandarin proficiency on poverty reduction and its mechanism. The China General Social Survey (CGSS) is taken as the data source. From the perspective of social integration, the poverty reduction effect of Putonghua and its mechanism are empirically studied from the perspective of social interaction, social fairness, and social trust. The findings showed that improving the ability to listen and speak Mandarin positively affects social interaction, social trust, and social fairness. It showed that Putonghua proficiency positively correlates with the suppression of economic poverty. After the occurrence of poverty, whether a sample of absolute poverty or relative poverty, the ability to listen and speak in Mandarin has a specific inhibitory effect on social interaction, social trust, and social fairness. After the occurrence of poverty, the frequency of social interaction, social trust, and social public since have been reduced to a certain extent. Specifically, the ability to express Mandarin has shown remarkable results in improving social interaction, and the ability to listen among ordinary people has shown remarkable results in enhancing social fairness. The results of this paper provide empirical evidence of poverty alleviation in China via Improving Mandarin Proficiency. This research is also of great significance for optimizing poverty alleviation paths through language in the post-poverty alleviation era.

**Keywords**: absolute poverty, China General Social Survey, multidimensional poverty, post-poverty alleviation, Putonghua

## Introduction

Social networks are an integral part of human existence [1]. Since absolute poverty has been eradicated, our focus is now eradicating the relevant poverty of individuals and accelerate their development [2]. As a cultural carrier, language is becoming increasingly important in social interaction [3]. First used in 1965, the term economics of language is derived from Jacob Marschak's article in Behavioral Science in which he argued that language is a form of human capital and that its value is related to the speaker's income [4]. Measurements of linguistic diversity would show a significant correlation with economic level and cultural fitness [5]. Linguistic

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diversity is significantly correlated with GNI and life expectancy [6, 7]. Language skills, as an important human capital, have a clear effect on the increase of workers' incomes [8]. It is found that people with higher language skills have a higher degree of social integration [9-11]. The language is also an integral part of our identity and our ability to trust each other [12]. Good language planning has a non-negligible impact on poverty reduction [13]. For poor areas, good language planning can have a positive effect on eradicating absolute poverty and hunger, and in accessing education [14, 15].

In that way, as a multiethnic developing country, China's comprehensive understanding of Mandarin's multifaceted role will contribute to promoting social integration and consolidating poverty alleviation achievements. In 2018, Ministry of Education, National Poverty Alleviation Office and National Language Commission co-issued the Plan to Promote Mandarin Chinese as a National language for Poverty Alleviation (2018-2020), which upholds the tenet that poverty alleviation must help wisdom, by using language education to block the transmission of poverty [16]. Based on the Plan (2018-2020) above-mentioned, we should prioritize improving the language ability and communication of poverty-stricken people and realize the influence of language ability on labor income.

#### **Impact of Mandarin on Poverty Alleviation**

From an economic, social, and political perspective, it is necessary to promote Putonghua in poor areas and to implement a strategy of targeted poverty reduction through language and character education [17]. Promotion of Putonghua within the context of poverty alleviation also requires accurate promotion of Putonghua [18, 19]. There are new dimensions and ways to improve the language ability of people out of poverty, ranging from "popularizing" to help eliminate absolute poverty to improving their comprehensive language quality to promote their comprehensive and sustainable development [20]. There are a number of ways and dimensions should be employed to improve the language ability of those who have been lifted out of poverty so that they do not return to poverty and have the capability to prevent new types of poverty from occurring [21]. There is a pivotal role for Mandarin Chinese as s a national language in poverty alleviation [22].

The empirical studies mainly fall into two categories: Some studies centered on the influence from Mandarin Chinese as a national Franca on labor income. Furthermore, the positive correlation between Mandarin Chinese and labor income has been demonstrated. Others investigated the influence from Mandarin Chinese used in ethnic minority regions on labor income. The economic motivation for learning Putonghua is obvious, and they prefer practical Putonghua in terms of learning content [23]. Based on further econometric analysis, it appears that the improvement of workers' ability to listen, speak, and write Putonghua can lead to a significant increase in their labor income [24]. The Putonghua level has a significant effect on labor income as well [25]. Mandarin Chinese influences the labor income and people's cognition [26]. There is multidimensional effect from Mandarin Chinese on poverty alleviation [27].

The studies mentioned above shed light on understanding the relationship between language and poverty. Nevertheless, this paper holds that we should analyze poverty, a complex variable, from a comprehensive and sociological angle. Currently, piles of prior literature revolve around the correlation between language and income; scarcely any study has touched upon the influence of language on poverty. Against this backdrop, based on data from the Chinese General Social Survey, this paper tries to explore the relationship between Mandarin Chinese ability and poverty from the aspects of social interaction, social trust, and social justice.

## Research Design and Data Analysis Modelling Data Source

The data center of the Renmin University of China is in charge of the Chinese General Social Survey, which collects data about society, city, family, and individuals and stores the data in different modules such as core module, date review in the past decade, energy module, EASS module, ISSP models and so on. This data has been widely used in teaching and, researching, decision-making references for the government. For this paper, all data sets are taken from CGSS, 2015 [28] as a data source with a total sample of 10968. After deleting those invalid responses and incomplete data, the remaining sample is 8216. Data are available through the Chinese National Survey Data Archive website (CGSS, 2015).

## Variables and Descriptive Statistics Dependent Variables

After winning the victory of poverty alleviation and entering another new phase to pursue common prosperity, China should view poverty alleviation from multiple dimensions instead of a single dimension. In other words, poverty alleviation should consider the following dimensions: economic level, social development, better life, and beautiful China building.

## Independent variable and controlled variables

Proficiency in Mandarin Chinese is set as an explanatory variable, including the listening level and the speaking

of Mandarin Chinese. The CGSS (2015) divides the levels of Mandarin Chinese into five scales: Cannot listen or speak entirely, poor, middle-level, good, and extremely good. This paper uses a virtual variable for valuation in the listening level and the speaking of Mandarin Chinese. The scale "good" and "extremely good" is set as 1, and other scales of listening and speaking is set as 0. The controlled variable considers some information such as individual, family, and region. The following are controlled variables: gender, nationality, education, household registration, marriage, family scale, poverty level, and province.

Table 1 Variables and descriptive statistics

| variables  | Table 1 Variables and descriptive statistic variables requirements  |       | standard<br>deviation |  |
|--|---|-------|-----------------------|--|
| dependent<br>variable                                    |   |       |                       |  |
| Social interaction                                       | Hardly have social interaction within a year Yes=1, No=0  | 0.34  | 0.47                  |  |
| Social trust   | Extremely disagree or very disagree that Most people are not trustworthy in society.  Yes=1, No=0                 | 0.19  | 0.39                  |  |
| Social justice   | Believe that the society is extremely or very not just Just=1, no just=0  | 0.27  | 0.44                  |  |
| Poverty criterion 1                                      | The family annual income per person in 2014 is less than 4500 RMB Yes=1, No=0                                     | 0.14  | 0.34                  |  |
| Poverty criterion 11                                     | The family annual income per person is 60% lower than annual median (rural 10291 RMB, urban 29129RMB) Yes=1, No=0 | 0.40  | 0.49                  |  |
| Exploratory variables                                    |   |       |                       |  |
| Listening ability of Mandarin Chinese                    | Extremely or very good=1 Other levels=0   | 0.61  | 0.48                  |  |
| speaking ability<br>of Mandarin<br>Chinese<br>Controlled | Extremely or very good=1 Other levels=0   | 0.39  | 0.48                  |  |
| variables<br>gender                                      | Male=1, female=0  | 0.48  | 0.5                   |  |
| age  | years' old  | 49.52 | 16.23                 |  |
| Nationality  | Han people=1 Ethnic minority=0  | 0.92  | 0.26                  |  |
| Marital status   | Married=1<br>Non-married=0  | 0.79  | 0.40                  |  |
| household registration                                   | Agricultural=1<br>Non-Agricultural=0  | 0.57  | 0.49                  |  |
| Educational duration                                     | Year  | 8.79  | 4.62                  |  |
| health   | Extremely/very unhealthy=1 Other=0  | 0.16  | 0.36                  |  |
| Family size  | people  | 2.89  | 1.47                  |  |
| region   | Rural area=1<br>Urban area=0  | 0.42  | 0.49                  |  |

Table 1 shows the statistical results of the variables mentioned above. It is obvious that there are some differences between social interaction, social trust, and social justice. 34.8% of samples hardly have social interaction with others; about 19.5% of samples extremely disagree or very disagree that most people are trustworthy in society; 27.3% hold that the society is completely or very not just. As for how to define economic poverty, this paper takes Wang Xiaolin's criterion [29]; namely, less than \$1.90 per person per day is in absolute poverty that is 4000 RMB each year; if calculated by the current exchange rate, 14% samples are in poverty. According to the relevant poverty criterion of the European Union, if the income per person is below 60% of the median, 40.5% of samples are in relevant poverty. Among the independent variables, 61.3% of samples'

listening levels can be above "good", while less than 40% of samples' speaking levels can be above "good". As for other controlled variables, females and males have almost the same number, and their annual age is 49.5. The Han people account for 92%, about 22% are unmarried, people with rural household registration account for 57.1%, their annual education duration is 8.79 years, about 16% of samples are very unhealthy, and 58% of samples live in urban areas<sub>o</sub>

Table 2 Variables comparative description among different groups

| variables                                   | aabsolute poverty |                       |           |                       | relevant poverty |                       |           |                       |
|---|-------------------|-----------------------|-----------|-----------------------|------------------|-----------------------|-----------|-----------------------|
|   | occurred          |                       | not occur |                       | occurred         |                       | not occur |                       |
|   | mean              | standard<br>deviation | mean      | standard<br>deviation | mean             | standard<br>deviation | mean      | standard<br>deviation |
| Social interaction                          | 0.37              | 0.48                  | 0.35      | 0.48                  | 0.37             | 0.48                  | 0.33      | 0.47                  |
| Social trust                                | 0.17              | 0.38                  | 0.20      | 0.40                  | 0.20             | 0.40                  | 0.19      | 0.39                  |
| Social justice                              | 0.25              | 0.43                  | 0.28      | 0.45                  | 0.28             | 0.45                  | 0.27      | 0.44                  |
| Listening ability<br>of Mandarin<br>Chinese | 0.40              | 0.49                  | 0.65      | 0.48                  | 0.56             | 0.50                  | 0.65      | 0.48                  |
| speaking ability<br>of Mandarin<br>Chinese  | 0.17              | 0.38                  | 0.43      | 0.50                  | 0.34             | 0.48                  | 0.43      | 0.50                  |
| gender                                      | 0.47              | 0.50                  | 0.48      | 0.50                  | 0.47             | 0.50                  | 0.49      | 0.50                  |
| age   | 55.73             | 15.61                 | 48.5<br>2 | 16.11                 | 52.49            | 15.93                 | 47.50     | 16.13                 |
| nationality                                 | 0.85              | 0.35                  | 0.94      | 0.25                  | 0.91             | 0.29                  | 0.94      | 0.25                  |
| Marital status                              | 0.80              | 0.40                  | 0.80      | 0.40                  | 0.80             | 0.40                  | 0.80      | 0.40                  |
| household<br>registration                   | 0.88              | 0.33                  | 0.52      | 0.50                  | 0.45             | 0.50                  | 0.66      | 0.48                  |
| Educational duration                        | 5.72              | 4.08                  | 9.29      | 4.51                  | 7.99             | 4.59                  | 9.34      | 4.57                  |
| health                                      | 0.32              | 0.47                  | 0.14      | 0.34                  | 0.22             | 0.41                  | 0.12      | 0.33                  |
| Family size                                 | 3.30              | 2.16                  | 2.83      | 1.32                  | 3.15             | 1.68                  | 2.72      | 1.28                  |
| region                                      | 0.78              | 0.41                  | 0.37      | 0.48                  | 0.43             | 0.50                  | 0.42      | 0.49                  |

Table 2 presents comparative results of relevant variables between absolute poverty samples and relevant poverty samples. It is uncovered that there are some differences among social interaction, social trust, and social justice. For example, the social interaction for relevant poverty samples is lower than 4% than the social interaction for those who are not in relevant poverty. Similarly, the social trust and social justice for relevant poverty samples are lower by 1% than that for those who are not in relevant poverty. Among all the variables, there is a sharp contrast between the listening ability and speaking ability in Mandarin Chinese. Specifically, the listening ability of those absolute poverty samples is lower than 25% than those who are not in absolute poverty. The speaking ability of those absolute poverty samples is lower by 26% than those who are not in absolute poverty. The listening and speaking abilities for those relevant poverty samples are lower than 9% than those not in relevant poverty. In addition, household registration, educational duration, and health also make some difference in the results, which are not to be presented in detail.

## **Modeling and Methods**

The dependent variable is set as a binary virtual variable in this paper,

Thus we made a regression analysis with logit modeling instead of OLS modeling, aiming to explore the relations among listening and speaking ability of mandarin Chinese, social interaction, social trust, social justice, and the occurrence of relevant poverty and absolute poverty.

Result= $\beta 0 + \beta 1$ language+ $\beta 2X + \epsilon 1$  (1)

Model 1 presents us with progressive results about the variables mentioned above. Language refers to the listening and speaking ability of Mandarin Chinese, and X refers to vector quantities of controlled variables. Perhaps different from OLS progressive analysis, the logit model is widely used in the regression of binary-type

discrete variables. Because the primary regression coefficient of the logit's regression is not a true linear relationship, it is necessary to make a marginal effect test. Thus, the following results are reported after the marginal effect test.

## **Empirical Results Analysis**

The marginal effect between Mandarin listening, speaking ability, and social integration
This paper made a marginal effect test between Mandarin listening, speaking ability, and social integration, and the results are shown in Table 3.

Table 3 Benchmark Progressive results

| Table 3 Benchmark Progressive results                 |   |   |  |   |   |   |  |  |
|---|---|---|--|---|---|---|--|--|
| variables   | social interaction  |   | soc  | cial trust                                    | social justice  |   |  |  |
| listening ability<br>of Mandarin                      | listening<br>ability of<br>Mandarin<br>Chinese<br>0.007<br>(0.85) | speaking<br>ability of<br>Mandarin<br>Chinese | listening<br>ability of<br>Mandarin<br>Chinese<br>0.005<br>( 0.46) | speaking<br>ability of<br>Mandarin<br>Chinese | listening<br>ability of<br>Mandarin<br>Chinese<br>0.028**<br>(2.49) | speaking<br>ability of<br>Mandarin<br>Chinese |  |  |
| Chinese<br>speaking ability<br>of Mandarin<br>Chinese |   | 0.016**<br>( 2.52)                            |  | 0.008<br>( 0.81)                              |   | 0.003<br>( 0.26)                              |  |  |
| age   | 0.004**   | 0.001***                                      | -0.004***  | -0.004***                                     | -0.003***   | -0.004***                                     |  |  |
|   | ( -4.73)  | ( 0.61)                                       | ( -11.07)  | ( -11.01)                                     | (-8.97)   | (-9.32)                                       |  |  |
| gender  | -0.038*   | 0.011**                                       | -0.008   | -0.008  | 0.004   | 0.003   |  |  |
|   | (-1.65)   | (6.22)  | ( -0.91)   | ( -0.88)                                      | ( 0.44)   | ( 0.34)                                       |  |  |
| nationality   | 0.009   | 0.005   | 0.011  | 0.011   | 0.038**   | 0.04**  |  |  |
|   | ( 0.30)   | ( 2.10)                                       | ( 0.64)  | ( 0.66)                                       | (1.98)  | ( 2.08)                                       |  |  |
| household   | -0.005  | -0.014  | -0.008   | -0.02   | -0.005  | -0.008  |  |  |
| registration  | ( 0.13)   | ( -0.96)                                      | ( 0.43)  | ( -1.63)                                      | ( -0.37)  | ( -0.57)                                      |  |  |
| Marital status  | -0.024<br>( -0.84)  | -0.003<br>(-1.05)                             | -0.006<br>( 0.5)   | 0.006<br>( 0.55)                              | 0.041*** (3.2)  | 0.042*** (3.23)                               |  |  |
| Educational duration                                  | -0.001  | -0.002***                                     | -0.005***  | -0.005***                                     | -0.004**  | -0.003*                                       |  |  |
|   | ( 0.42)   | (-3.22)                                       | (-3.43)  | (-3.5)  | ( -2.52)  | (-1.91)                                       |  |  |
| health  | 0.049**   | 0.023***                                      | 0.074***   | 0.074***                                      | 0.09***   | 0.089***                                      |  |  |
|   | (6.85)  | ( 6.87)                                       | ( 6.18)  | ( 6.19)                                       | ( 6.67)   | ( 6.59)                                       |  |  |
| Family size   | -0.009  | -0.002  | 0.006**  | 0.006**                                       | 0.005   | 0.005   |  |  |
|   | ( -185)   | (1.35)  | ( 2.15)  | ( 2.15)                                       | (1.38)  | (1.35)  |  |  |
| region  | -0.037***   | -0.024***                                     | -0.038***  | -0.038***                                     | -0.062***   | -0.062***                                     |  |  |
|   | (-6.3)  | (-3.22)                                       | (-3.27)  | (-3.24)                                       | (-4.8)  | (-4.81)                                       |  |  |

From Table 3, as for social interaction, especially the listening and speaking ability of Mandarin Chinese, the regression coefficients are all positive, indicating that it has a positive effect on promoting social interaction, social trust, and social justice. Under the same conditions, people with better listening ability in Mandarin Chinese have obviously 0.7% higher social interaction, 0.5% higher social trust, and 2.8% social justice compared with those with poor listening ability in Mandarin Chinese. People with a better speaking ability in Mandarin Chinese have obviously 1.6% higher social interaction, 0.5% higher social trust, and social justice.

**Table 4** Benchmark Progressive results

| Table 4 Benchmark Progressive results    |   |  |   |   |  |  |  |  |
|--|---|--|---|---|--|--|--|--|
| Variables                                | Absolut   | te poverty                                 | Relevant poverty  |   |  |  |  |  |
| listening ability of<br>Mandarin Chinese | listening ability<br>of Mandarin<br>Chinese<br>-0.036***<br>(-4.79) | speaking ability<br>of Mandarin<br>Chinese | listening ability<br>of Mandarin<br>Chinese<br>-0.056***<br>(-5.02) | speaking ability of<br>Mandarin Chinese |  |  |  |  |
| speaking ability of<br>Mandarin Chinese  | ,   | -0.048***<br>( -5.24)                      | ,   | -0.066***<br>( -5.81)                   |  |  |  |  |
| age                                      | 0.002***  | 0.002***                                   | 0.001***  | 0.001***                                |  |  |  |  |
|  | (7.43)  | (7.42)                                     | (3.78)  | (3.73)                                  |  |  |  |  |
| gender                                   | 0.0120  | 0.0120                                     | 0.017*  | 0.0150                                  |  |  |  |  |
|  | ( 1.64)   | (1.6)                                      | (1.73)  | (1.52)                                  |  |  |  |  |
| nationality                              | -0.06***  | -0.064***                                  | -0.084***   | -0.088***                               |  |  |  |  |
|  | (-5.55)   | (-5.85)                                    | (-4.61)   | ( -4.88)                                |  |  |  |  |
| household registration                   | 0.095***<br>(7.55)  | 0.092*** (7.3)                             | -0.462***<br>( -27.14)  | -0.466***<br>( -27.31)                  |  |  |  |  |
| marital status                           | -0.03***  | -0.033***                                  | -0.045***   | -0.049***                               |  |  |  |  |
|  | (-3.22)   | (-3.46)                                    | (-3.47)   | (-3.75)                                 |  |  |  |  |
| educational duration                     | -0.007***   | -0.007***                                  | -0.023***   | -0.023***                               |  |  |  |  |
|  | (-6.39)   | (-6.39)                                    | ( -15.07)   | (-14.8)                                 |  |  |  |  |
| health                                   | 0.059***  | 0.059***                                   | 0.102***  | 0.101***                                |  |  |  |  |
|  | (7.05)  | (7.03)                                     | (7.19)  | (7.18)                                  |  |  |  |  |
| family size                              | 0.026***  | 0.027***                                   | 0.08***   | 0.08***                                 |  |  |  |  |
|  | ( 10.83)  | ( 10.95)                                   | ( 19.06)  | ( 19.07)                                |  |  |  |  |
| region                                   | 0.091***  | 0.09***                                    | 0.179***  | 0.177***                                |  |  |  |  |
|  | ( 9.6)  | ( 9.44)                                    | ( 11.69)  | (11.57)                                 |  |  |  |  |
| interference                             | -4.292***<br>( -12.77)  | -3.686***<br>( -12.76)                     | 0.616***<br>(3.13)  | 0.625*** (3.19)                         |  |  |  |  |

Table 4 reports the marginal effect of the listening and speaking ability of Mandarin on poverty reduction, from which we can see that the coefficients of both Mandarin listening and speaking ability are negative. The statistics indicate that with controlled variables, improving Mandarin listening and speaking ability has a suppressive effect on poverty. Specifically, in this research sample, the probability of absolute poverty decreases by 3.6 percentage points, and the probability of relevant poverty decreases by 5.6 percentage points for those who speak Mandarin well compared to those who speak it poorly; similarly, the probability of relevant poverty decreases by 4.8 percentage points and the probability of relevant poverty decreases by 6.6 percentage points for those who speak Mandarin well compared to those who speak it poorly.

Table 5 Benchmark Progressive results

| Table 5 Benchmark Progressive results |                      |                       |                      |                       |                      |                       |  |  |
|---------------------------------------|----------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|--|--|
| variables                             | social interaction   |                       | socia                | ll trust              | social justice       |                       |  |  |
|                                       | absolute<br>poverty  | relevant<br>poverty   | absolute<br>poverty  | relevant<br>poverty   | absolute<br>poverty  | relevant<br>poverty   |  |  |
| Absolute poverty                      | -0.054***<br>(-3.32) |                       | -0.003<br>( -0.19)   |                       | -0.013<br>(-1.31)    |                       |  |  |
| Relevant<br>poverty                   |                      | -0.013<br>( -0.89)    |                      | -0.036***<br>(- 3.14) |                      | -0.021*<br>(-1.93)    |  |  |
| age                                   | 0<br>( 0.16)         | -0.004***<br>(-11.08) | -0.004***<br>(-9.31) | 0<br>( 0.35)          | -0.004***<br>(-11.2) | -0.004***<br>(-9.43)  |  |  |
| gender                                | 0.041***<br>(3.79)   | -0.008<br>( -0.92)    | 0.004<br>( 0.36)     | 0.04***<br>(3.76)     | -0.008<br>(-0.95)    | 0.003<br>( 0.33)      |  |  |
| nationality                           | 0.024<br>(1.21)      | 0.01<br>( 0.59)       | 0.04**<br>( 2.07)    | 0.023<br>(1.13)       | 0.012<br>( 0.73)     | 0.042**<br>( 2.18)    |  |  |
| household registration                | -0.019<br>( -1.33)   | -0.02*<br>( -1.68)    | -0.007<br>(-0.54)    | 0<br>(-0.02)          | -0.015<br>( -1.18)   | 0.002<br>( 0.15)      |  |  |
| marital status                        | 0.001<br>( 0.07)     | 0.005<br>( 0.45)      | 0.042***<br>(3.23)   | 0<br>(-0.01)          | 0.006<br>( 0.57)     | 0.043*** (3.33)       |  |  |
| educational<br>duration               | -0.001<br>( -0.62)   | -0.004***<br>(-3.49)  | -0.003**<br>(-2.05)  | 0<br>(-0.26)          | -0.004***<br>(-3.13) | -0.002<br>( -1.63)    |  |  |
| health                                | 0.095*** ( 6.5)      | 0.075***<br>( 6.22)   | 0.09***<br>(6.59)    | 0.095***<br>(6.55)    | 0.073***<br>( 6.02)  | 0.087***<br>(6.41)    |  |  |
| family size                           | -0.006<br>( -1.53)   | 0.007**<br>( 2.26)    | 0.005<br>(1.36)      | -0.007*<br>( -1.77)   | 0.005*<br>(1.76)     | 0.003<br>( 0.93)      |  |  |
| region                                | -0.095***<br>(-6.66) | -0.037***<br>(-3.13)  | -0.061***<br>(-4.73) | -0.094***<br>(-6.63)  | -0.04***<br>(-3.39)  | -0.065***<br>( -4.99) |  |  |
| interference                          | -0.602***<br>(-3.36) | 0.001                 | -0.317<br>(-1.62)    | -0.698***<br>(-3.83)  | -0.057<br>( -0.26)   | -0.387*<br>( -1.96)   |  |  |

Table 5 reports the marginal effects of poverty on social interaction. It also shows that the samples with the occurrence of absolute and relevant poverty have negative coefficients on the three dimensions of social interaction, implying a certain restriction effect on the three dimensions of social interaction. Thus, the frequency of social interaction, social trust, and social justice is reduced to some extent after the occurrence of poverty. Compared with those with the occurrence of absolute poverty and those without the occurrence of relevant poverty, the frequency of social interactions decreases by 5.4% and is significant at the 99% level. Social trust decreases by 0.3 percentage points, and social justice decreases by 1.3 percentage points. Similarly, comparing with those with the occurrence of absolute poverty and those without the occurrence of relevant poverty, the frequency of social interactions decreases by 1.3% percentage points, and social trust decreases by 3.6 percentage points and is significant at the 95% level. Social justice decreases by 2.1 percentage points and is significant at the 95% level.

The above regression analysis shows the social integration function of Mandarin listening and hearing ability. Specifically, Mandarin speaking ability can enhance social interaction, and Mandarin speaking ability can enhance social justice, which has shown significant results. At the same time, enhancing the ability to listen and speak Mandarin can significantly suppress poverty while reducing absolute poverty. Social interaction will increase by 5.4 percentage points if absolute poverty decreases each point. Meanwhile, social trust can increase by 3.6 percentage points. Moreover, the probability of increasing social injustice can increase by 2.1 percentage points.

#### Discussion

In this paper, the relationship between Mandarin proficiency and poverty in different dimensions is explored by

using the data of the CGSS (2015) China Comprehensive Social Survey, and the poverty reduction effect and its mechanism of Mandarin are empirically studied in three dimensions: social interaction, social equity, and social trust

Firstly, Mandarin as the national language positively impacts promoting social interaction, social trust, and social justice. The above research findings show that the poverty reduction mechanism is based on social interaction, social trust, and social equity perspectives. Participation in social interaction activities has become an important indicator to measure social capital. Social interaction can help individuals establish social networks through personal contact and interaction with others, which is conducive to the accumulation of their own social capital, and reduce the cost of information collection, cooperation and supervision through good social interaction so that the cost saved can not only directly increase economic profits, but also improve economic operation efficiency and increase output. Through social interaction, individuals can also increase social participation, which is conducive to exerting personal functions, realizing value, and realizing overall human development. Social trust is the cornerstone of human economic activities, mainly by enhancing mutual trust, promoting cooperation, and reducing transaction costs, thereby promoting economic development. Suppose the regional social trust level is high, and then easy to reach cooperation. In that case, it is conducive to stimulating economic vitality, increasing market transaction volume, and expanding the scale of economic aggregates so that the actual economic aggregate is close to the potential optimal economic aggregate. On the contrary, if the regional social trust level is low, opportunistic behavior prevails, expectations are poor, the defense psychology of both sides of the cooperation is stronger, and the cooperation process is more difficult. As a result, there is less cooperative behavior and less market activity, and the economic aggregate is well below the potential optimal level. Social fairness, as the core value pursuit of socialism, is to build a solid value foundation for the community of common destiny of the Chinese nation; social fairness is published in coordinating the interests of economic individuals, stimulating laborers to develop production, improving the enthusiasm and expectation of participating in economic activities, improving the level of consumption and living standards, is the guarantee for improving economic efficiency, is conducive to coordinating the interesting relationship between people, achieving social harmony, and promoting common prosperity.

The findings of this study are consistent with studies that have found that social ties are crucial to building trust. At the very least, they can reduce the level of mistrust, which results in a more equitable society. When majorities interact face-to-face with diverse individuals, racial and ethnic differences become less concerning [30, 31]. The role of language in social interaction is central [32]. The basis of human economic activity is social trust, involving mutual trust and cooperation. As a result, transaction costs are reduced, thereby contributing to economic growth. [33]. Through social interaction, individuals can also increase social participation, which is conducive to exerting personal functions, realizing value, and realizing overall human development.

Secondly, improving Mandarin speaking and listening skills has a suppressive effect on poverty. In order to maximize the poverty reduction effects of Putonghua proficiency, it is pertinent to consider the perspectives of social interaction, social trust, and social fairness. It is found in this study that Putonghua has a significant role to play in promoting social interaction, social trust, and social fairness. Second, improving Mandarin listening and speaking skills has a dampening effect on poverty.

This study confirms the findings of the study in West Africa that language plays an important role in national development and is, therefore, an important tool in poverty reduction. [34]. As the language capital itself is an economic resource, it can be tapped to provide employment opportunities for translators, interpreters, teachers, and publishers as a whole. The indigenous language capital must be developed in order to distribute resources evenly throughout the country [35]. It is a long-established fact of modern life that economic efficiency, labor productivity, economic growth, and development can be either stimulated or hampered by language policy and language practice [36]. Whether it is physical or human resources, all resources are valuable if society recognizes their value, manages them appropriately, and uses them efficiently. An effective plan can transform the language sector into a viable industry capable of generating a large number of jobs [37].

Finally, the samples of absolute poverty and relative poverty have negative correlations in the three dimensions of social integration, suggesting the inhibition effect and risk of poverty on social integration. The absolute and relative poverty samples were negatively correlated in all three dimensions of social integration, suggesting that poverty has inhibitive effects and risks on social integration. It should be pointed out that the statistical results of the above correlations are only probabilistic and not a causal relationship. Although the correlation between variables is significant, it does not mean that manipulating one variable necessarily results in the desired change in the other variable. The above research findings show that language poverty alleviation is not only a single poverty alleviation measure in the economic sense. It has a positive role in promoting social interaction, social

trust, and social equity and is conducive to national integration.

## **Implications**

This research provides insight with empirical evidence of how Mandarin can play an active role in poverty alleviation in China. Language as economic capital has a direct positive influence on poverty reduction. Low-income ethnic and regional families can be helped by government investment in economically disadvantageous regions to improve their proficiency in Mandarin. The government should improve the mechanism to reduce regional differences by investing to improve the mandarin proficiency level of minorities and ethnic regions. It will help enhance their social integration by improving social interaction, social trust, and social fairness.

## Limitations

The study did not cover all the samples in the CGSS (2015) database, reducing its representativeness to some extent. In addition, the authors have limited knowledge of alternative theories in politics, demography, and sociology that would provide a more comprehensive reflection of the role of Mandarin in enhancing social integration. Future studies will build a stronger theoretical framework and employ more accurate mathematical models by tracking more targeted samples to test the mandarin impact on poverty alleviation by improving social integration factors.

#### Conclusion

This paper broadens the analytical dimension of language poverty alleviation, and the research results have reference significance for optimizing the language poverty alleviation path in the post-poverty alleviation era. The results of this study remind us that in addition to paying attention to the relationship between the national lingua franca and economic development, we should pay more attention to the interaction between language and social interaction, social integration, and other development factors. There is also a need to comprehensively consider the synergistic development of political, economic, cultural, and social development factors and the improvement of citizens' language ability. Therefore, it is necessary to re-examine language's position and role in poverty alleviation. Its contribution to poverty governance in our country should be correctly evaluated and given due attention.

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