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Marketization and Market Capacity: The Formation of Middle Class in China —An Empirical Study in Shanghai, Beijing and Guangzhou

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In the post-reform China, the middle class remains relatively weak despite its expanding size, which is a basic structural feature of the Chinese society. How to develop the Chinese middle class has become one important issue in the middle-class research. It is suggested that three approaches can be relied on to develop Chinese's middle class: education, expertise, and the market. Based on the three approaches, as well as data from the Survey of Living Conditions of Residents in Megacities, this study analyzes how the middle class is formed in China from the perspective of marketization and market capacity.

Keywords: *middle class, formation mechanism, marketization, market capacity*

Introduction

China has been undergoing a dual transition from the planned to the market economy, and from the traditional agrarian to the modern industrial society ever since its reform and opening up. Thanks to the social and institutional transformation, the long-rigid social structure has begun to be relaxed, and remarkable changes have been observed in people's occupation, identity and social status. The middle class (or intermediate class, intermediate stratum) has emerged as a new social stratum. This class has been expanding in recent years, and it is still relatively weak as a whole, which is another characteristic of the social structure in China.

It is widely believed that a mature and large middle class will play a positive role for social stability, economic development and political democratization (Goldthorpe 1982; Kerr et al. 1973). Therefore, an unduly undersized middle class will do no good to the harmonious and stable development of China. How to develop the middle class has become an important issue for the middle class research in China.

Most of the existing research discusses the formation and development of the Chinese middle class at a macro level. Specifically, economic, political and cultural factors jointly contribute to the creation and growth of the middle class in China. The open and just political environment and the readjusted state-society relations have facilitated the emergence of the public sphere within a certain scope. The sustainable economic growth, economic restructuring, and the expanded tertiary industry have significantly facilitated the process of marketization and urbanization. Cultural diversity, the transition from elite to mass education, and the advanced science and technology have laid a cultural and spiritual foundation for the rise of the middle class (Zhou Xiaohong 2003; Li Chunling 2011). The macro-level analysis can well describe the background of the emergence of the Chinese middle class, but the middle-level mechanism analysis is also very important. Li Qiang (2015) proposes three approaches to the formation of the Chinese middle class, namely education, expertise, and market, and provides a preliminary analysis of how it forms. This analysis, however, is a description of the occupational structure of the middle class in China, and is not statistically tested. In contrast, we use the survey data of the middle class in three megacities of China, i.e. Beijing, Shanghai and Guangzhou, to test with statistical models the approaches to the formation of the middle class, and then analyze the formation mechanism of the middle class in China's

megacities.

It should be noted that the middle class is not evenly distributed in China. It concentrates in economically developed regions, especially megacities such as Beijing, Shanghai and Guangzhou. The middle class in such regions has a longer history and a larger size. Take Shanghai for example. Qiu Liping (2014), after studying the structural transition of the Shanghai society in the 30-plus years since reform and opening up, holds that the non-standard pyramid structure in Shanghai has turned into a standard pyramid, in which the middle class dominates in downtown areas. Therefore, it is of great significance for us to investigate the formation mechanism of the middle class in megacities in order to develop this class across China.

Do the three approaches exist in the formation of the middle class in China's megacities? How do they play a role in this process? Is it possible to establish a holistic theoretical framework to analyze the impacts of the three approaches? These are research questions to be examined in this paper.

Literature Review and Research Hypotheses

Definition of the Middle Class

Since its inception, the concept of the middle class has undergone a long process of evolution and its implications have varied with social relations. Therefore, it is necessary to define the middle class based on the nature and composition of a specific society. In ancient Greek, the Greek term referred to the social class with a middle level of wealth in the city-state, a merchant class. This intermediate status made it a stabilizer of the city state. After the formation of cities and towns in the Middle Ages, it meant the industrial and business class whose political status was disproportionate to their wealth. In the capitalist society, however, the middle class has become an occupational concept which is closely connected with the income and lifestyle of specific occupational groups.

Different understandings will lead to different definitions of the middle class. For neo-Marxism class theorists, class relationship is used to define the middle class (Dahrendorf 1959; Poulantzas 1973; Carchedi 1975; Wright 1976); for neo-Weberian class theorists, it is market capacity (Lockwood 1958; Giddens 1975; Goldthorpe 1987; Erikson and Goldthorpe 1992); and for post-modernist and culturalist theorists, it is consumption and subjective identity (Boudrieu 1984). Li Peilin and Zhang Yi (2008) divide the existing

standards used to define the middle class into objective and subjective indicators. Objective indicators include occupational status, income, asset, control over inferiors, professional ranking, education, reputation, consumption, ethnicity and blood. Subjective indicators mean external assessment and self-identity. Now, comprehensive indicators have been increasingly used to define the middle class, involving income, education, occupation, and things alike.

In this study, occupation is adopted to define the middle class. On one hand, occupation has always been regarded as the most important indicator in defining the middle class. As Qiu Liping (2001) argues, occupational status is an indicator of social stratification; it indicates not only social prestige, but also social status, involving power, wealth and reputation. On the other hand, we try to dialogue with Li Qiang, therefore we adopt a method consistent with his, in order to test more directly and clearly the impacts of the three approaches he proposes on the formation of the middle class. In Li Qiang's (2010) opinion, occupational status is the foremost kind of social status; the middle class is first of all made up of occupational groups positioned at the middle level in the society. In accordance with facts around the world, the middle class mainly consists of four occupational groups: management personnel, professionals, office staff, business people and service staff. In fact, nevertheless, employees in the service departments as a whole do not enjoy a decent enough social status to be included into the middle class (Li Qiang 2005). Therefore, the middle class in this paper includes only management personnel, professionals, office staff, and business people. It is noteworthy that the middle class in this study is not a strictly defined class or stratum, it can be interchanged with the intermediate class and the intermediate stratum.

Market Capacity and the Middle Class

Giddens (1975) developed the concept of market capacity, which means the various properties that individuals bring to the market to increase their bargaining power. According to him, there are three kinds of important market capacity: ownership of property in the means of production, possession of educational or technical qualifications, and possession of manual labor power. These provide the foundation for three basic classes in a developed capitalist society: the upper, middle, and lower or working class. Obviously, the possession of educational or technical qualifications as a market capacity plays an important role in the formation of the middle class.

In this sense, the two approaches of formal education and expertise proposed by Li Qiang fall into the category of market capacity.

The approach of formal education refers to individuals' attainment of the middle class status by means of higher education. As an achieved factor, education stands for human capital level, measures the competitiveness of people in the labor market, and thus influences the attainment of occupational status. As argued by Mills (1951), "mass education has also been one of the major social mechanisms of the rise of the new middle class occupations, for these occupations require those skills that have been provided by the education system."

It is widely believed by Chinese scholars that the expanding higher education has provided the foundation for the rise of the Chinese middle class (Zhou Xiaohong 2005; Li Chunling 2011). However, previous studies usually regard those who received higher education as a highly homogenous group, and neglect the impact of stratification inside higher education on individuals' occupational status attainment. This stratification, however, is noticed by Li Qiang. He argues that though higher education is an important approach for individuals to access the middle class, it is relatively easier for graduates of famous universities to achieve this goal, while it is much more difficult for junior college students to do so. Therefore, we put forward the following research hypotheses:

> *Hypothesis 1*: Education has an impact on individuals' attainment of the middle class status.
> *Hypothesis 1a*: Other factors being constant, the higher the education level is, the easier it is for an individual to access the middle class.
> *Hypothesis 1b*: Other factors being constant, it is easier for university graduates, compared with junior or vocational college students, to join the middle class.

The approach of expertise involves two kinds of people: one is professionals, such as professors, lawyers, doctors, and engineers; the other is technicians, mainly technical workers. In this study, occupational status is used to define the middle class, professionals (or technicians) are categorized as the middle class, and technical workers are non-middle class.[1] Given this,

[1] In contemporary China, technical workers are part of the working class and have a relatively inferior social status, therefore they are regarded as non-middle class. Another indicator for the market approach measurement is professional title, technical rank or certificate, which, however, is not included in the survey questionnaire. Therefore, it is impossible to investigate the specific

we will not discuss the effects of the approach of expertise on the rise of the middle class.

Marketization and the middle class

Zhou Xiaohong (2005) holds that increased marketization has contributed to the growth of the Chinese middle class. The increased marketization will accelerate class differentiation; the policy of "allowing some people to become rich first" will lead to an expanded middle class. The market approach to the formation of the middle class means that people gain profits from the market and achieve a higher occupational status through business management, operation and marketing. Li Qiang argues that market has been the major approach to the expansion of the Chinese middle class over the last decade. It includes the commodity, the labor and the financial market. He focuses on the mechanism of the middle class formation from the perspective of the commodity market, i.e. the rapid increase in the number of commodity traders. In this paper, we focus on the labor market. We believe that the labor market has an impact on the formation of the middle class. The analysis of the impact of marketization on the middle class formation depends on the operationalizaiton of the concept of "marketization."

The measurement of marketization in the existing research mainly involves the comparison between different time points, sectors, regions and personal characteristics, and the comparison of personal characteristics has to be based on the test of time, sector and region (Zhang Wenhong and Zhang Li 2012). In this study, we also measure marketization in the dimensions of time, sector and region. As for time, we define the time of the first employment of interviewees as at different phrases of marketization based on the stages defined by Li Xiaoxi (2009). The dimension of sector mainly involves ownership and industry. It essentially reflects a division in the labor market. The most commonly used method is to investigate ownership. In recent years, however, as the market-oriented reform deepens, the gap between monopoly and open industries has begun to attract increasing academic attention. As argued by Bian Yanjie and Zhang Zhanxin (2002), though marketization implies the access of non-state-owned enterprises into the production field, monopoly control of the state over some important industries (e.g. industries providing nationwide public goods, closely related to economic macro-control, or relevant to political and

influence of this indicator.

ideological control) has resulted in the segmentation of open and monopoly industries in China. Therefore, generally speaking, state monopoly sectors control more resources, and their occupational status is higher than that of non-monopoly sectors. In the dimension of region, we directly measure the marketization levels of different regions or cities at the same time point, and compare horizontally the difference between different cities. It is generally believed that the more developed the market is, the more likely it is for the residents to achieve a higher class status. Based on the above analyses, we make the following research hypotheses:

Hypothesis 2: Marketization has an impact on the middle class formation.
Hypothesis 2a: Other factors being constant, the more developed the market is during the first employment of an individual, the more likely it is for him/her to access the middle class.
Hypothesis 2b-1: Other factors being constant, it is more likely for individuals employed in state sectors, compared those in non-state sectors, to access the middle class.
Hypothesis 2b-2: Other factors being constant, it is more likely for people employed in monopoly industries than those in non-monopoly industries to access the middle class.
Hypothesis 2c: Other factors being constant, it is more likely for an individual in cities with a more developed market to access the middle class.

Research Design

Data source

This study is based on data from the Survey of Living Conditions of Residents in Megacities in Beijing, Shanghai and Guangzhou conducted by the Shanghai Institute of Social Science Survey of Shanghai University during the period from November 2014 to October 2015. A two-stage sampling was used in this survey. At the first stage, we did a regular map sampling in order to obtain representative population samples from different classes and define the dividing line for the middle class population. We selected one adult from each of the 20 households selected from each of the 50 communities selected as samples in each city. In total 1,000 samples were obtained in each city. At the second stage, an adaptive cluster sampling targeting at the middle class was used in order to get representative middle class samples. 1,000 samples

were obtained in each city at this stage. We got about 6,011 samples at the end of the survey. This paper mainly investigates the mechanism of the middle class formation, in which occupation is used to define the middle class. Therefore, we exclude cases of students and people without employment experience. Due to some missing data, this study is finally conducted based on the 2,781 samples from the first stage in Beijing, Shanghai and Guangzhou.

Variables

Dependent variables in this paper are binary variables. Management personnel, professionals, office staff, and business people are integrated as the middle class and assigned the value of 1. Service staff, production workers, transport workers, manual workers and employees in agriculture, forestry, animal husbandry, and fishing are regarded as non-middle class and assigned the value of 0. Defined by occupation, the middle class accounts for 64.98% in Beijing, Shanghai and Guangzhou (see Table 1). In terms of occupational classification, business people hold the largest share (31.54%), followed by professionals (30.33%) and office staff (24.02%); management personnel have the lowest proportion(14.11%).

Market capacity and marketization are independent variables. Market capacity is operationalized in this paper as the level of education. To better compare the impact of different education levels on the middle class formation, we make the following differentiations: junior high school and below, vocational school/technical secondary school, senior high school, vocational high school, junior college, university undergraduate, and university postgraduate and above. We also create six dummy variables accordingly, with junior high school and below as the reference variable. To simplify the full model, we further create the variable of years of education.

TABLE 1
OCCUPATIONS OF THE MIDDLE CLASS IN BEIJING, SHANGHAI AND GUANGZHOU

Category	Frequency	Percentage (%)
Middle class	1,807	64.98
Non-middle class	974	35.02
Total	2,781	100

Specifically, below primary school=4, primary school=6, junior high school=9, senior high school/vocational high school/technical secondary school/vocational school=12, junior college=15, university undergraduate =16, and university postgraduate and above=20.

The existing measurement of marketization mainly involves the comparison between different sectors, regions and time points. These comparisons are operationalized in this paper as follows:

In reference to the classification of China's marketization process by Li Xiaoxi (2009) and Zhang Wenhong and Zhang Li (2012), we differentiate different stages of marketization based on the time of interviewees' first employment: Prior to 1978, it is the redistribution period. we term the time prior to 1978 as the redistribution period. From 1978 to 1991, the early reform period witnessed the transformation from an economic system with "the planned economy playing a leading role supplemented by the market" to a "planned commercial economy" (dual-track system). Overall, the planned economy still dominated. In the period 1992-2001, the socialist market economy was established preliminarily, representing the first real step of marketization. This period saw the most changes in China. From 2002 to 2009, it is a period when the socialist market economy was improved, during which China joined the WTO, its economic system expanded globally, and its economy was hit by the global financial crisis in 2008. From 2010 to 2015, China's socialist market economy was further improved.

The dimension of sector involves the types of ownership and industry. Ownership of the last work unit of an interviewee is defined as a binary variable: 1=state sectors, including Party and government agencies, state-owned enterprises, and public institutions; 0=non-state sectors, including collective enterprises, self-employed businesses, private enterprises, foreign/jointly funded enterprises, corporate enterprises and others. The type of industry is also defined as a binary variable, with monopoly and semi-monopoly industries=1, and non-monopoly industries=0. Monopoly and semi-monopoly industries include electricity, gas, water production and supply, transportation, warehousing, post and telecommunication, finance, insurance, housing, health, sports, welfare, science and technology industries, as well as government agencies, Party organizations, and social organizations. Non-monopoly industries include agriculture, forestry, animal husbandry, fishing, mining, manufacturing, construction, mineral exploration, water conservancy, wholesale and retail, food and social service industries.

There are different approaches to the measurement of regional marketization. The first is to take region or city as a control variable, and

TABLE 2
DESCRIPTIVE STATISTICS OF VARIABLES

Variables	Percentages (%)	Samples	Variables	Percentages (%)	Samples
Gender			Ownership		
Male	48.47	1346	State sector	42.95	1182
Female	51.53	1431	Non-state sector	57.05	1570
Marital status			Industry		
Married	76.07	2108	Monopoly industry	32.34	849
Single	23.93	663	Non-monopoly industry	67.66	1776
Education			Stage of marketization		
Junior high school and below	29.19	810	Prior to 1978	17.11	464
Vocational school/ technical secondary school	9.48	263	1978-1991	23.67	642
Vocational high school	2.27	63	1992-2001	18.07	490
Senior high school	16.22	450	2002-2009	22.90	621
Junior college	17.69	491	2010-2015	18.25	495
University undergraduate	20.94	581			
University postgraduate and above	4.22	117			

Variables	Maximum	Minimum	SD	Mean	Samples
Age	65	18	13.37	43.67	2,767
Years of education	20	4	3.49	12.59	2,775
Log of individual annual income	16.11	7.31	0.82	10.88	2,596

compare the coefficients based on a rough estimation of the levels of marketization in different cities. A second way is to use local economic growth rate as an indicator for marketization. Some scholars also try the indicator of the proportion of other kinds of local economic population to

the whole employed population. This paper adopts the first measurement approach. In accordance with the 2009 ranking of marketization of all the provinces in China (Fan Gang et al. 2010), the scores of the provinces in which Beijing, Shanghai, and Guangzhou are located are: Shanghai (10.96), Guangdong (10.42) and Beijing (9.87).

The control variables in this study include gender (0=female, 1=male), age (years, from 18 to 65), marital status (0=single, 1=married, For the convenience of calculation, "single" is defined to include the status of being single, divorced, or widowed), and individual annual income (the natural logarithm of the 2014 individual annual income). Table 2 shows the descriptive statistics of the variables.

Research Findings

This paper adopts the binary logistic regression method. Model 1 is a benchmark model only involving control variables. Model 2 investigates the impact of market capacity on the middle class formation. Models 3-6 discuss the influence of marketization on the formation of the middle class. Model 7 is a full model including all the independent variables. The chi-square values of all the models are highly statistically significant ($p<0.001$) under the corresponding degrees of freedom.

The impact of control variables on the middle class formation

Model 1 shows the impact of control variable on the formation of the middle class. Gender plays a significant role in the middle class formation. The coefficient of this variable is negative, indicating that compared with males, females are more likely to join the middle class. The coefficient of age is also negative, which means that younger people are more likely to access the middle class. It is argued by Chen Guangjin (2013) that the reform since the mid-1990s has given rise to an unfavorable market environment to older people and a more favorable environment to younger people. Li Chunling (2011) believes that it can be explained by the development of emerging industries, which provide more opportunities and more convenient ways for young people's upward social mobility. Income has a significant impact on the middle class formation ($P<0.001$): the higher the income level is, the more likely can a person access the middle class. In the previous studies, it is widely believed that occupation influences income, not the vice versa. In this study,

income is incorporated into the model, given the potential important influence of income as a significant indicator for socio-economic status on an individual's access to the middle class. Marital status has no significant influence on the access to the middle class.

The impact of market capacity on the middle class formation

Model 2 investigates the relationship between different levels of education and the middle class formation. The data show a remarkable gap in the influence of different education levels on the access to the middle class; the gap is particularly significant between interviewees receiving higher education and those not. Statistical significance exists for the education levels of vocational school/technical secondary school, vocational high school, senior high school, junior college, university undergraduate, and university postgraduate and above, the exponent values being[2] 2.438, 3.762, 2.010, 4.821, 13.662, and 18.156, respectively. Compared with interviewees receiving only education of junior high school and below, the incidence rate for accessing the middle class is, respectively, 2.438, 13.662, and 18.156 times higher for those receiving vocational school/technical secondary school, university undergraduate and postgraduate and above education. Overall, education is positively correlated to the middle class formation: the higher the education level is, the more likely it is to access the middle class, which verifies Hypothesis 1a. It is noteworthy that a gap exists even inside the group receiving higher education (including vocational high school, junior college, university undergraduate and postgraduate and above); the gap is especially obvious between junior college students (including vocational college students and junior college students) and university undergraduates and postgraduates. Hypothesis 1b is therefore verified.

The statistics of the National Bureau of Statistics of China show that in 2014, there were 10.0663 million junior college students, accounting for more than one third of the total college and university students (27.3247 million). In accordance with Chen Wei and Wuriniqiqige (2016), vocational education had a return advantage because these students were more likely to take professional jobs when the higher education was undersupplied. The higher education expansion, however, has led to a relative decrease in the value of vocational education diploma. As a result, compared with university undergraduates and postgraduates, junior college students encounter more

[2] The "the exponent values being" will be abbreviated as "exp value" in the rest of this paper.

TABLE 3
THE BINARY LOGISTIC REGRESSION MODEL OF THE IMPACT OF MARKET CAPACITY ON THE MIDDLE CLASS FORMATION

		Model 1	Model 2
Market capacity 0=Junior high school and below	Vocational school/ technical secondary school		0.891*** (0.159)
	Vocational high school		1.325*** (0.313)
	Senior high school		0.698*** (0.129)
	Junior college		1.573*** (0.149)
	University undergraduate		2.615*** (0.193)
	University postgraduate and above		2.919*** (0.474)
Control variable	Male (0=female)	-0.410*** (0.092)	-0.392*** (0.098)
	Age	-0.025*** (0.004)	-0.003 (0.004)
	Married (0=single)	-0.077 (0.112)	0.011 (0.120)
	Log of individual annual income	0.934*** (0.072)	0.601*** (0.074)
Constant		-8.067*** (0.812)	-6.515*** (0.831)
X^2		371.70	664.03
Pseudo R^2		0.1119	0.2004
Samples		2,572	2,567

Note: (1) Standard deviations in parentheses. (2) *** p<0.001, ** p<0.01, * p<0.05.

obstacles when they want to join the middle class after graduation.

The impact of marketization on the middle class formation

Models 3-6 investigate the influence of marketization on the formation of the middle class (see Table 4). Given the high relevance of age and the time of first employment, we remove the age variable in Models 3 and 6.

Model 3 show that the time of marketization has little explanatory power to account for the middle class formation, with a pseudo coefficient of determination R^2 of 0.1043. Model 6 indicates that compared with interviewees who got their first job in the pre-reform era, it is easier for those whose first employment occurred in the post-reform era to access the middle class. Nevertheless, the different stages in the post-reform era have different impacts on the middle class formation: no statistical significance is observed for 1978-1991; but statistical significance exists for 1992-2001, 2002-2009, and 2010-2015, with exp values being 1.621, 2.062, and 1.743, respectively. In another word, compared with those first employed in the pre-reform era, it is most likely for those first employed during 2002-2009 to join the middle class. In Model 7 (see Table 5), when education is controlled for, the time of marketization no longer has significant effects on the middle class formation, which shows that education can neutralize the impact of the time of marketization. Therefore, Hypothesis 2a is not verified.

In accordance with Model 6, when other independent variables are controlled for, the type of industry has significant influence on the middle class formation ($P<0.001$). It means that compared with those employed in non-monopoly industries, it is easier for those employed in monopoly and semi-monopoly industries to access the middle class, which verifies Hypothesis 2b-2. Ownership has a varying influence on the formation of the middle class. In Model 6, its influence on independent variables is statistically insignificant. In Model 7, when education is included, it has a significantly negative influence on independent variables ($p<0.001$), with an exp value of 0.6670. This means that compared with employees of non-state sectors, the incidence rate for those employed in state sectors to access the middle class is 33.20% lower. Hypothesis 2b-1 as a whole is not verified.

Models 5-7 analyze from different perspectives the influence of regions at different market levels on the middle class formation. The data show that individuals are more likely to join the middle class in cities with a more developed market. In another word, when other variables are controlled for, it is most likely for residents in Shanghai where the market is most developed

TABLE 4
THE BINARY LOGISTIC REGRESSION MODEL OF THE INFLUENCE OF MARKETIZATION ON THE MIDDLE CLASS FORMATION

			Model 3	Model 4	Model 5	Model 6
Independent variables						
Marketization	Time	Time of first employment (0=prior to 1978)				
		1978-1991	0.281* (0.131)			0.197 (0.139)
		1992-2001	0.514*** (0.151)			0.483** (0.164)
		2002-2009	0.803*** (0.147)			0.723*** (0.166)
		2010-2015	0.582*** (0.156)			0.556** (0.176)
	Sector	Ownership (0=non-state sector)				
		State sector		-0.121 (0.107)		-0.153 (0.109)
		Industry (0=non-monopoly industry)				
		Monopoly/ semi-monopoly industry		0.918*** (0.112)		0.969*** (0.113)
	Region	Market level			0.295** (0.100)	0.356*** (0.103)
Control variables		Male (0=female)	-0.400*** (0.093)	-0.411*** (0.097)	-0.405*** (0.092)	-0.398*** (0.097)
		Age		-0.023*** (0.004)	-0.027*** (0.004)	
		Married (0=single)	-0.212 (0.115)	-0.164 (0.117)	-0.071 (0.113)	-0.287* (0.120)
		Log of individual annual income	0.955*** (0.073)	0.892*** (0.076)	0.942*** (0.072)	0.936*** (0.077)
Constant			-9.737*** (0.764)	-7.899*** (0.860)	-11.161*** (1.332)	-13.360*** (1.400)
X^2			340.46	419.16	380.53	416.86
Pseudo R^2			0.1043	0.1335	0.1145	0.1338
Samples			2,532	2,427	2,572	2,411

Note: (1) Standard deviations in parentheses. (2) *** p<0.001, ** p<0.01, * p<0.05.

TABLE 5
THE BINARY LOGISTIC REGRESSION MODEL OF THE MIDDLE CLASS FORMATION

			Model 7	
			B	S.E
Market Capacity		Education	0.276***	0.019
Marketization	Time	Stages of marketization (0=prior to 1978)		
		1978-1991	0.025	0.147
		1992-2001	0.131	0.176
		2002-2009	0.102	0.180
		2010-2015	-0.064	0.193
	Sector	Ownership (0=non-state sector)		
		State sector	-0.405***	0.117
		Industry (0=Non-monopoly industry)		
		Monopoly/semi-monopoly industry	0.617***	0.121
	Region	Market level	0.471***	0.111
Control variables		Male (0=female)	-0.419***	0.103
		Age		
		Married (0=single)	-0.134	0.127
		Log of individual annual income	0.586***	0.079
Constant			-13.690***	1.487
X^2			661.23	
Pseudo R^2			0.2126	
Samples			2,408	

Note: *** p<0.001, ** p<0.01, * p<0.05.

to access the middle class, who are followed by residents in Guangzhou and then Beijing. In Model 7, the exp value of regional marketization is 1.6020, which implies that a unit increase in regional marketization will lead to an increase of 60.20% in the incidence rate for individuals to access the middle class. Hypothesis 2c is verified.

Generally speaking, among the factors of marketization, sector has the most explanatory power to account for the middle class formation, which is followed by region and time, respectively.

A comparison of the pseudo coefficients of determination in Models 2 and 6 shows that compared with marketization, market capacity can better account for the formation of the middle class. Model 7 is a full model including all the independent variables, with a pseudo R^2 of 0.2126, the highest among all the models.

Conclusions and Discussions

As to how to develop the middle class in China, Li Qiang proposes three important approaches, i.e. education, expertise and market. Unfortunately, they are not statistically tested with survey data. Based on the survey data, this study uses statistical models to investigate how the three approaches have influenced the middle class formation in China's megacities from the perspectives of marketization and market capacity. Therefore, it adds to the existing literature with the following findings.

First of all, education remains the dominant approach to the formation of the middle class. As a market capacity, education plays a significant positive role in the middle class formation. A higher level of education leads to higher possibility for an individual to access the middle class. The previous research focused more on the gap in social status attainment between people receiving higher education and those not. Given higher education expansion, however, we need to attach more importance to the polarization inside higher education and the decreased returns to higher vocational education. Whether higher education expansion worsens inequality is per se an important issue in educational sociology. Based on the hypothesis of Maximum Maintained Inequality (MMI), Lucas proposes Effectively Maintained Inequality (EMI). According to Lucas (2011), two kinds of inequality exist in the distribution of educational opportunity: quantitative inequality and qualitative inequality. Qualitative inequality refers to hierarchy in the same level of education: some kinds of higher education diploma are simply more valuable than others. For

example, in China's higher education, junior college diplomas are far less valuable than university undergraduate diplomas, leading to a very unfavorable position of junior college students in the market competition, and decreased opportunities for them to access the middle class. Therefore, reducing opportunity inequality in higher education can increase access to the middle class.

Secondly, it should be noted that Li Qiang's analysis of market focuses on the commodity market; for him, the market approach means that through business management, operation and marketing, people obtain profits from the market and then achieve higher occupational status. In this paper, we focus on the labor market, and comprehensively discuss the impact of market on the middle class formation in megacities in the dimensions of time, sector and region.

In terms of sector, ownership and industry play different roles in the middle class formation. On the one hand, compared with those employed in non-state sectors, those from state sectors are less likely to access the middle class. In previous studies, ownership was frequently used as an important indicator, while industry was often ignored. Hao Dahai and Li Lulu (2006) argue that marketization and state sector reformation have resulted in a decreased importance of ownership. As marketization gradually accelerates in quite many economic fields and sectors, market and competition has increasingly become the dominant mechanism in resource distribution. Due to market competition, state-owned enterprises and non-state-owned sectors have become very similar in operational mechanism and institutional structure.[28] Therefore, employment in sate sectors has no positive role in the middle class formation. On the other hand, compared with people in non-monopoly industries, those employed in monopoly/semi-monopoly industries are more likely to join the middle class. The market-oriented transition is essentially a result of state initiative, therefore it will inevitably be subject to state control. Monopoly of some sectors thus becomes an important way for the state to maintain its control and influence. Market competition is limited; its effects are remarkable only in some open industries. At the current stage, it is more likely for people employed in monopoly industries to join the middle class.

In terms of region, this paper finds that the more developed the market in a city is, the easier it is for its residents to access the middle class. Due to space limitation, we do not compare the different roles of the three approaches in Beijing, Shanghai and Guangzhou. These three megacities have different levels and characteristics of marketization, therefore, it is very

meaningful to compare differences in the middle class formation in these cities.

Lastly, occupational classifications of the middle class in the three cities show that professionals account for the highest proportion in the middle class as a whole, which provides evidence for the positive role of expertise. Nevertheless, compared with Western developed countries, this proportion is not high enough, which indicates remaining difficulties in the access to the middle class by virtue of expertise.

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