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Rural Education in the Time of Urbanization:

The Policy and the Problems in China 2000-2015

Dissertation submitted by

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Author's Declaration

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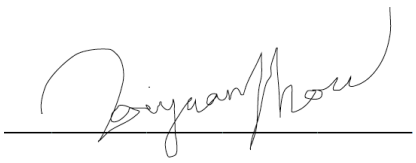
Signature: 

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Abstract

China's post 1978 Reform and Opening Up emphasis on industrialization and urbanization has resulted in a shift from traditional agriculture-based economy to a modern industrial economic structure. The urbanization has been not only triggering social problems in the urban areas, but also in rural: deserted villages, decline in agriculture, and "left-behind" children are ones of the serious problems rural China has been facing in the recent years. One of the key issues in rural development is education. In China, although the overall gross enrolment ratio is high compared to other developing countries, a large urban-rural disparity exists despite the national effort in enforcing universal nine-year compulsory education. Rural schooling still has disadvantages both in terms of quantity and quality compared to urban areas.

This research examines the nature and the problems of the current rural education policy in China in 2000-2015 compared to its urban counterpart by conducting data analysis. Further it provides description and analysis of the past or ongoing policies related to rural education, including educational, social and economic policies and their positive and negative impacts on the promotion of rural education, and explores the objectives behind the overarching policy, especially within the scope of the general goal of urbanization and modernization. Finally, it offers policy recommendations on how China could improve rural education at both practical level and broader policy level.

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Chapter 1 - Introduction

1.1 Overview

China has become the world's second largest economy in the recent years. Since joining the World Trade Organization and other multilateral economic agreements and institutions, China has been increasingly playing an important role in the global political and economic society. However, China remains a developing country with many challenges including high level of inequality, over urbanization, and demographic pressures related to internal rural-urban migration.

China's post 1978 Reform and Opening Up emphasis on industrialization and urbanization has resulted in a shift from traditional agriculture-based economy to a modern industrial economic structure. In 2014, China's GDP of industrial sector took up to 42.7% of overall GDP, whereas agriculture value added accounted for merely 9.17% (The World Bank, 2014). Regarding the population, agrarian nature remains despite the economic shift. According to the World Bank, in 2014, 45.6% of the total population was in rural, and there were still 70.17 million poor in rural areas based on China's current poverty standard (per capita rural net income of RMB 2,300 per year) (The World Bank, 2014). However, with the rapid urbanization, this demographic structure has also been changing in the past decades due to the huge migration influx from rural to urban, caused by the difference in employment opportunities, income, social services and living standards.

Rural issue has always been one of the fundamental issues in China since the

establishment of the People's Republic of China. The Chinese Communist Party (CCP)

addresses the relevant policy as Three Rural Policies (San Nong Zheng Ce), representing for farmers, villages and agriculture. Since the Reform and Opening Up, China has been aiming to shift out of agriculture-based economy and increase the percentage of industry and service sector. Dealing with the balance between rural development and the general goal of urbanization has become an integral part of such process of modernization.

1.2 Rural-Urban Disparity and the Massive Migration

Since the Reform and Opening Up, the Chinese government had been pushing forward the "urban-rural dual structure (chengxiang eryuan jiegou)", restricting internal migration via registration control (Hukou system). While CCP's this approach helped the industrial economy rapidly grow in the 1980s and 1990s, it also brought many problems into the modern Chinese society. Resulting from this political approach, the rural-urban divide remains significant in China despite the recent effort on rural economic development. The annual average per capita disposable income in rural China marked RMB10,489 (USD1,570) in 2014, approximately one-third of the average per capita disposable income in urban areas, which was RMB29,381 (USD4,400) (National Bureau of Statistics of PRC, 2015). The rural-urban gap exists not only in income distributions, but also other social resources. Farmers who hold rural registration have less access to medical services, cultural activities and education compared to city residents registered in urban areas.

Such disparity and the mitigated restriction on internal migration in the recent years have

caused a massive scale of urbanization. OECD report foresees rural to urban migration of 100 million by 2020 (2015). Chinese government is planning to achieve an urbanization ratio of 60% by 2020, with the share of residents with urban Hukou registration increasing to 45% from the 36% of 2013 (OECD, 2015). While this approach towards rapid urbanization might stimulate the industrial economy in urban and suburban area, there are risks that rural population will further shrink, and the rural-urban income inequality will increase.

Looking at the number of urban and rural education from 1982 to 2015, the trend of migration from rural to urban is apparent (see Table 1). In 1982, the urban population was merely 20% of the total population. The urban ratio quickly rose up to 36% by the end of 2000, and the urban population exceeded the rural population in 2010s.

Indicators/Year	**1982**	**1990**	**2000**	**2015**
Total Population at Year-end (10,000 persons)	101,654	114,333	126,743	137,462
By Residence				
Urban	21,480	30,195	45,906	77,116
Rural	80,174	84,138	80,837	60,346

Table 1. Urban, Rural and Total Population Nationwide1982-2015

1.3 Rural Education

Education is seen as one of the most important aspects in poverty cycle. It is often seen as a crucial channel to push forward the economic productivity and reduce poverty. Education is also seen as a fundamental human right itself. Rural education faces various challenges in many countries, especially in developing world: the lack of resource allocation, remoteness of

schools, decreasing rural caused by outgoing migrants, and the shortage of qualified teachers are usually some of the difficulties rural schools encounter. Even in developed countries, the quality of education and declining rural schools are still problems often discussed and criticized.

In China, the overall gross enrolment ratio is high compared to other developing countries, and the gender disparity is relatively small. However, rural schooling still has weaknesses both in terms of quantity and quality compared to urban areas despite the effort of the central government on universal compulsory education. China introduced nine-year compulsory education in 1986. In 1992, China acceded to the Convention on the Rights of the Child, which was was adopted at the General Assembly of the United Nations in 1989. Further, in the 11th Five-Year Plan in 2006 (2006-2010), Chinese government made commitment to universalizing the compulsory education system. This policy has promoted primary education widely in rural, resulting in a high enrolment ratio. According to the UNICEF, the net enrolment ratio for primary school participation in 2008-2012 marked 99.8% for both male and female (2014). However, in the past decade, the implementation of rural education has been far from ideal, and rural-urban disparity is considerable while comparing the resources such as the number of schools, qualified teachers, school facilities, and the outcomes such as test scores and promotion rates. Even when the central and local government or charity organizations build schools in rural, it is hard to find qualified teachers and management personnel to maintain these schools. In some remote areas, children don't have access to means of transportation, making it extremely difficult to attend to classes regularly. OECD

reports that around 27% of rural children attend boarding schools. 75% of them are children left behind by parents migrated to cities for urban labor opportunities (2015). Although these boarding schools have better quality education than rural schools, they often have difficulties in providing fundamental needs such as meals and proper accommodation (2015). Another important issue is that while the enrolment rate has been improving, the return rate is relatively low. One of the contributing factors is the segregated rural-urban labor market. Parents perceive education as a way to climb up the social ladder to step into urban economic market. Therefore, some initiatives in promoting vocational trainings and schools in rural China have not brought out expected results, even though the universal education curricula does not match the needs of the rural labor market. Last but not least, while the government has been increasing the spending on rural education, more investments are made to support the children of migrant workers in urban schools at both national and provincial level. This uneven distribution of budget further limits the development of education in rural.

Chapter 2 - Literature Review

Literature on rural education often focuses on either rural in developed countries or in developing world, and few studies were made with cross development status comparative studies. While studies in rural areas in developed industrial countries such as the United States, Canada and European Union are highly beneficial in order to identify the potential future development in China, this research mainly analyses academic work on general

theoretical work of rural education and studies on rural education in developing countries.

2.1 Social Role of Education

To address the problems in rural education in China, first it is fundamental to look at the theoretical debate on the role of education in rural and overall society. Ball's research on sociology of education summarizes scholarly work on two opposite paradigms of education in developing societies: *modernization* and *dependency* (1981). He concludes that modernization approach of education is based on the structural-functionalism framework (Ball, 1981). When a society becomes modern, it involves fundamental reallocation of human resources, therefore the nature of education is seen as human capital investment related to value transformation (Ball, 1981). In the modernization school approach, each stage of education is perceived as merely a preparation for the next step, often leading to highly examination-oriented teaching., and while this approach stresses the modern market's demand for literacy and high-skill workers, it is not only economistic because it also notices the "value transformation" within the overall population (Ball, 1981).

In contrast to the modernization theory, dependency does not see the body of education as the national society but rather a global process. Education, in their views, has to be conditioned by non-cultural aspect, and it has a colonial nature of political and economic control. Poverty remains because of the uneven allocation of capitals. Ball also draws attention to Nash's interesting study in this field that provides insights of multiple problems

rural education often faces (Ball, 1981; Nash, 1980). One of his concerns is that rural schooling is providing a way for rural children to escape their families to enter into the urban, thus aggravating urbanization (Nash, 1980). He also notes that there is no clear evidence that education helps agricultural development in rural (1980). This identification is important in understanding the rural education: only by examining the process of rural development and how education plays a role can we analyze the potential problems associated with educational policies in a broader policy environment.

2.2 Rural Relevance Education vs. Universal Academic Education

Another long disputed issue is whether there should be a unified curriculum at the national level, or rural education should put focus on vocational trainings aiming to improve agricultural productivity.

Some scholars advocate relevance education, which usually takes form of non-formal education, in the field of rural development. In *Attacking Rural Poverty*, Coombs and Ahmed identify three critical factors of rural development as population, land and employment (1974). They categorize educational needs for rural development as follows: general or basic education, family improvement education, community improvement education and occupational education (Coombs and Ahmed, 1974). In order to develop rural as a whole, it is crucial to train the population to increase the agricultural productivity via education. The authors argue that agricultural productivity should be increased by the education fits the need.

Educators should introduce education outside of school that benefits future farmers, artisans, craftsmen and small entrepreneurs to gain the necessary skill to enter in to the market (1974).

Some others argue that rural education should be formal and academic, despite the fact that it happens in rural setting. This has been mainstream in rural development study in recent decades. One of the most reviewed studies is *The Vocational School Fallacy in Development Planning* by Foster (1965). He explains that the vocational education approach to improve agricultural productivity often fails because farmers in rural see schools as a means to climb up the social ladder and get into urban labor market. He proposes that instead of advocating vocational education in rural, the schools should improve their academic education and provide higher quality education to respond to the population's needs, leaving the incentives for rural vocational training entirely to the market adjustment (Foster, 1965).

Andreas focuses on the impact of college examinations in his study. He conducts a case study on Lai Shui, a small county in Hebei Province near Beijing (Andreas, 2004). He assesses the impact of the examination system by comparing the system before the Cultural Revolution (1966 to 1976) and during the revolution, because college entrance examinations were canceled during the period. In the study he finds that when the examination system existed, it provided a ladder for villagers to enter into more prestige jobs in cities, and therefore it is highly difficult to implement rural-specific education. Local population would perceive vocational trainings as a distraction to academic education (2004). He also provides an observation that since the main purpose of receiving education is seen as to success in

examinations, once a student fails, there is no purpose in continuing, leading to a high dropout rate (2004). Although this study looks into a historical case back in the time of the Cultural Revolution, it is highly relevant in the modern setting, considering that the competition for college entrance examinations has been increasingly heating up, and the exam-oriented school education has becoming one of the biggest issues in the society.

While no similar empirical study was found in rural China to examine parents' attitude and expectation towards education, in *Education for Its Own Sake: The Relevance Dimension in Rural Areas*, Baker's work offers some empirical study on the relevance of education in rural areas in other developing countries (Baker, 1989). She generally agrees with many scholars that the past failure of rural vocational education program is indeed due to parents' expectation for their children to have similar academic education as children in urban areas, and use high education as a stepping-stone into more privileged urban society. By looking into several case studies conducted in Peru, Tanzania, and Mexico, she concludes that vocational trainings designed to cultivate agrarian skills do not fit parents' desire for children to climb up social ladders. However, interestingly her research in Sri Lanka shows that parents have general desire for children to be educated for the sake of acquiring knowledge (1989). She does not analyze why parents in Sri Lanka has this different expectation for education.

OECD report suggests that both universal education and vocational trainings need to be reinforced. The current knowledge taught and skills provided in the classrooms are far from

matching the needs of modern labor market in China (OECD, 2015). Although China has been increasing the resources dedicated to research, there are no adequate innovations, and in order to bring out more technological innovations, one cannot neglect rural education both in terms of academic and technical trainings (2015).

This debate is also crucial to analyze Chinese educational policies. The agrarian nature of rural China and the ongoing massive migration have led to distinct needs for education in rural China. In order to implement the most effective and efficient rural education policy, one should carefully examine these approaches.

2.3 Education, Poverty and Rural-Urban Migration

In terms of the relationship of education and rural-urban migration, a few studies were found addressing the rural-urban disparity in opportunities are providing incentives for formal education. Also, some even argue that education would further enable and stimulate the rural population to move into cities. Rhoda's study indicates that the commonly accepted belief that intervention in rural development would decrease migration into cities is hardly justified (Rhoda, 1983). Although he acknowledges that increasing rural income or allocation of land might reduce outgoing migration, he maintains the position that developing rural education appears to stimulate more migration. In *Education's Effect on Poverty: The Role of Migration*, the authors see the outgoing migration to metropolitan areas as a potential obstacle to improve education level in rural in order to reduce poverty (Weber et al., 2007). They conceptualize education-poverty link framework by showing education has impact on both poverty

probability and rural-urban migration probability. They use data from the Panel Study of Income Dynamics conducted in 1993 to 1999 in the United States, and conclude that 1) people with more education are more likely to move to urban areas; 2) people with more education are likely to have higher income; 3) education appears to have a direct effect on reducing poverty, yet no effect was found through encouraging migration (education reduces poverty risk for both those who migrate and who do not) (2007). The reason why this study is intriguing is that it partially denies the reasoning of rural parents' expectation of their children moving to urban areas to escape from poverty. Granted, the motivation behind outgoing migration might not only include income incentives but also social status and other factors. However, if the main drive behind education were to increase income, then whether the children move out the villages or not after the completion of education would not affect their ability to make more income.

2.4 Rural Education in Chinese Context

Some scholars have conducted empirical research on rural education in China.

Under the framework by Education for All (EFA) goals organized by UNESCO, Hao and Yu conduct a study on rural-urban migration and access to education. They find that in China the public sector serves as the main platform for primary education, compared to more private-driven countries such as India (Hao and Yu, 2015). Also, in China educational finance is decentralized. In other words, educational budgets are allocated not by the central government but by the provincial or even local governments. While this provides certain

flexibility in policy making, it also leads to problems such as inequality and inefficient allocation of recourses. They emphasize the importance of taking the broader policy environment into account, such as the Hukou system in China, which is deeply related to the educational policies (2015).

There are several studies on challenges that rural education in China faces related to urbanization and migration. They acknowledge the deep connection between the education system and the urbanization policy including regulation on migration. For example, Xu (2015) argues that rural education has been influenced by the urbanization thus is too focused on urban needs instead of providing education that fits local context. In 'Labor Migration and Returns to Rural Education in China', Zhao (1997) states that the large urban-rural income difference provided a strong incentive for more accessible senior high school education in rural areas.

Yiu and Adams (2013) investigated the quality of teaching in rural regions in China by conducting research on data in Gansu Province in 2000 and 2007 to examine whether teacher expectations for rural are conditioned by the students' and teachers' social origin and backgrounds. Their findings were: 1) a tendency that teachers are more likely to hold lower expectations for students from rural backgrounds; 2) non-local teachers hold lower expectations for rural children compared to local teachers; 3) few teachers expect students to enrol in vocational education after 9-year compulsory education (Yiu and Adams, 2013). They concluded that these results were caused by both educational policy and social inequality.

Xu and Law (2015) argued that rural education in China has been seen as a pragmatic instrument for the state to promote urbanization rather than to improve the rural livelihood, facing challenges related to urban-based curricula and evaluation standards, keeping qualified teachers, and the outflow of original rural residents.

Chapter 3 - Key Definition

3.1 Urban and Rural

According to the United Nations Database, the urban/rural criteria are usually defined by each national government, and there is no consensus on the definition and the measurement. Universally, the traditional distinction between urban and rural areas within a country has been largely made based on the density of settlement. Since this approach is not applicable in many countries with complex geographical and economic structures, it is suggested to use additional criteria such as the percentage of the economically active population employed in agriculture, the general availability of electricity and/or piped water in living quarters and the ease of access to medical care, schools and recreation facilities.

In China, there are three administrative types of cities: 1) provincial-level municipalities; 2) prefecture-level cities (PLCs); and 3) county-level cities (CLCs). In addition, 4) administrative towns are today also considered "urban (Chenzhen)" settlements (Kamal-Chaoui et at., 2009). Areas other than these four types of cities are categorized as "rural (Nongcun)". Up until 2006, "urban" settlements in China were administratively defined as statutory cities and statutory

towns. The National Bureau of Statistics adopted a new definition of "urban" in 2006 in order to align with the international standard statistics practice. The new parameter in the 2006 definition is to include villages in outer urban and suburban areas that are "directly connected" to municipal infrastructure, and that receive public services from urban municipalities (Kamal-Chaoui et al., 2009).

Although this definition is an improvement from the previous imprecise calculation of "urban" residents, it is still problematic. As Kamal-Chaoui and others argue in their research, it is "supply-driven", meaning the population is only considered "urban" where the municipality services reaches them while excluding the factor of "demand" – the economic participation of rural population in urban market.

Chapter 4 - Research Design

4.1 Research Question

This research intends to explore the nature and the problems of the current rural education policy in China in 2000-2015 compared to its urban counterpart, and how it is relevant to the undergoing educational, social and economic policy.

Literatures try to answer the question by empirical research including interviews and case studies, however, lacking adequate policy analysis. One of the distinct aspects about rural policy in China is that it is deeply tied to a broader political context because of the relatively

stable long-term development plans under the strong central planning power under Chinese regime. This research intends to fill this gap in rural education study by providing description and analysis of the past or ongoing policies related to rural education, including educational, social and economic policies and their positive and negative impacts on the promotion of rural education. Moreover, it intends to explore the objectives behind the overarching policy, especially within the scope of the general goal of urbanization and modernization, how they parallel with each other, and where the gaps and contradictions lie. Specifically this study discusses the relationship between rural-urban migration and rural education, filling the gap of empirical study on impact of migrant workers in rural education in China, as well as how migration influences rural education. Finally, it explores policy implications on how China could improve rural education and makes policy recommendations.

The evaluation and data analysis are conducted by examining indicators such as budgetary investment, the quantity of schools, numbers of qualified teachers, enrolment rate at each level of education, test scores and other relevant figures, in order to identify the urban-rural disparity in the field of education. The main research subjects would be primary schools and secondary schools, since most of the high education institutions are highly concentrated in metropolitan areas such as Beijing and Shanghai.

4.2 Empirical Methods

4.2.1 Data analysis

The research will conduct data analysis on secondary data related to rural education in

China.

Datasets used in the research are provided by institutions such as National Bureau of Statistics of the People's Republic of China and Ministry of Education. The datasets include a wide range of key statistics on the enrollment rate, teaching conditions, the amount of teachers and other relevant figures in urban, suburb and rural areas from primary to high education. Data is available both at national level and regional level, although some provincial data is not complete due to the difficulty of data collection in remote areas. Also, World Bank, UNICEF and UNESCO provide dataset on education on some general information.

4.2.2 Document review

Document review is carried out on relevant national and provincial policy documents. These include but not limited to: the central 5-year plans; law; regulations; governmental publications such as reports, blogs; and media coverage. Specifically, "Compulsory Education Law of the People's Republic of China", "Chinese Educational Reform and Development Compendium", "National Mid-to-Long-Term Educational Development Plan, 2010-2020", and "State Council's Decision on Balanced Development of Compulsory Education" are some of the most central legal documents related to the field. The main objective is to review what have been the focuses of rural education policy in the past 15 years and what have shifted in the overall rural development goal. Also, evaluations on education policy implication will be examined to see whether the implementations met the initial goal in the field.

4.2.3 Justification and Limitations

The research analyses the key indicators from 2000-2015 to highlight the change in rural education. Comparison between urban and rural schooling indicators will be carried out to examine whether rural education has disadvantages compared to urban schools, and to what extent. The research focuses on the past 15 years, as they have seen one of the fastest economic growth and social development in the Chinese history. Since joining the WTO and the increasing participation in the global economy, Chinese internal policy on urbanization and rural development have been shifting towards stronger industrial and service sectors. Therefore the given period of time would provide contrasts and insights on the research question. Five provinces (Beijing, Shanghai, Hainan, Heilongjiang, Xinjiang) are selected in the data analysis.

Proportion of Urban Population (%)		
	2006	**2014**
Beijing	84.3	86.4
Shanghai	88.7	89.6
Hainan	46.1	53.8
Heilongjiang	53.5	58.0
Xinjiang	37.9	46.1
National total	44.34	54.77

Table 2

The selection was made both according to rationality and data availability. Beijing and Shanghai are the two most urbanized cities in China with over 20 million population and have 85-90% of urban population ratio (see Table 1). Hainan is a relatively small province situated

in a southern island, separated from the mainland, and Heilongjiang is a large northern province currently undergoing a rapid transformation with strong industrial potentials. Both of these regions are one of the largest sources for migrant workers in cities nearby. Xinjiang, situated in the northwestern border of China, is one of the least urbanized provinces in China with low economic development level. These five provincial-level administrative units represent different part of China with various characteristics in the data analysis.

Limitations include the restrained access to some data, especially of remote areas. The datasets from National Bureau of Statistics do not have complete coverage on regions and years, and it lacks explanations on the statistic methodology on data collection. It is crucial to mention that the data obtained only provides statistics at provincial level without the differentiations between urban and rural areas within the provinces. Therefore the robustness of the data analysis is to be improved. However, by focusing on a few representative urban and rural provinces the study has showed some valuable findings on the tendency regarding rural education and the urban-rural disparity.

Chapter 5 - Problems in Chinese Rural Education: Data Analysis

5.1 Number of Schools

According to the China Rural Education Development Report (2015), student-teacher ratio in rural primary and secondary schools showed some decline, due to the implementation of governmental subsidies for rural teachers. The student-teacher ratio in junior secondary

schools in China has decreased from 13.6% to 10.89% in 2014. The report states that at the end of 2015, the central investment on teacher subsidies in remote rural areas has reached 7.4 billion RMB, affecting over one million teachers.

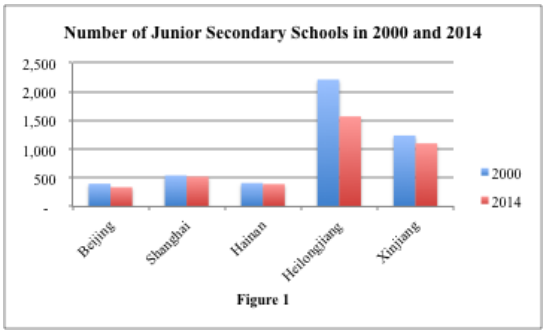

Figure 1

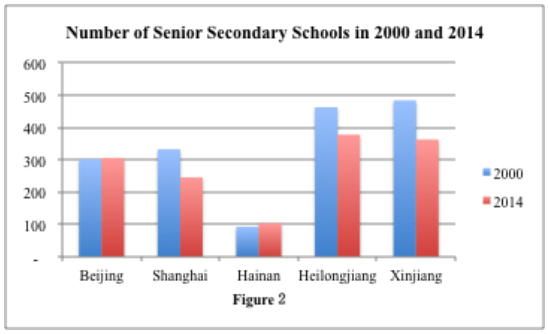

Figure 2

Figure 1 shows the comparison between the numbers of junior secondary schools in 2000 and 2014, in Beijing, Shanghai, Hainan, Heilongjiang and Xinjiang. While the schools do not have significant changes in Beijing and Shanghai where the urbanization level is high, there is an apparent decrease in Hainan, Heilongjiang and Xinjiang. Figure 2 shows a similar tendency for the numbers of senior secondary schools. Although there is an increase observed in Hainan, there is huge decrease in Heilongjiang and Xinjiang. Interestingly, the decrease in senior secondary schools is also observed in Shanghai.

What have caused the decrease in rural schools? One possible explanation is that there are fewer needs for schools because of the decline in school-age children due to the One Child Policy and the trend of urban young couples not having children.

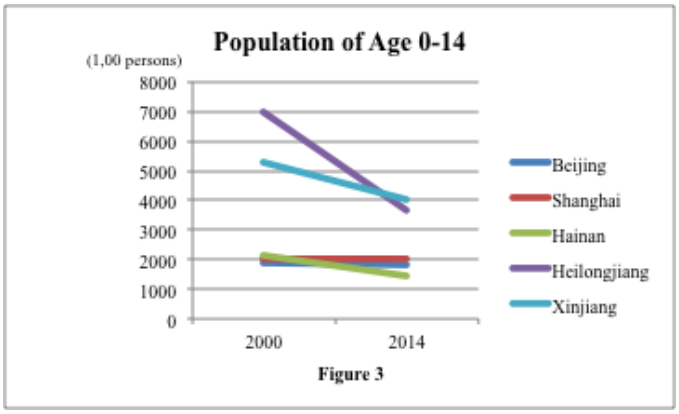

Figure 3

Indeed, when we look at the population of age group 0-14, almost in every province it shows an apparent decline. Nationwide, in 2014 the number of children (0-14) reached 22 million, showing an approximately 7 million decrease from the 29 million in 2000 (National Bureau of Statistics, 2001; 2015). However, it does not justify the drastic decrease in rural schools. Firstly, the decrease in the number of children from 0 to 14 does not equal to the decrease in the number of school-age children. Due to the data availability, the analysis is restrained to the large range categorization, failing to diversify 0-5, 6-12 (primary school age), and 12-15 (junior secondary school age). Secondly, the decrease is likely to have taken place in urban areas rather than rural. In rural areas One Child Policy does not apply, and people usually consider having children as an important way to guarantee the labor force in the farms. Traditional value in having an integral family with children also remains in rural lands. On the contrary, in urban areas there has been a trend where younger couples choose not to have children, as a reaction to the slowing-down economy and the incoming Western influence. Hence, although it is a fact that overall population of children is declining, there is a significant drop in school numbers in provinces with larger rural areas that cannot be justified by the overall 0-14 age group population drop.

5.2 Number and Qualification of Teachers

Urban-rural disparity is observed not only in the quantity of education but also quality. The selected indicators to represent teaching quality are: number of teachers, teachers qualification (graduate level, under-graduate level, or high school graduate). Table 3 shows the comparison between indicators in the five provinces. While highly urbanized areas such as Beijing and Shanghai have a large amount of teachers with graduate degree, few were found in regions with high percentage of rural lands such as Heilongjiang and Xinjiang. There are almost no teachers with high school graduate in Beijing and Shanghai, where a significant amount was found in the rural-oriented provinces.

	Junior Secondary School			
	Number of Teacher	Graduate	Under-Graduate	High School Graduate
Beijing	32,855	4,643	27,777	20
Shanghai	37,564	3,204	33,734	4
Hainan	25,717	241	19,523	82
Heilongjiang	93,830	807	74,920	360
Xinjiang	85,749	616	60,254	199

Table 3

5.3 Resource Allocation

	Educational Funds (RMB)		Population (Age 0-14) (1,000 persons)	Funds per Child
	2000	**2013**	**2014**	**2014**
Central Government		16,364,673	22,558	0.73
Beijing	1,698,275	8,941,899	1,804	4.96
Shanghai	1,436,730	7,640,400	2,024	3.77
Hainan	146,295	1,826,386	1,420	1.29
Heilongjiang	835,947	5,126,395	3,665	1.40
Xinjiang	571,713	5,504,391	4,008	1.37

Table 4

It is a longstanding problem that the distribution of educational resources is uneven (Ministry of Education, 2017). Table 4 shows the shift in amount of educational funds from 2000 to 2013, as well as the amount of funds per child using the 2014 data on population (age 0-14). Here the educational funds only include national budgetary funds and other supplements, excluding private funds and investments coming from other sources. While a drastic overall increase in educational funds could be observed while comparing 2000 to 2013, the funds allocation is far from even. When comparing funds per child by provinces, urban provinces such as Beijing and Shanghai has 4-5RMB/child, which is 3-4 times more than that of rural provinces such as Hainan, Heilongjiang and Xinjiang.

5.4 Students' participation

Dropout rate is difficult to measure, especially in remote rural areas due to the lack of data. Also the Compulsory Education Law Enforcement Inspection Report (2015) points out that the "hidden dropouts" should be paid more attentions to. "Hidden dropouts" means although students are registered in schools, they do not actually participate in classes. According to the Report, in the past decade, more and more children from rural areas choose to participate in labor outside of the village instead of going to school. There are contradicting data on the dropout rates. One of the newest datasets by Ministry of Education shows that in rural China the dropout rate for junior secondary schools is between 17.6%-31%, far beyond the 2.6% published by the National Bureau of Statistics. Some researchers indicated that the overall dropout rate in rural areas reaches 56% (Compulsory Education Law Enforcement Inspection Report, 2015). For senior high school, over half (51.2%-53.5%) students in poor

rural regions choose not to enroll in high school (2015). The high dropout rates in rural areas could be attributed to different social and economic factors. Firstly, the students and the parents have little incentive in continuing education, because there are few chances for rural students to be able to be admitted to high-ranking universities in cities. Without the perspectives of getting into higher education, senior secondary schools are often perceived as "waste of time and money" by rural parents (2015).

Migrant Workers, Floating Population and Left-Behind Children

According to the statistics, the nation-wide floating population in 2014 was 252 million, showing more than 100% increase since 2000.[1] Majority of the floating population is the temporary, seasonal, or permanent migrant workers from rural seeking for employment opportunities and better wages in cities.

The report of National Bureau of Statistics indicates that there were 20 million "left-behind children" across the country in 2014. Amongst them, 13.8 million are enrolled in primary schools and 6.4 million are enrolled in junior secondary schools. "Left-behind children" is a term for the children whose parent(s) is away from home. Many migrant workers are reluctant to take their children with them to cities because of the limited access to education and healthcare with their rural registration in urban area, resulting in a concerning number of left-behind children staying in rural. It has become a serious social problem. Studies show that left-behind children tend to have higher dropout rate than other children,

[1] Data of 2000 is based on the National Population census, and others are based on annual national sample surveys of population.

either because of the lack of monitoring from parents or the need to participate in the farm work and housework to fill in the part of their absent family member (National Bureau of Statistics, 2015).

5.5 Vocational training

The 2015 Annual Report of National Bureau of Statistics reports that there were decreases in vocational schools nationwide.

Vocational Schools (secondary) 2014	
Beijing	94
Shanghai	104
Hainan	88
Heilongjiang	361
Xinjiang	176

Table 5

The number of vocational schools in China is still relatively small compared to developed countries (OECD, 2015). The numbers in rural and urban are almost proportionate to the children population, regardless of the difference in economic structure in these provinces.

Chapter 6 - Policy Framework

In order to examine the rationality and reasons behind the problems revealed in the data analysis from the previous section, this section is going to provide analysis on the ongoing policy in China in the recent 15 years that are relevant to rural education. The section further analyses other political, social and economic policies in order to identify the root cause behind the problematic agenda setting, implementation and evaluations.

6.1 Compulsory Education Law

The Law on Nine-Year Compulsory Education of People's Republic of China came in effect in 1986. The law laid out requirements for achieving universal education goals and guarantying school-age children the access to receive at least nine years of education, including six years in primary education and three years in secondary education usually in junior high school. It specifically provides that such education shall be tailored to local conditions. Before the law, the rural areas had only four to six years of compulsory education, where urban areas were already required to provide nine years.

The program is designed to serve the reform and modernization goals established in the 5th Five-Year Plan. It targets to increase the number of skilled workers to participate in industrial sector labor, as well as to bring up the overall literacy rate across the country. Guidelines at the central government as well as at various local levels are issued to safeguard the implementation of the program taking steps and methods formulated by the central authorities. Authorities at provincial level are conferred certain autonomy to develop plans, distribute funds to counties and manage senior high schools with direct supervision. A county level, authorities are given the autonomy for fund distribution, supervision of teaching, vocational schools and the management of teachers' schools and training. Under the law, the counties manage primary and junior high schools, whereas provinces mostly manage senior high schools. The goal-setting, implementation and the evaluation of the Compulsory Education Law are operated under three regional categories: 1) cities and economically developed areas in coastal provinces and a small number of developed areas inland; 2) towns

and villages with medium development; and 3) economically left-behind areas. In the third category, economically backward (rural) areas, the law was to popularize minimum education without a timetable, tailoring the educational development plan to the local socioeconomic conditions. The state also would provide support in promoting education in minority areas in the third-category areas, in forms of funds, national teaching support programs, and technical assistances. It is important to point out that despite the law and its enforcement, the tuition-free primary education goal is still not realized across the country in China (OECD, 2015). Although the tuition and the costs such as textbook and school lunch in China is relatively low, rural families with low income still struggle to pay, resulting in lack of incentives for continuing putting their children in school.

6.2 "Key Schools" Regime

"Key schools" became an integral part of the effort to revive the lapsed education system in 1980s, during the blooming period after the Cultural Revolution. Historically the regime was developed to deal with the scarce educational resources: identified schools with proven high level of educational records were allocated with higher quantity and quality of teachers, equipment, and funds. Key schools often are only a small percentage of all senior and junior secondary schools. Parents usually fight for the opportunity to get their children into one of the key schools, putting a lot of competitions among the primary and junior secondary school students to get high scores in the entrance exams. Key schools are mostly concentrated in urban China where economic development is high and average income is the highest among the country. County-level key schools are allocated in the largest town in the counties, distant

from rural areas. Key school regime is criticized by scholars to be enhancing the regional inequality of education by providing children in cities more opportunities to obtain better educational resources, leaving rural children even less access.

6.3 Dismantling teaching points and combining schools

The Dismantling teaching points and combining schools policy carried out in 2001 has significantly affected the rural education, mostly adversely (Yiu and Adams, 2013). The aim was to dismantle a large amount of preexisting primary and secondary schools in the rural areas and concentrate the students to a part of major schools in surrounding cities. Since it caused more negative impacts than expected, the policy was annulled in 2012.

The policy was first carried out reacting to the reduction of the number of school-age children due to the One Child Policy and the migration influx from rural to urban. By shifting from "village-based education" to "central schools", the policy aimed to reallocate the educational resources (Fang & Liu, 2013). The impact was direct: in 2000, the total number of primary schools in rural China was 440,000, which was reduced to 230,000 in 10 years (2013).

Although the policy has achieved the goal of resource reallocation to certain degree, succeeding in increasing the scale of schools and the educational levels, there were negative impacts on rural education following the implementation of the policy. Firstly, the students from remote areas have suffered from the decreased accessibility to education, and the dropout rate for these students showed a significant increase. Chu and Zhang's research pointed out that the policy has forced the students from remote regions travel further into the cities and towns,

therefore increased the transportation costs (2012). This policy has accelerated the urban-rural disparity, and reinforced the regional inequality. Secondly, the "dismantling" left no sufficient schools to meet the educational demands. More students were crammed into one class, resulted in higher student-teacher ratio and poorer teaching quality in the classroom. This could also be a contributing factor in the raising dropout rate in rural, because teachers are no longer able to pay sufficient attentions to each student and encourage them to continue education despite of the difficulties.

6.4 The National Mid and Long-Term Education Reform and Development Plan (2010-2020)

The National Mid and Long-Term Education Reform and Development Plan (2010-2020) puts forward the strategic objectives for China's educational reform and development: the basic realization of education modernization, the basic establishment of learning society, becoming a nation with strong human resources power. The Plan sets new implementation policy to put the education as the top priority in development strategy position to cope with the pressure China is experiencing from the vast population and the recent shift in economic growth pattern.

The Plan indicates a few challenges under the current educational framework: 1) The concept of education, curriculum and methodology are outdated, e. g. excessive amount of homework; 2) Educational resources are unevenly distributed – citizens in rural, poorer areas are left behind in educational development; 3) Educational funding is not meeting the demand.

Firstly the plan targets to further popularize education by 2020, universalizing preschool education and further consolidating and enhancing the popularization of nine-year compulsory education. Moreover, it aims to guarantee equal access to education, to offer quality education not only in academic fields but also in moral, physical and mental health. It suggests to combine diploma-based education with non-diploma based education such as vocational training both pre-job and on-the-job.

The Plan shows important policy advancement in the field of education as it identifies the still uneven distribution of educational resources, and commits to safeguard equal access to education. It is currently used as the legal basis from the central authority for provincial and local-level policy making in the field of educational development.

6.5 Vocational Education Law

The Vocational Education Law of the People's Republic of China was adopted at the Nineteenth Session of the Standing Committee of the Eighth National People's Congress of the People's Republic of China in 1996.

The law provides specifically that the state and local governments at county level and above shall adopt measures to develop vocational education in rural areas, ethnic minority regions, remote border areas and poverty-stricken areas. It also mandates the local governments to sponsor vocational schools and training institutions in accordance with the needs of development of rural economy, agricultural science and technology and practical technologies. However, the law lacks a practical regulatory mechanism to enforce the

implementation at the local level. Also, the law does not have matching mechanism or practice to shift public perceptions of education from a "stepping stone" into urban life to a venue to obtain skills to increase their income at home in rural areas. Therefore rural population often lacks the motivation to participate in vocational schools.

6.6 "Gaokao": The National Higher Education Entrance Examination

One of the root causes behind the rural education problems lie in "Gaokao" system – the National Higher Education Entrance Examination. "Gaokao" was established in 1952 as a universal academic exam to determine college admissions. The examination is a mandatory for senior students in senior high schools to entrance into almost all higher education institutions. The examination is highly competitive due to the low availability of higher education. Common criticisms on "Gaokao" are as followings:

Firstly, it results in exam-oriented education. Because of the nature and competitiveness of the examination, Chinese students are required to prepare for the exam since the first year in senior secondary schools. Even though physical education and art classes are mandated by the state, schools often neglect non-exam subject classes in order to make up time for more exam preparation. This approach leads to problems such as narrow scope of education and strictly result-oriented thinking of students and parents. When the sole purpose of education becomes to obtain high scores in the examination, children with low chance to getting into universities simply give up and choose to drop out from secondary schools. Moreover, the examination is divided into social sciences and natural sciences, other than the obligatory

exams on Chinese, Mathematics and English. Students are required to choose either social sciences (political science, history and geography) or natural sciences (physics, chemistry and biology). This choice usually needs to be made during the first year of secondary senior school, at the age of 15-16. This choice also affects their college majors and even future career paths, and is difficult to switch once it has been decided. This system would limit children's overall knowledge on various disciplines, and also pose restrictions on future profession options by forcing children to make choices at a very early stage in life.

Secondly, the examination system includes regional discriminations. Universities usually have fixed admission quotas for each province, which is not proportionate to the regional population. They have a larger quota for students coming from their home province. This is problematic because the higher education institutions are not evenly distributed across the country. Top universities are concentrated in cities such as Beijing, Shanghai and Guangdong, providing students from these provinces higher quota to be admitted to these universities. Therefore it is significantly easier for students from Beijing to be admitted into a given university in Beijing than students from other provinces such as Shandong, because the competition is much lower. Hence, the Gaokao admission schemes for different provinces and regions intensify competition among students from provinces with fewer higher education resources. It is difficult to justify such practice, since the regional universities are not funded nor subsidized by local or provincial governments. On the contrary, public universities in China are largely funded by the state budget rather than local budget. The regional disparity shown in the admission quota and regional admission rates are one of the driving forces for

rural students to drop out from secondary education after nine-year compulsory education. Students from provinces with fewer resources, usually provinces with a large proportion of rural areas, have to score significantly higher than their counterparts in large cities to get admissions into the same university. When the chance is thin to be admitted to a qualified university, students might choose to participate in labor instead of keep investing in education. Moreover, migrant students may not be allowed to sit for the gaokao in their place of residence, even if they have a local hukou, if their parents lack formal employment or the required number of years of social security contributions (OECD, 2015).

Despite of the criticisms, Gaokao is still often seen as the "lesser evil" – a relatively fair mechanism for college admission with the least room for corruption and nepotisms. Voices against the examination reform is as strong as the support for the reform also for the reason that an even allocation of quota would result in chaotic over urbanization, allowing even more rural population to flow into the urban, although this argument could be found ethically problematic.

6.7 "Hukou" system and urban-rural disparity

During the peak of central planning in the late 1950s, the state divided the residents into two categories: urban population and rural population, establishing the Household registration system. Whether a person is able to receive education, to be employed, to access healthcare and other public services deeply depend upon the kind of the registration one has. This system has furthered the urban-rural disparity, enabling the urban population to enjoy a series of

social, economic and cultural benefits, leaving the rural with limited access to resources. It also brings out the income inequality in different regions, and sets barriers for the migration between urban and rural. Under such system, migrant workers living in cities have limited rights to public services and benefits in urban areas, including education, medical care, pensions and insurance. Although they have the legal right to work in cities, they are not allowed to obtain the permanent residency in cities. Their children are not permitted to attend the public schools in cities, leading the parents no choices but to leave their children behind at home in rural.

Hukou system has been under constant reform since 1990 in order to cope with the intensifying social problems regarding inequalities. In 1990s, the migrant workers from rural finally gained the legal rights to work in urban areas. In 2000s, further improvements have been made to the system in accordance to the huge influx of rural population into cities, contributing to the economic growth. However, the Hukou system has not fundamentally changed, and still plays a significant role in urban-rural inequality in China today.

According to the statistics bureau, until the end of 2016, 56% of total population resides in urban area. This number was merely 26% in 1990. The increased amount of migrant population from rural not only suffers from the lack of access to public service due to the Hukou system, but also from the socio-cultural discrimination. The difficulties in social integration of migrant workers in cities have lead parents to leave their children back at home in rural, causing a social problem called “stay-home children” as shown in the data analysis

section above.

6.8 Five-Year Plans

China's Five-Year Plans are series of social and economic development planning by the central government. They are the most important policy guideline in the political cycles in China. Five-Year Plans are lead by the Central Committee of the Communist Party of China, establishing the principles of socialism with Chinese characteristics, setting objectives for economic growth, social development and reforms.

The Five-Year Plans from the last decade have been putting a lot of emphasis on economic modernization, underlining the importance of industrialization and urbanization. In the Tenth Plan (2000-2005) goals were set to bring the development disparity between regions under control and raise levels of urbanization. The Twelfth Plan (2010-2015) targeted at an urbanization rate at 51.5% by the end of the five years.

The current Thirteenth Plan (2016-2020) continues on the direction of industrialization and urbanization. One of the key concepts in the Thirteenth Plan is "innovation": the Plan targets to move up in the value chain by abandoning old heavy industry and building up bases of modern information-intensive infrastructure. The key policy in regards to urban/rural development is the goal of "urbanization with Chinese characteristics", where it continues to focus on the urbanization while aiming to decrease the urban-rural income disparity and providing access to healthcare and education in rural China.

This strong emphasis in urbanization in the central policy blueprint might be the contributing factor of the declining rural education. The population is incentivized to move to urban, where the income is higher and the living condition has been improving year by year. The declining agricultural sector cannot offer sufficient employment opportunities to the rural population anymore. It is also difficult to encourage the population to remain at rural, due to the lack of social services, economic opportunities and cultural resources.

Chapter 7 - Policy Implications

This section intends to offer a few policy recommendations to resolve the problems and challenges rural education is facing in China.

7.1 Even Allocation of Funds and Resources

As pointed out in the previous sections, under the background of increasing educational budget and improvement in teaching resources, the compulsory education and senior secondary education in rural areas still face shortage in resources. According to a report from Ministry of Education, some provincial governments collect funds for the nine-year compulsory education by loans, causing financing problems in the government budgeting.

The investment on nine-year compulsory education should be focused on rural areas for the coming years, helping them to catch up at national average level of enrolment rate, school facilities, and teaching resources at minimum. The central government should allocate the budget by per capita to provinces, guaranteeing each province gets even funds on every

student. At the same time, the central government shall consider the social and economic development levels in different provinces including purchase ability, price level, needs for education and other factors, and establish a distribution mechanism that allows a sustainable development of rural education while not neglecting the urban counterpart. The key to this is to clearly identify the responsibilities and financial liabilities of the central government and the provincial or county-level government, to safeguard the minimum funds and to incentivize further investment on education by local governments. In the time of rapid urbanization and a large scale of migration, the central policy makers should timely reflect the change of status in population caused by migration, evaluate and adjust the urban-rural educational resources allocation. Moreover, the unified payment standard for teachers should be published in ordered to ensure the equal payment of teachers in rural and urban schools to incentivize qualified teachers to participate in education in poorer areas.

7. 2 Establishing Incentive Mechanisms

It is crucial for the rural education to establish strong intentives for parents and students in the rural regions, convincing them that it is more beneficial in the longer term choose continued education over labor participation at the early age. Because traditionally parents have strong saying in the decision making of their children, it is important to involve family into the rural educational institutions, increase the parents' participation in education to raise awareness about the benefits of education.

Incentives should not only be outlaid for formal academic education targeting on further opportunities in universities, but also be established to encourage the enrolment in vocational schools to obtain professional skills. Information sessions on the economic advantages of vocational schools would be a way to motivate rural students who are considering about dropping out from secondary schools to be enrolled.

7.3 Quality-focused Management

Currently, most evaluation indicators on education are focused on quantities: the number of schools, the number of teachers, the coverage of school facilities, etc. Schools usually are evaluated by the exam results of student at national and local level. Rural schools that have lower exam results therefore have fewer chances to get funds allocated, or to recruit better teachers, thus falling into vicious cycle of resource shortage and poor education offering.

The policy makers should shift into more quality-based approaches. A well-maintained quality management should be done through the entire process of schooling, including mapping out the objectives for education according to the needs of the students; designing the curricula and the teaching methods; choosing the appropriate classroom orientations and levels that suit the students; establishing good relationship between teachers and students; monitoring the process periodically to examine the enforcement of the management mechanism and collect feedbacks from students, parents, employers and local communities. The judgment on the quality of education should not be monopolized by the government and educational agencies, but also reflect the opinions of all stakeholders.

7.4 Increasing Vocational Training

The state should provide funds to assist the further development of vocational training for rural young population. The vocational training not only includes special skill training, but also general compensatory education. It could be provided through both vocational schools and regular secondary schools. Especially where the resources are scarce, the state should encourage regular secondary schools to set up vocational training courses for students who are looking into skilled labor opportunities.

7.5 "Gaokao" Reform: Building a Diversified Evaluation Processes

In order to break the vicious chain caused by the exam-oriented education where rural children are disadvantaged to get results, a more diversified evaluation system should be established in the future. The new evaluation system should consider the huge differences students have, coming from different social and regional backgrounds. The quota of university admissions should be allocated evenly, instead of holding a large share of the quota for the cities where universities are located. The reformation process should be consulted under the participation of all the stakeholders including students, parents, teachers, employers and the local communities.

7.6 Breaking the Regional Registration Barrier

Furthermore, the limitation on educational resources allocation according to the Hukou registration system should be broken. With the current migration influx in to the labor market in urban areas, the allocation of educational supply does not match the economic reality. The

policy makers should encourage the movement of students across the regions and urban-rural boundaries. Not only it is the fundamental requirement of equal opportunities in education, but also it would increase the effectiveness and efficiency of education by opening up education to students' choices. At the same time, efforts should be made to maintain the minimum quantity and quality of rural education, for those who are not able/willing to move to urban schools to receive equal education at home.

7.7 Boosting Rural Economy

Fundamentally, education is tied to labor opportunities. The long-term approach in improving rural education is to boost rural economy, create employment, and raise the income level. Increasing agricultural productivity not only has an important impact on food security, but also pushes forward further rural development. A higher-level rural education would provide human resources with advanced skills enabling the further increase of productivity. Hence, it is a bi-directional process. Providing micro finance for farmers, creating scale economy at the local community, and technical assistance on sustainable farming are some of the approaches that are often discussed about in the field of rural economic development (Strange, 2012). Another attribute to this long-term approach is availability of social resources. Rural population choose to migrate into cities not only for the wage and employment, but also for the better social security, easier access to medical care, wider range of cultural life, etc. Therefore, while boosting rural economy, it is also important to shorten the gap between urban-rural living standards, making investments on infrastructure and social services in rural areas.

Chapter 8 - Conclusion

The data analysis of the research indicated a significant urban-rural gap in primary and secondary education. In Beijing, Shanghai, Hainan, Heilongjiang, and Xinjiang, there was a decline in numbers of schools from 2000 to 2014, attributed to the "dismantling" policy implemented during the period in rural areas. The number and qualification of teachers, as well as funds allocation of rural schools are significantly inferior to their urban counterparts. Large cities such as Beijing and Shanghai have high proportion of qualified teachers with graduate or undergraduate degrees, while more rural provinces such as Heilongjiang and Xinjiang had fewer teachers per student, and higher ratio of teachers with high school degree. Higher dropout rates are observed in rural schools, especially secondary education. This could be attributable to the "left-behind" children issue associated with the recent labor migration influx. The numbers of vocational schools are not in proportion with the number of students both in urban and rural areas.

Despite the goals outlined in Compulsory Education Law, the National Mid and Long-Term Education Reform and Development Plan (2010-2020) and the Vocational Education Law, the rural education has been facing challenges and problems. "Key schools" regime and the National Higher Education Entrance Examination are the national educational policies that have negative impact on rural education, intensifying the urban-rural disparity. Other than educational law and policy, "Hukou" registration regime and China's Five-Year Plans are the social and economic policies that define the Chinese social development. While these policies are fundamental to the current Chinese social structure and development goals,

the strict division on urban-rural population, restrictions on social mobilization and the overemphasis on urbanization result in uneven and unequal distribution of educational resources in rural areas.

The policy implications include: even allocation of funds and resources; establishing incentive mechanisms; quality-focused management; increasing vocational training; “Gaokao” reform and building a diversified evaluation processes; breaking the regional registration barrier; and boosting rural economy. Due to the endogeneity and bi-directionality of the relationship between education and economic development, it is impractical to discuss about education without looking at economy, or vice versa. In the era of rapid urbanization, rural education is dependent upon rural economy, and only by cultivating human resources that meet the labor market demands, could rural agricultural economy shift into a more efficient and sustainable modernized multi-dimensional economy.

For the future research, it would be intriguing to conduct study on the relationship between outgoing migrations and rural education. Since the modern Chinese society is tightly related to the recent industrialization and urbanization, it is crucial to explain the social perspectives of the goal of education, and parents’ expectation in education. It is particularly interesting to examine how problems in rural education are related to the rural-urban migration in both directions by in-depth interviews and surveys at local level.

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