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Public Pension System in Transition Economy: Analysis on China's Historical Pension Reform under Economic and Demographic Change

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Abstract

Purpose: With rapid economic growth and the world's largest population, China has been on the path of pension reforms under unparalleled economic transition and demographic change since its first formal pension scheme established in 1951. This thesis aims to review China's pension systems in three periods, 1951-1984, 1984-2000, and 2000-2010, with the research question on whether Chinese government's efforts on pension reforms conformed to economic and demographic changes within each period.

Methodology and Approach: This paper is a literature- and evidence-based research, focusing on analyzing economic transitions, demographic changes and government reforms on pension systems from a historical perspective. Data are collected mainly from China's official statistical yearbooks and international organizations' reports, and are processed into supportive graphs.

Findings: China's government-led public pension reforms from a purely pay-as-you-go (PAYG) based and State-owned Enterprises (SOEs) backed system to the multi-tires system were motivated by emerging economic reforms and demographic changes. However, despite some amendments were introduced under evolving economic and demographic circumstances and had made some achievements, the pension reform is incomplete to solve all the challenges.

Key words: Pension reform; China 1951-2010; Economic reform; Demographic change

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INTRODUCTION

China has made tremendous economic achievements since its transformation from a centrally planned economy in Mao's era (1949-1978) towards a socialist market economy (1978-) through economic reforms. However, over the past three decades, rapid economic liberalization and marketization within a rigid political structure have created challenges for Chinese society especially the social security system in general (Saunders & Shang, 2001). With the largest population, China is also facing rapid fertility decline and population ageing. In order to adjust to fundamental economic and social changes, Chinese government has introduced a series of reforms on social security system. As part of the social security system, pension is key to enhance the well-being of current and future retirees and becoming a heated topic in present China under the risk of "growing old before getting rich".

Government efforts on public pension reforms have been ongoing in the last several decades. The first formal national pension system was established in the early 1950s. When China's economy became market oriented since 1980s, the reforms of state-owned enterprises (SOEs) along with demographic pressures imposed financial burden on pension provision and led to the shrinking coverage of previous SOE-backed, urban-based pension system. A series of policy were announced during 1980s and 1990s. In 1997, China replaced the pure pay-as-you-go (PAYG) pension scheme with a three-pillar pension system, which includes a defined benefit PAYG (pillar Ⅰ), a funded contribution individual account (pillar Ⅱ)

and a voluntary social insurance (pillar Ⅲ). Although a series of government reforms have helped to gradually strengthen the pension system, problems still remain under fundamental transitions in Chinese economy and population.

Literatures and empirical studies demonstrate that social security provisions are government responses to fundamental changes in economic and social circumstances (Diamond, 2002; Feldstein & Siebert, 2009; Park, 2011). China has achieved remarkable GDP growth with an average of 9% from 1980 to 2012, during which China also experienced rapid population growth, rural-urban migration and population ageing (World Bank, 2013). Under such contexts, this thesis will explore how economic and demographic transitions shaped Chinese pension systems. Unlike most previous researches that solely focus on demographic factors, this thesis will comprehensively review the history of pension reforms under diverse economic and demographic changes in different stages.

This thesis unfolds as follows: Chapter 1 contains literature reviews on pension systems and pension reforms. Chapter2 introduces the methodology approaches and data resources. Based on a brief review on China's economic history and demographic transition since 1950s, Chapter 3 will discuss how economic and demographic transitions affected the pension reforms in chronological order: 1950-1984 pre-reform period, 1984-2000 reform period, and 2000-2010 period. Chapter 4 will provide supplementary explanation from political perspective and finally a conclusion will be given in Chapter 5.

1. LITERATURE REVIEWS ON PENSION SYSTEM AND PENSION REFORM

1.1 Objectives of Pension System

At a broad level, the term "pension" normally refers to a periodical sum of cash received by individuals after their retirement (Park, 2011). Pension system is designed to provide income for a group of people who have reached a certain age and can no longer earn stable income from employment, while seeking to increase social security in a manner applicable to the specific country (Holzmann, 2005).

Targeting on maintaining the well-being of people in old age, pension is an important part of social protection policy. Skocpol and Amenta (1986) resonated literatures by diverse schools of thoughts and concluded the determinants of social policy: the structural-functionalist school interprets the underlying logic of social policy development is industrialization, while the neo-Marxist school argues that social policy follows the social reproduction requirements for advanced capitalism. As for developing countries especially countries in transition like China, Haggard and Kaufman (2008) further demonstrate that the evolution of social protection policy is determined not only by the industrialization or political demands, but also by country-specific structural change and different market institutions.

Traditionally the objective of pension is providing monetary income to maintain pre-retirement standards of living for retirees. Pension systems in general have four central objectives from both individual's and public policy perspectives (Barr, 2002):

- For individuals, the primary function of the pension system is to facilitate consumption smoothing (transfer earnings and resources working period to retirement) and to provide supplementary insurance particularly against inflation and illness to minimize the risk of uncertainty after retirement.
- For public policy, the minimum objective of pension system is to alleviate poverty of people in old age and redistribute a bundle of goods and services to people in need. However, considering the different social and economic contexts in different countries, the objectives of pension systems need to be reassessed (Holzmann, 2005).

Except goals for individual welfare and public policy, pension reforms are also motivated by the concerns regarding the potentially consequences for labor market incentives (Fisher & Keuschnigg, 2008). Pension system is strongly linked to economic development broadly and economic growth specifically, and the potential implications of public pensions have always played an important role in the debate of pension economics in literatures. Badly designed pensions which ignore the changes in employment structure, demographic factors or the erosion of pension benefits received by the workers, may trigger adverse labor market performance for economic growth (West, 1999). Besides, excessive fiscal spending on pension usually brings tax rates increase for financing public expenditures, but lowers savings and investment for economic growth. On the contrary, appropriate pension systems which facilitate increasing performance of employment and household saving, could promote exogenous growth by improving the operation of labor and capital as inputs into production (Myles, 2000).

1.2 Principles of Pension Design

Pensions can be managed in different ways in terms of how pensions are financed and the relationship between contributions and benefits. The fundamental choice of pension system is between individual risk bearing and social risk pooling, in other words the *defined contribution* (DC) and *defined benefits* (DB). Under a DC pension plan, pension investment and benefits as well as longevity risk are individual bearing. While under a DB pension plan, the society shares the risks as a whole. By definition, the DC plan is a fully-funded system. The DB plan can be further divided into unfunded pension scheme which is called Pay-as-you-go (PAYG) (Nicholas & Diamond, 2006).

In a funded pension scheme, pensions are distributed out of a fund accumulated during the period of working time from the retired person's contributions, which means there is no redistribution across generations. When an individual retires, the pension fund which both the enterprise and individual pool into will be holding the retired person's past contributions, together with the returns and interests earned from investments on financial assets (Barr & Diamond, 2006).

1.3 Economics of PAYG and Funded Pension System

China formulated and continued the PAYG pension system in State-owned large enterprises in urban areas until the market reform in late 1980s. Contrast to the funded pension scheme, PAYG system is not financed by capital fund accumulated during their working days, but directly from the contributions of current workers. From the perspective of National Account, PAYG is a tax-transfer mechanism whereby income, as part of the social product, is transferred from current income-earners and redistributed to the older section of the population (Cesaratto, 2005). Since Bismark initiated the first formal pension system in Germany in 19th century, many policy makers have adopted the PAYG system because doing so permits a windfall benefit to current retirees at the cost of deferring the windfall of future taxpayers (Feldstein, 1999).

Samuelson's (1958) famous article, "*An Exact Consumption-loan Model of Interest With or Without the Social Contrivance of Money"*, established the academic foundation that PAYG pension system is a desirable policy compared to funded system. From his analysis it can be inferred that in equilibrium, an unfunded PAYG pension system has a positive real rate of return which means the sum of the growth rate in the labor force and the growth rate of productivity (Feldstein, 1999). This can be illustrated in the following scenario:

Person A contributes £1 to a pension system which established under the PAYG principle at time 0. If the rate of growth of aggregate wages is W=L+P (L is the growth grate of labor force, P is the growth rate of productivity which equals the growth rate of wages per worker), therefore after n years, Person A will receive the total amount of £$(1+L+P)^n$.

Samuelson's theoretical analysis shows that in principle, PAYG pension system is a preferable policy choice for every generation to receive more than contribution payment, given that technology advancement, population growth and capital accumulation contribute to the growth rate of total real earnings overtakes the interest rate (Breyer, 1989; Aaron & Reischauer, 1998). However, it is worth noting that Samuelson's pension theory is based on two fundamental assumptions: a) there is no capital stock in the economy; b) the ratio of the number of working population to retirees is balanced. First, countries normally have capital stock in reality. For these economies, marginal product of capital is higher than the growth rate of aggregate wages, therefore in practice the country could use a funded pension scheme to buy retirement income at a lower price than by the PAYG scheme (Feldstein, 1999). Second, population ageing is one significant demographic trend of modern society neglected by Samuelson. In a society where the fertility rate is low and longevity is increasing, the growth rate of labor force will slow down, which means fewer workers need to support more pensioners. Under this trend contribution rates will rise in order to maintain the current relation between retiree benefits and preretirement wages, or government cut benefits to maintain the fiscal sustainability. This could partially explain the shift from PAYG to funded systems in countries such as Chile (Barr, 2002).

1.4 The politics of Chinese Pension Reform

The organization and management of the world most populous country with vast landscape is a challenging task from institutional perspective. The last imperial institution Qing Dynasty collapsed in 1911, further intensified this governance challenge for the later capitalist Republic of China (1912-1949) and socialist People's Republic of China (PRC) (1949-). According to Beland and Yu (2004), after the Chinese Communist Party (CCP) built the coherent bureaucratic state in 1949, the party's intention to preserve its political domination posed a strong obstacle to systematically increase the administrative capacity of the state because the revolutionary CCP and the state institutions followed diverse organizational rational and logic. Therefore the administrative capacity building of the developmental state unavoidably challenged the political authority of the CCP, which could explain why the Party started the movements to destroy the building of state institutions, the most well-known one is the Cultural Revolution (Zheng, 1997). Even though state institutions were rebuilt afterwards, the continuing consensus building efforts resulted the administrative policy process in a way that is coherent with the institutionalist perspective (Lieberthal & Oksenberg, 1988).

Hence, with the large administration scope and the state-building issues, Chinese government encountered huge challenges to organize a centralized, national welfare state in China. Traditional political science suggested that for all states regardless of partisan compositions or national differences, labor is the center of welfare growth (Rudra, 2002). From a historical perspective, this also applied to the early stage of PRC. Chinese leaders were convinced of the importance of labor in securing political stability and economic development, therefore the government adopted a command approach of guaranteed employment or full employment policy (Iron rice bowl) in state-owned enterprises in urban areas. Employees in SOEs and other public sectors were eligible for the

pension protection.

However, as the economic reform in SOEs proceeded, along with the marketization and economic liberalization in China since 1980s, rapidly rising unemployment in SOEs and rising employment in private sectors, which were inevitable process during the transition from a planned to a market economy, created powerful appeals for pension protection and objection on the state's continuing pure PAYG pension scheme with limited coverage.

2. DATA AND METHODOLOGY

Quantitative data in this thesis are mainly collected from two channels: 1) Chinese official data yearbooks and 2) reports from international organizations and research centers. As for the first channel, relevant data is collected and organized consecutive years of China Statistical Yearbook, China Labor Statistical Yearbook, China Labor and Social Security Yearbook provided by China Statistical Bureau since 1951 (with some interruptions during Cultural Revolution). The raw data is transferred into different types to figures and some with simple calculations to support the analysis. Besides the first channel, demographic data also comes from United Nation's Population Database, the World Bank Group and China Health and Retirement Longitudinal Study (CHARLS) database. Qualitative data in this thesis comes from secondary academic literatures and historical reviews.

This thesis aims at analyzing factors that drive the reforms of pension system in China, therefor the *Drivers of Change* (DOC) analyzing framework developed by Oxford Policy Management for exploring the interactions between economic, political and social changes is adopted (Holland, 2007). The research scope is focused on China-specific context in the era of opening up. China is a good case to analyze to what extent economic transitions along with demographic changes can explain the government reforms on pension system for two reasons: 1) China since 1950s has experienced two eras of distinct economic regimes. 2) As the most populous country, China has been experiencing diverse demographic changes including dramatic population growth, rural-urban migration and population ageing.

3. DISCUSSION AND ANALYSIS

Discussion and analysis on China's pension reforms in the era of opening up will be conducted in a chronological sequence: 1951-1984, 1984-2000, and 2000-2010. The first part of this chapter will provide a historical review on economic transition and demographic changes. Reforms of pension systems that have taken place during each period will be discussed combined with specific economic and demographic changes. Then an assessment will be conducted to evaluate whether pension reform in China's economy transition conformed to the forces that underlie economic activity and social circumstances particularly demographic changes.

3.1 Historical Review on Economic Transition and Demographic Change in China

3.1.1 Review on Economic Transition

Figure 1 compares the economic history of China and Western Europe from 1500 till 2000 based on Madison's estimates and available data (2007). Before 20th century, China's per capita GDP stagnated at much lower level than Europe, and some historians attributed to the bureaucratic political-institutional systems in Ming (1368-1644) and Qing (1644-1911) dynasty (Zhu, 2012). Since 1950, one year after the establishment of PRC, there was a dramatic increase in China's economy, but economic performance before and after 1978 differs significantly. Prior to the economic reforms in 1978, China was on the socialist path under the leadership of Chairman Mao Zedong, maintained the planned economy model, which is characterized by centrally controlled, inefficient, and relatively isolated from global economy (Morrison, 2014). The People's Republic imitated Soviet model in order to achieve its socialist transformation from an underdeveloped agricultural country to a developed industrialized country. Chinese Communist Party launched the Great Leap Forward movement for the big push towards industrialization, but resulted to 20-49 million people death due to starvation during 1959-1962 famine (Wright, 2011). In 1960s and 1970s, a series of social and political movements were carried out to strengthen the party's control and promote the development of capital-intensive heavy industries through State-Owned Enterprises (SOEs).

According to Chinese government statistics, China's real GDP grew at 6.7% from 1953 to 1978 (Figure 2), but many specialists have been questioned the accuracy of the data since China at that time was trapped into the so-called "a wind of embellishment and falsification" so the real production level was often exaggerated (Rawski, 2001). The industrialization process during this period created the misallocation of resources in industries and resulted the inefficiency, overflowing of redundant workers and the over production of no-market output in most SOEs (Zhu, 2012).

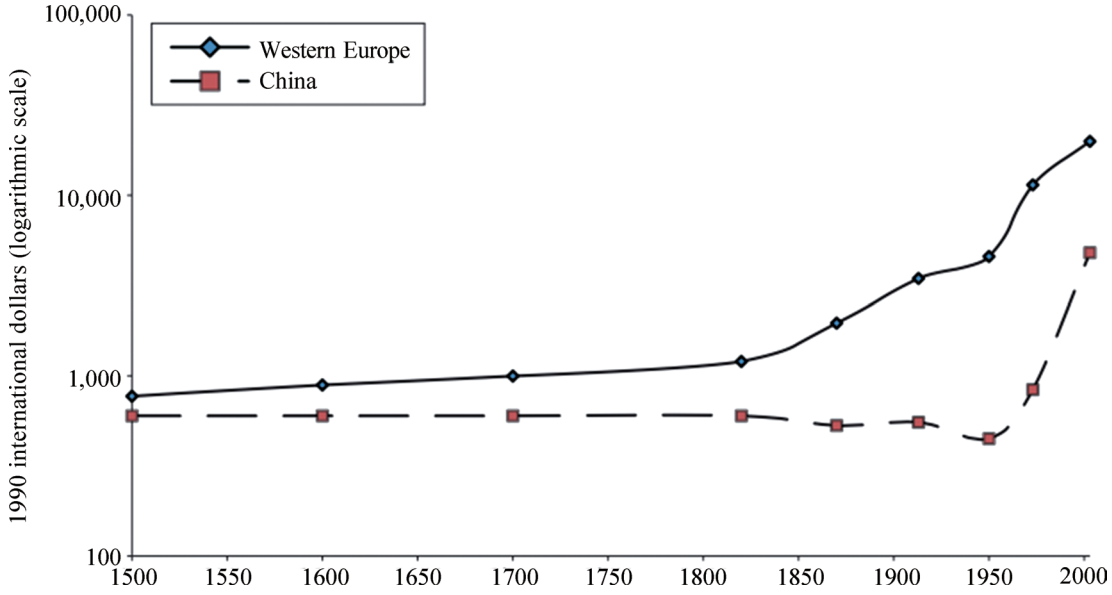

Figure 1
Per capita GDP of China and Western Europe (1500-2000).
Source: Madison (2007).

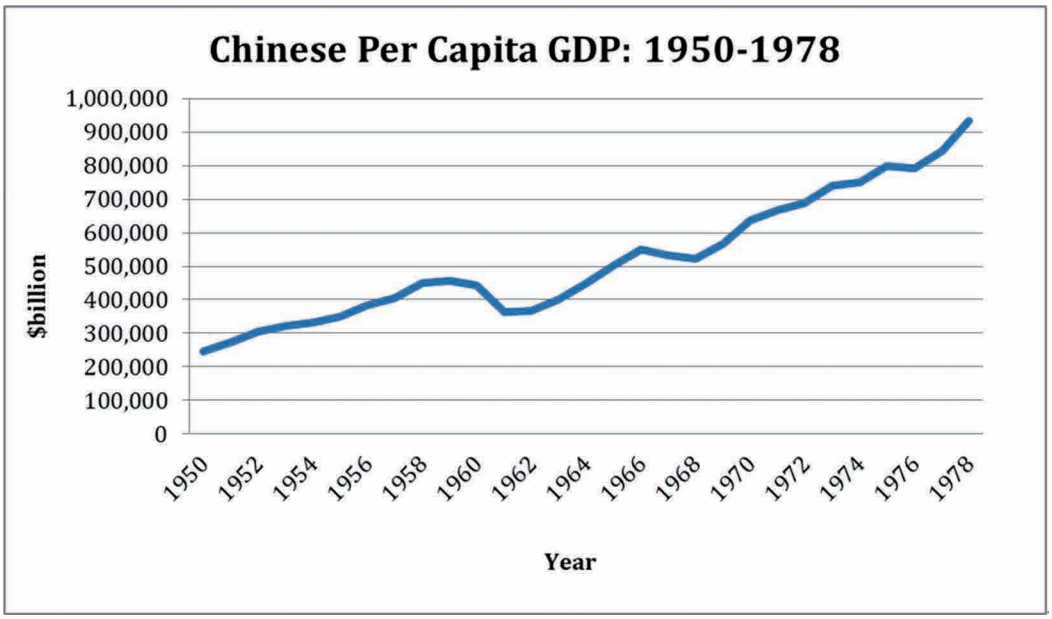

Figure 2
Chinese Per Capita GDP: 1950-1978 ($billion, PPP basis).
Source: Historical Statistics of World Economy: 1-2008AD.

In the late 1970s, China initiated a full-scale economic reform with a combination of regulation by plans and regulation by the market. Since then, China has been one of the fastest growing economies and created the experience of "China miracle" for other developing nations undergoing similar economic transition. According to the World Economic Outlook by the International Monetary Fund, China's annual real GDP in 1980-90 and 1990-99 averaged around 10.1% and 10.7% respectively, which implies that Chinese economy would double in size roughly every seven years (Figure 3).

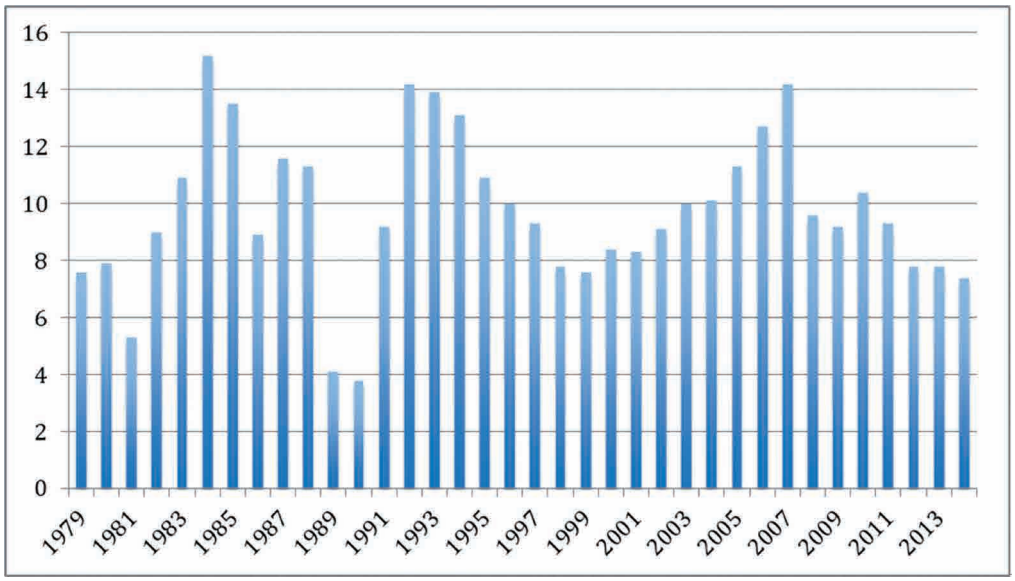

Figure 3
Chinese Real GDP Growth: 1979-2014 (percent)
Source: World Economic Outlook 2014.

China at first introduced household responsibility system in rural areas and abolished the people's communes system in late 1970s. In urban areas, the decentralization of SOEs and the opening up to outside world eliminated the rigid structure of the planned economy, gave space to the development of non-collectively-owned enterprises, which in together dramatically altered the structure of Chinese economy (Wu, 2011). Rather than a wholly controlled price system during the pre-reform era, the government recovered the price mechanism and partially liberalized the role of market in production and consumption. In special economic zones and later in more broad areas, the government also adopted an open-door policy to attract foreign direct investment (FDI) and liberalize foreign trade (Lin et al., 2003). Till the end of 1990s, Chinese economy has been transformed from an underdeveloped economy under state control into a fast-growing economy where market played a major role.

3.1.2 Review on Demographic Changes in China

Demographers define demographic transition as a set of changes in reproductive behavior that societies experience the transformation from a pre-modern period with high fertility and high mortality to a post-modern one with low fertility and low mortality (Coale, 1984; Kirk, 1996). According to the Dyson (2010), demographic transition is categorized into three stages, characterized (1) higher birth rate, higher mortality and low natural growth rate of population; (2) high birth rate, low mortality and high natural growth rate; (3) low birth rate, low mortality and low natural growth rate of population. However, the classical demographic transition theories were developed from Western European countries' experiences, therefore when the theory is applied to developing countries with diverse socioeconomic conditions, the reduction of fertility and mortality from high to low levels happened over shorter lengths of time. Despite the transition processes are different, there is a convergence of demographic transition theory that the world population will eventually reach the level of low fertility, low mortality and low population growth, known as the completion of demographic transition.

Mortality Decline

With the return to a peacefully domestic environment, China entered the period of demographic transition since 1950s. When People's Republic of China was initially established, China was a typical pre-transition state with high fertility and mortality. In 1950 the crude birth rate, crude death rate and natural growth rate were 37‰, 20‰, and 17‰ respectively. From 1950, the crude death rate continuously declined except during the three years' Great Famine from 1959 to 1961, and reached a low level of below 7‰ with small fluctuations ever since (Figure 4).

Fertility Decline

Figure 4 shows that fertility decline occurred around 15 years after mortality decline, but achieved a low level within a short period of around 20 years. From 1970s, the crude birth rate declined dramatically from around 33‰ in early 1970s to 18‰ in late 1970s. Demographers attributed the transition in fertility to the family planning programmes introduced in the early 1970s in China. Since then almost all researches on Chinese population indicate a below replacement level of fertility (2 ‰).

Although China is still the most populous state in the world, it's population has been fundamentally changed over the past six decades. Today China's fertility rate is among the lowest in developing world, and its structure has also changed considerably. Along with dramatic economic

changes, different demographic changes including the rapid population ageing and massive migration of floating people have brought huge influence on the labor market and implications for reforms of social policies.

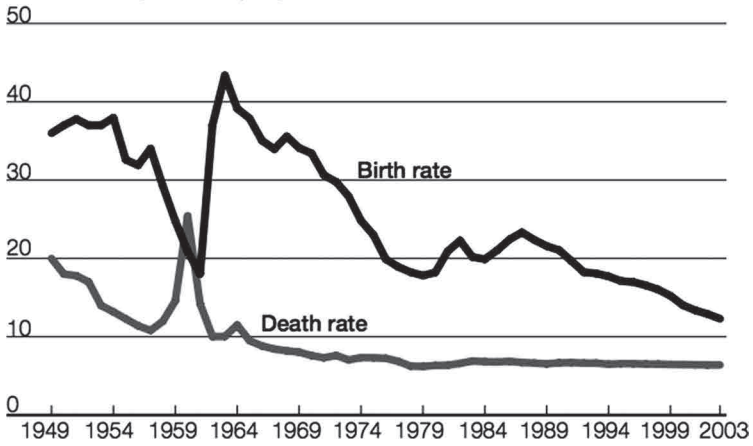

Figure 4
Birth and Death Rate in China: 1949-2003 (per 1,000 people).
Source: National Bureau of Statistics (2004).

Population Growth

The second stage of the demographic transition created a rapid increase of the population size. During the interval between mortality decline and fertility decline, the natural growth of population, which equals the difference between fertility rate and mortality rate, rises at the fastest rate. As we can see from Figure 5, the growth rate maintained high during 1960s and 1970s. Till year 1990, the population of China reached around 1 billion, which is regarded much lower than actual number due to the poor statistical research in rural areas.

Year	Population Growth Rate (%)	Total Population (million)
1960	1.83	667.07
1970	2.76	818.32
1980	1.25	981.24
1990	1.47	1135.2
2000	0.76	1262.6
2010	0.48	1.337.7

Figure 5
Population Growth 1960-2010.
Source: World Bank (2015).

Population Ageing

Population ageing, the process that brings rising proportions of older persons, has become a huge social problem for most developed countries especially in Europe since the mid-twentieth century. The mortality and fertility decline along with the prolonged life expectancy leads to population ageing in almost everywhere just like demographic transition at different level and speed (UN, 2013). Population has been ageing for several decades in developed areas, while in developing countries, population ageing is a relatively recent phenomenon but at a fast speed. China is one of the fastest ageing countries in the world. In the end of 2012, the proportion of the people over 60 in China was 14.3%, higher than the world average (11%) and is predicated to rise to 34% in 2050 (UN, 2015).

3.2 China's Pre-reform Pension System Under Planned Economy: 1951-1984

Economic Background

Prior to 1979 the economic reform and opening up, China maintained a centrally planned economy. With the damaged economic foundation and the necessity to build up national power and national security, Chinese government set out to develop heavy industries through direct government control. A series of Five-Year Plans were introduced as the strategies to prioritize the boom of heavy industries through direct control and command system. Under such planned economic system, government determined prices of all goods and assigned agricultural products low while industrial products high in order to generate surplus for nationalized enterprises and strengthen fiscal capability for industrialization. Studies of Chinese economic history in the socialist era found commonalities with USSR's path of industrialization (Hay et al., 1994). The strategy of giving overwhelming

priority to heavy industry sectors was copied the model of Soviet Union under Stalin, who was a strong supporter of planned economy. The famous historian of modern China Maurice Meisner in his book *Mao's China and After* (1977) regarded Mao's era as China's modern industrial era, and the huge investment in heavy industries and military industries promoted the dramatic increase in GDP than in other sectors. Rapid industrialization was achieved through high rates of investment and labor force participation, with squeezing agriculture and light industry. During the period of *Great Leap Forward campaign* (1958-1962), which aimed at speedily transforming China into socialist society through big push in industrialization and overwhelming collectivization, an estimated 60% decline in agricultural output and the greatest famine in 20th century dramatically hammered Chinese young economy.

To support the rapid industrialization, Chinese government started the large-scale investment in heavy industries in early 1950s and established many centrally controlled, state-owned enterprises. In China, SOEs embrace the monopoly power in key industries, an economic characteristic that can be traced back to the planned economic era. Planners or officers had the absolute power in setting production targets, assigning consumption quotas, and allocating resources among different industries. Besides, in urban areas, private enterprises that once welcomed and encouraged to develop independently before the series movement in 1953 were nationalized into socialized enterprises with state ownership.

Pension System Under "Iron Rice Bowl"

Chinese leaders clearly recognized that without abundant capital or modern technology, labor was a decisive factor for industrializing China. Even before the establishment of People's Republic of China (PRC), social security system was put into agenda. Chinese workers had a relatively high social status for a long time especially during Mao era. In the *Article 1 of Chinese Constitution*, PRC is "a people's democratic state led by the working class and based on the alliance of workers and peasants" (Wang, 1999). The economic and ideological priority of workers in China was reflected in the *Labor Union Law*, one of the first pieces of government legislation, which provides specific rights and social prestige for the workers. In the days of China's centrally planned economy, government introduced programmes that mainly focused on the welfare of employees in large-sized SOEs (above 100 employees) and government organisations in rural areas, where people enjoyed the "cradle-to-grave" social protection (Saunders & Shang, 2001). Therefore SOEs under the planned economy were described as "micro welfare states" in which people were guaranteed lifetime employment along with social benefits including old age pensions, medical insurance and housing, which is described as "iron rice bowl" (Jackson et al., 2009).

In 1951, the initial pension system in PRC was introduced under *National Labor Insurance Regulation*, the first formal pension system of China implemented by the State Council, which aims to promote the transformation of abundant labor force into the fuel of rapid economic growth. Retired employees in SOEs could receive 50% to 70% of their salaries at work as pension benefit. Backed up by the government, this system was based on the PAYG principle, unfunded with defined benefit, where enterprises paid 3% of their salary expenditures on funding the pension, of which 70% was paid as pension benefit to the retired employees directly and the rest 30% was used to finance the social pension pool as a form of pre-funding. With the improvement of the economic situation and political stability, Chinese government gradually expanded the coverage of old-age pension. In 1958 the *Temporary Regulations on Retirement of Workers* included both governmental officials and industrial workers who came from enterprises with lower than 100 employees.

The period of pension stagnation started with the outbreak of "Cultural Revolution" (1966-1976). Fully concentrated on the battle for "pure communist ideology", the country stopped pooling pension funds, abolished organizations including *All-China Federation of Trade Unions* (ACFTU) and the *Ministry of Labor*, and transferred all accumulated fund of pension to other usages (Holzmann, 2000). Pension management was shifted to individual SOEs which were responsible for paying the pension for their employees from income account. However, the pension scheme was not re-constructed even after the Cultural Revolution ended and enterprises continued to be solely responsible for pension provision.

Challenges and Responses of Pension System in the Late 1970s

The first three decades of PRC witnessed a rapid population growth due to the sharp mortality decline with an averaged high fertility (See 4.1.2). Between 1952-1978, the total labor force grew from 207 million to 398 million. However, under the economic system during this period, employment creation was relatively slow because most industries were capital-intensive while services and consumption industries were squeezed and neglected. Therefore even confronted the booming labor force, modern industries and service sectors could only absorbed 37% of working population increase. Combined with only 2% growth in agricultural workforce during this period, huge employment pressure was exerted to SOEs (Lee, 2009). This situation got worse at the end of 1970s. When Cultural Revolution ended, tens of millions of young people forced in the *Up to the Mountains and Down to the Countryside Movement*[1] returned to hometowns. While the

enterprise-based pension system was increasingly unable to meet present obligations, social stability was seriously threatened by widespread unemployment.

Under such economic and social circumstances, the State Council amended the pension regulations in 1978, allowing pensions to be paid for people who worked continuously for 10 years rather than previous minimum 20 years and increasing pension rates (Salditt et al., 2007). The new pension regulations towards a higher benefit and easier eligibility were clearly designed to encourage early retirement in order to accommodate the flow of work force supply. The qualifying years of total employment dropped from 25 for men and 20 for women to only 10 years for both men and women (Figure 6). As a result, the number of pensioners nearly doubled in the year after the 1978 regulations with a large increase in pension expenditure, which motivated further reform in the next period.

	1951	1953	1958	1978
Retirement age				
Men	60	60	60	60
Women	50	50	50	50
Qualifying years of total employment				
Men	25	25	25	10
Women	20	20	15	10
Qualifying years of employment at current place of work				
Men	10	5	5	n.a
Women	10	5	5	n.a
Replacement rate (%)	35-60	50-70	50-70	60-90
Life expectancy at birth	41	41	45	65

Figure 6
Comparison of Retirement Age, Eligibility and Replacement Rates: 1951-1978.
Source: Yearbook of Labor Statistics China (various years).

3.3 Pension Reforms Under Economic and Demographic Transitions: 1984-2000

The economic and social background of Chinese pension system in this period changed markedly and imposed great pressures for pension reforms. Deng Xiaoping's Asian tour from 5th to 14th November especially to Singapore provided the most powerful message that market economy can perform better (To, 1981). Lee Kuan Yew, Singapore's first prime minister and one of the most influential politicians in Asia, shared Singapore's modernization experience with Deng Xiaoping. Not long after Deng's Asian tour, China started the market-oriented economic reform and launched several waves of institutional and economic changes since 1978 (Béland & Yu, 2004). The coherent packages of the reform covered from agricultural policies of adopting the household responsibility system to marginal liberalization of markets to attract foreign investment.

3.3.1 Economic Changes

SOEs' Financial Pressures on Pension Provisions

As mentioned above, under the planned economy, a typical enterprise in China was controlled by administrative agencies both in central ministries and in various levels of local government, and it was the state rather than the SOEs that bared the profits and losses, in which the pension expenditures was part of the production cost (Saunders & Shang, 2001). The market reform changed the relations between enterprises and the state. Since 1984, the Chinese government took serious steps to reform state enterprises and give them some autonomy in production, marketing and investment decisions. With a series of fiscal reforms that effectively transferred the residual claim to enterprise earnings to municipal level governments, the property rights of previous SOEs were transferred to local governments (Zhu, 2012). Besides, instead of handing in all earnings to the state, the SOEs were allowed to keep the remaining benefit within the enterprises after paying the required taxes to the state (Chow, 2004).

However, the marketization process, which refers to the conversion from a planned economy with state intervention to a market economy where competition and self-regulation are promoted, negatively affected the financial situation of Chinese SOEs and therefore weakened their capacity to pay their retirees the promised full pension benefits. Confronting the competition from

[1] The *Up to the Mountains and Down to the Countryside Movement* (in Chinese shang shan xia xiang) during the *Cultural Revolution,* which was designed to prevent bourgeois thinking, forced tens of millions of fresh high school graduates out of cities and resettle in countryside.

both the emerging private sector enterprises as well as international competition from the opening up policy, SOEs for a long time relied on the monopoly power and state support cannot effectively integrated in the market competition, and therefore suffered terrible loss. According to Smyth (2000), the proportion of SOEs that ran deficits in industrial sectors jumped from 19.2% to 38.2% during the period 1980-1997. In Figure 7 we can also find that especially in 1990s, there was a large amount of losses in State-owned industrial enterprises. Besides, without a clear pension reserves, SOEs had no choice but followed the pre-1980 high replacement rate, which was around 80% of current average salaries. Hence with poor performance after the economic reform, Chinese SOEs faced huge financial pressure on the pension responsibility under the traditional PAYG system.

Year	*Amount of losses (billion yuan)*	*SOEs at loss/SOE total number (%)*	*Total losses/total pre-tax profits (%)*	*Total losses/total net profits (%)*
1978	4.21	19.30	5.32	8.27
1979	3.64	17.64	4.21	6.46
1980	3.43	19.17	3.78	5.86
1981	4.60	22.90	4.93	7.93
1982	4.76	20.78	4.89	7.96
1983	3.21	12.75	3.11	5.01
1984	2.67	10.20	2.31	3.77
1985	3.24	9.66	2.43	2.43
1986	5.45	13.07	4.06	7.90
1987	6.10	13.00	4.03	7.76
1988	8.19	10.91	4.62	9.18
1989	18.02	16.03	10.16	24.25
1990	34.88	27.55	23.20	89.86
1991	36.70	25.84	22.09	91.25
1992	36.93	23.36	18.99	69.01
1993	45.26	28.78	18.44	55.39
1994	48.26	30.89	16.78	58.21
1995	63.96	33.53	22.25	96.09
1996	79.07	37.70	28.89	191.61
1997	83.10	NA	28.58	194.22

Figure 7
Stated-owned Industrial Enterprises Running a Deficit
Source: China Statistical Yearbook (1998).

Year	Pensioners (millions)	State pensioners as share of total	Urban collective pensions as share of total	Ratio of workers to pensioners
1978	3.14	90	10	30.3
1979	5.96	79	21	16.7
1980	8.16	78	22	12.8
1981	9.50	78	22	11.5
1982	11.13	78	22	10.1
1983	12.92	79	21	8.9
1984	14.78	72	28	8.0
1985	16.37	71	29	7.5
1986	18.05	72	27	7.1
1987	19.68	72	27	6.7
1988	21.20	73	27	6.4
1989	22.01	74	26	6.2
1990	23.01	75	25	6.1
1991	24.33	75	24	6.0
1992	25.98	76	23	5.7
1993	27.80	77	21	5.4
1994	29.29	77	21	5.1
1995	30.94	78	20	4.8

Figure 8
Pensioners by Ownership Type and Ratio of Workers to Pensioners: 1978-1995
Source: China Statistical Bureau (1996).

Declining Workers-To-Retirees Ratio

When Chinese pension first established in 1951, the official retirement age is 50 for women and 60 for men with the minimum 20 years registration. Therefore the issue of pension had not raised public concern until late 1970s when the qualified retirees started to reach their retirement age. The ease of pension eligibility to free up jobs for the young through early retirement further gave rise to a rapid increase in the number of pensioners, doubled from 1978 to 1980 and doubled again in 1986 (See Figure 8). Confronting intense competition from marketization and dependency from the state as mentioned above, SOEs could only provided limited employment with averaged 3% annual growth, which contributed to the progressively decline of workers-to-pensioners ratio (West, 1999).

The Shrinking Coverage of Pension

Till the early 1990s, the pension reforms undertaken by the government primarily focused on urban especially state enterprise workers, leaving a large number of workers in private sectors and rural people outside pension protection. Since the mid-1990s with the deepening reform towards a market-oriented economy, the changing structure of Chinese economy especially the downsizing of SOEs and the rapid development of private and informal sectors highlighted the problem of shrinking coverage of pension.

The first factor contributed to the shrinking coverage is the downsizing of state-sector employment. In July 1992, the government announced *Regulation on Transforming the Operational Mechanism of State-owned Industrial Enterprises* which allowed inefficient and poor-performing enterprises to modify their structure or to be sold to public or the employees. The 15th Party Congress held in September 1997 made a major breakthrough on ownership issues of SOEs. State ownership was downgraded to a "pillar of the economy" and private ownership was elevated to an "important component of the economy", officially changed the almost 50 years privileged state monopoly of SOEs. Local authorities were given more space in restructuring state enterprises, and diverse patterns such as bankruptcy, auctions, mergers or acquisitions were adopted (Naughton, 2006).

Along with the downsizing of SOEs, the official number of laid off workers increased from 3 million in 1993 to 17.24 million in 1998 (Chinese Labor Statistics, 1999). However, the real number of the laid-off workers during this period seems to be a mystery. According to the Ministry of Labor and Social Security report 1999, the official number of redundant workers from SOE systems was 6.1 million at the end of 1998, which was considered much lower than the real number. Some scholars estimated that around 10-15 million SOE employees were laid off for this time range (Gu, 1999; Also see Figure 9). Both the downsizing of SOEs and layoffs contributed to the shrinking of pension coverage in public sectors.

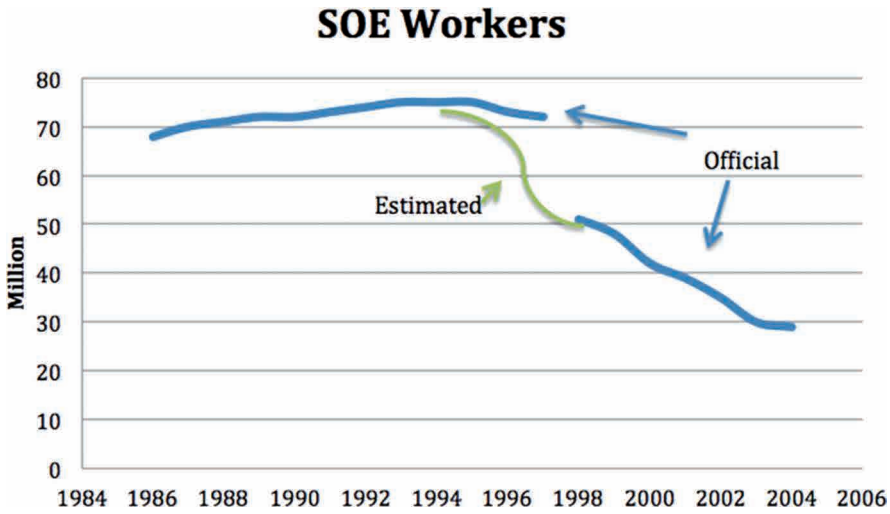

Figure 9
SOE Workers
Source: Naughton (2006).

The second factor contributed to the shrinking protection of pension system was the increased employment in non-state sectors. Till the first several years of economic reform, almost all urban workers were formal employees in SOEs. The economic reform loosened the entrance of private enterprises and self-employed business into market since 1980s, and changed supplementary role of private economy to an important component of the socialist market economy (Qian, 2000). Demand for labor in private sectors increased enormously due to the strong economic growth, and from Figure 10 we can see the increase in urban private enterprises and individual employment. However, the pension coverage was limited primarily to employees of government and party organisations, SOEs, and large urban collectives, which excludes workers in private sectors. Therefore the pension coverage shrunk with self-employment and employment in private enterprises grew.

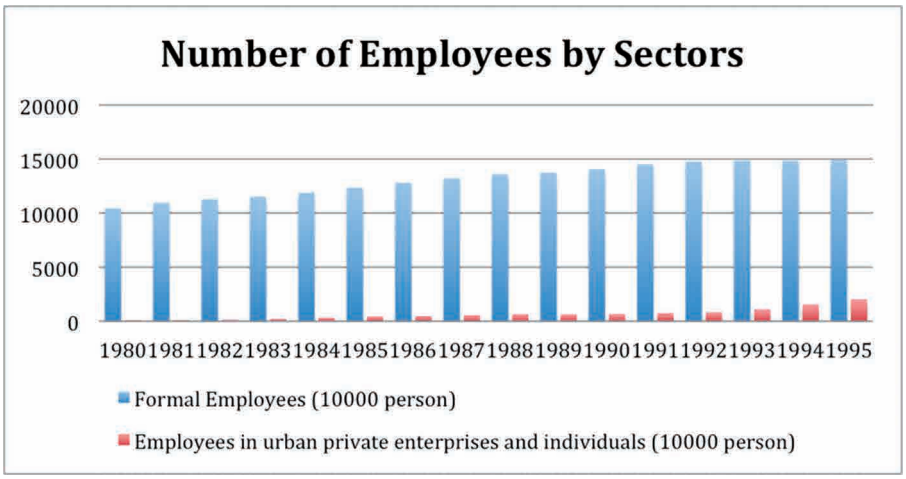

Figure 10
Number of Employees by Sectors
Source: China Statistical Yearbook 1996.

3.3.2 Demographic Changes

Pension Pressure From Changing Demographic Structure

Over the past several decades, the continuous fertility decline and longevity increase together give rise to population ageing. According to the data from United Nations Population Division, China's total fertility declined from six children per women in 1950-1955 to fewer than two children per women in 1990-1995 (UN, 2009). The rapid decline especially between 1970 and 1980 could attribute to Chinese "later-longer-fewer" campaign which means delayed marriage, enlarging the interval between births and fewer children, as the guidance of family planning to slow population growth in 1971 (Conly & Camp, 1992). And later in 1979, the most influential one-child policy was announced in China led to continuous decline of fertility. The proportion of dependent working age population increased while the proportion of children decreased generated a favorable demographic condition for Chinese economic growth since the late 1970s, which could partially explain the booming GDP growth (Jackson et al., 2009). Benefit from the improvement in nutrition and health care, the longevity of people gradually increase as show in the figure of people's expectancy at birth (Figure 11). As a consequence, according to the estimates by Zhang et al. (2000), the ratio of pensioners to workers has increased from 16.4% in 1985 to 37.1% in 2000, and is projected to reach around 50% by 2020.

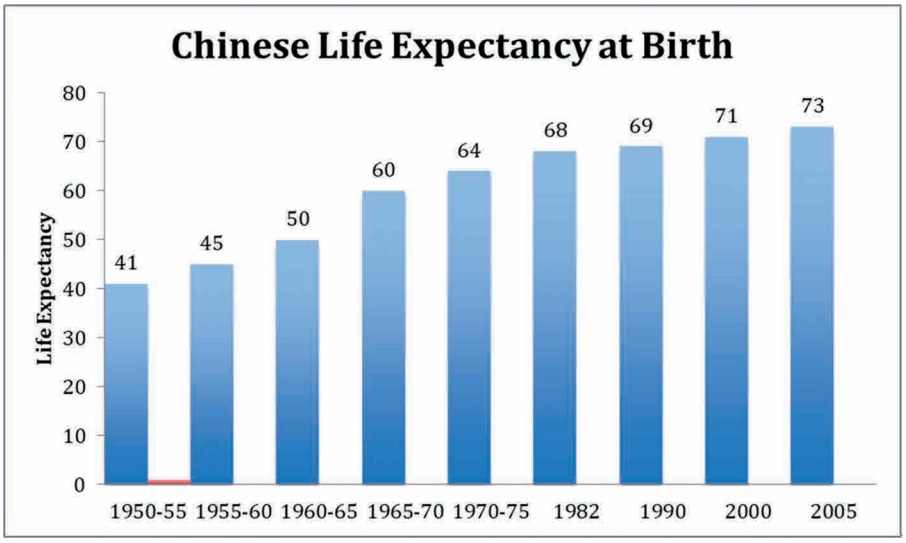

Figure 11
Chinese Life Expectancy at Birth: 1950-2005
Source: UN (2007).

Pension Pressure From Rural-urban Migration

Chinese internal migration from rural to urban areas also has important implications for pension system coverage. From Figure 12 we can see that between 1980 to 1990, a large amount of rural people moved to towns and cities at a relatively low urbanization rate. The rapid migration

could be explained by Arthur Lewis's dual-sector model-agricultural and industrial sectors-of developing economies. He assumed the surplus labor in agricultural sector would be transferred into modern manufacturing sector without substantial increase of wages (Cai, 2012). The enlarging urban-rural development status and the huge demand for labors in urban private sectors encouraged the migration of rural farmers, but meanwhile increased the number of pensioners who take part in the urban social security for pension income.

Year	Total population (10,000)	Urban population (10,000)	Net migration growth in persons (10,000)
1980	98,705	19,139	487
1985	105,851	25,094	831
1990	114,333	30,191	345

Figure 12
Rural-urban Migration 1980-1990.
Sources: China Statistical Yearbook 2000.

3.3.3 Critical Analysis on Chinese Pension Reform 1980-2000

Aware of the increasing pressure from pension provisions and the enlarging pension demand as well as the demographic change, the Chinese government implemented major reforms in pension system in this period with the underlying economic reform especially the restructuring of SOEs.

Three Tier Pension System to Ease SOEs' Financial Burden

The State Council Document 77 of 1986 published provisional regulations on pension pooling, which required individual contributions (up to 3 percent of their wages) into the pension system, aimed at releasing the financial burden for SOEs on pension payment. Along with the employees' contributions, enterprise also contributed 15% of payroll to the pension pool, which further established a more effective funding base. The pension pool worked in this mechanism: If the pension cost was higher than the contribution rate, then the pool would supply pension payment; While if the pension expenditure was less than the contribution rate, then the surplus would remit to the pool. The set of contribution pool from both employers' and employees' participation was the first step towards a multi-pillar pension system. Besides, this practice could be viewed as part of the government efforts on strengthening the commercial competitiveness of SOEs under economic reform. Reacting to the trend of marketization and privatization along with economic reform, in late 1980s the pooling system was extended through city or provincial level to private sector enterprises including private companies. foreign enterprises and joint stock companies (World Bank, 1997).

Year 1991 was regarded as the milestone for China's pension reform history because the prototype of three pillars pension system was formed. Under this model, an essential statutory pension tier was jointly shared by the state, the enterprises and pensioners themselves. The second pillar was financed by surplus from operations with supplemental pensions provided by the enterprises, and pillar 3 was funded by individuals on a voluntary base with either periodic payment or lump sum after retirement. Since pillar 2 and 3 were not mandatory but depended on the enterprises' profitability and individuals' willingness, in practice, no SOEs set up pillar 2 and only a few individuals participated pillar 3 at the early years of 1990s.

Broaden Coverage

The 1995 State Council Circular on Deepening the Reform the first time provided a guidance of a unified national pension system with two initiatives[2] for provincial administration. However, rather than broadening pension coverage, the coexistence of the two initiatives created conflicting schemes at local level and resulted a further fragmentation of Chinese pension system, because local government attempted to differentiate the pension design from others to keep control on the pension funds (World Bank, 1997). In order to unify the fragmented pension system, the State Council approved *Document No. 26 Establishment of a Unified Basic Pension System for Enterprise Employees* in 1997. This reform was under the influence of Word Bank's suggestions on the initial formulation of the multi-pillar pension design, and aimed toward a system which covered all workers in both state and non-state sectors. The expanding coverage of pension from mainly SOEs employees to the entire urban workers including self-employed matched up the rapid development of private sector in economy and the emerging needs of pension protection. The 1997 reform symbolized the formal establishment of China's Three-pillar pension system which is adopted as the principle pension framework till now (Figure 13).

[2] Plan 1: Emphasize on individual account with 3% individual contribution of total wages. Plan 2: Emphasize on social pooling and local authorities decide on the contribution sharing between employees and employers.

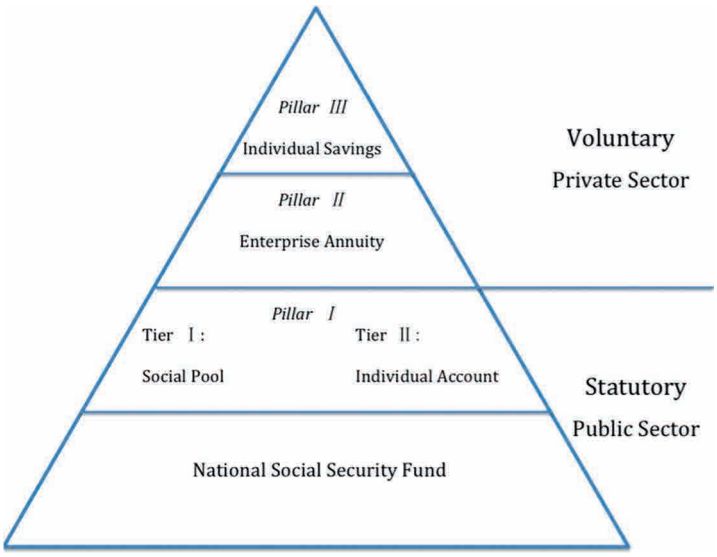

Figure 13
Current Structure of China's Pension System
Source: Salditt et al. (2007).

Remaining Issues

(1) Low overall coverage rate

Despite the government had made great efforts in broadening the pension coverage, the overall coverage ratio was quite low. As shown in the Figure 14, the coverage ratio in urban China gradually increased during 1990s, but till the early 2000s, the coverage ratio was still below 40%, which means for every 10 working people in urban China, only 4 of them under the coverage of formal pension system. The overall coverage rate in both urban and rural areas is further lower. Figure 15 is the comparison of coverage between China and other eight developing countries. While the overall coverage rage of China in 2002 is 20.7, lower than half of the averaged rates of the other eight countries. More recent data shows that, in 2007, just 3 in 10 Chinese workers are covered by public pension system (Figure 16).

	Pension Participants	Pensioners	Dependency ratio	Urban working population	Coverage ratio
	Million person		%	Million person	%
1989	48.2	8.9	18.5	216.9	26.3
1990	52.0	10.9	20.9	228.9	27.5
1991	56.5	16.8	29.7	239.1	30.7
1992	77.7	18.4	23.7	249.4	38.6
1993	80.1	20.8	26.0	259.7	38.8
1994	84.9	22.4	26.4	270.3	39.7
1995	87.4	23.6	27.0	281.2	39.5
2000	104.5	33.8	32.4	343.0	40.3
2001	108.0	33.8	31.3	357.0	39.7
2002	111.3	36.1	32.4	371.9	39.6
2003	116.5	38.6	33.1	391.7	39.6

Figure 14
Urban Pension Statistics in China: 1989-2003.
Source: National Bureau Statistics (2004). UN population database (2004).

Country	Coverage Rate (%)	GDP per capita ($)
Argentina	55.4	6452.7
Bolivia	23.1	1011.8
Costa Rica	69.3	4208.4
El Salvador	36.7	2128.1
Mexico	71.9	5805.6
Peru	27.2	2084.7
Uruguay	41.4	5136.8
Malaysia	60.5	3882.6
Average	48.2	3838.8
China	20.7	982.7

Figure 15
Comparison of Coverage Rates and GDP Per Capital 2002
Source: coverage rage from Claramunt (2004); GDP per capital from the World Bank Data.

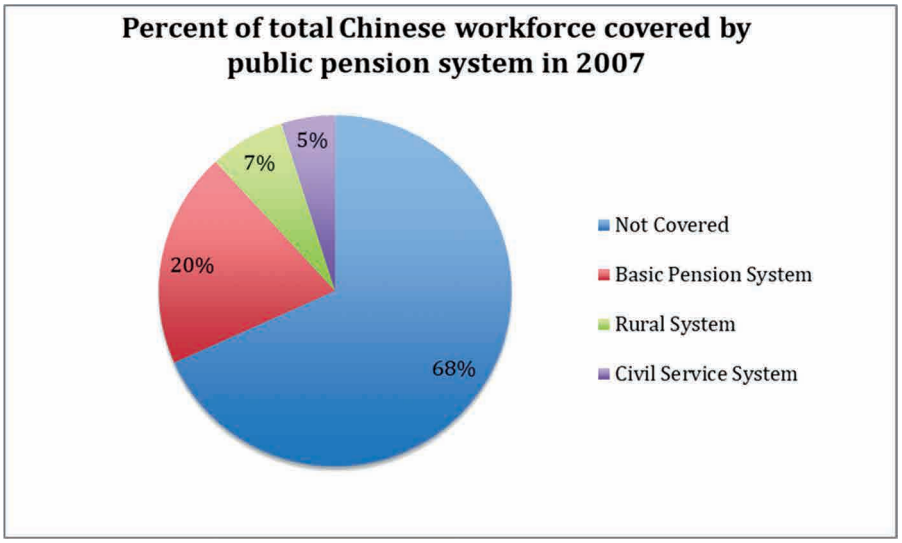

Figure 16
Percent of Total Chinese Workforce Covered by Public Pension System in 2007
Source: Jackson et al. (2009).

One reason that can partially explain the relatively low urban coverage rate is the lagging pension arraignment for rural-urban migrant workers. As mentioned above, the economic reform promoted the huge population floating towards prosperous cities in coastal China. But due to Chinese *Hukou* System which classified all Chinese into agricultural or non-agricultural residents, rural migrant workers are denied the access to pension protection. According to an empirical analysis on the issue of social insurance received by the migrants in Jiangsu Province, China, only 15% of total migrant workers were enrolled in the urban pension system (Nielsen et al., 2005).

(b) Few contributions to population ageing challenge. It is clear that the practice of the government on pension systems during this period was an effort to reduce the contribution burden on SOEs. The enlarging coverage of private sector workers brought working-age group in making contributions for several years before they could claim a pension benefit (Jackson et al., 2009). However, under the PAYG pension scheme which means a large proportion of the enterprises' and workers' contribution was used to pay for the pension responsibility of prior retirees, those workers in private sectors had little incentive to participate, which further resulted to government's failure in expanding pension coverage. In order to meet the pension payments, the local social security bureaus on one hand increased the contribution rate, on the other hand diverted the contributions in individual account to cover the shortfall. The "empty" of individual account further cannot play its role in releasing the financial burden of population ageing and uncertain economic growth (World Bank, 1994).

3.4 Pension Reform Under Economic and Demographic Pressures: 2000-2010

3.4.1 Economic Changes

From Investment and Export-led to Consumption-led Growth Strategy

Since 2004, the fundamental alter of Chinese growth strategy was from investment and export-led development to a path that relied more on domestic consumption. Especially after the 2008 Financial Crisis which hit the momentum of China's economic growth, the drop of GDP growth rate and industrial production rate after 2008 further motivated the structural adjustment of Chinese economy (See Figure 17). Since the economic reform and opening up in late 1970s, Chinese economic growth was largely engine by huge investment, export accompanying the beneficial demographic dividend, and the GDP per capita markedly increased from $193.3 in 1980 to $4514.9 in 2010 (World Bank, 2014). The rapid growth in income did not transfer into consumption mainly because the high savings of Chinese household.

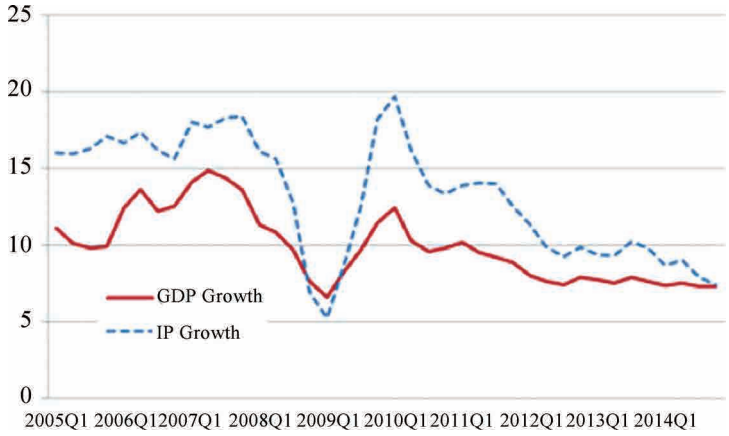

Figure 17
China: GDP and Industrial Production Growth.
Source: National Bureau of Statistics.

China has a high savings rate and the gross savings reached more than 50% of total GDP in 2010, much higher than the 22.4% world average level (World Bank, 2014). Except for cultural reasons, the lack of a well-developed social protection system is a major factor discouraging future consumption (Cai, 2012). Chinese people are not clearly aware how much benefits they can expect to get from pension system, confronting the overwhelming population ageing pressure and its influence on the soaring ratio of beneficiaries to workers, therefore people especially approaching retirement age choose to save more and consume less to secure occasional expenditures. In order to sustain economic growth in China, the provision of adequate and reliable pension system is indispensable for encouraging consumption and boosting output through a reduction of precautionary savings.

Pension deficit and unsustainable finance

The transition from purely PAYG pension system built in socialist China to the multi-pillar pension system after 1997 faced the question of what to do with the previous pensioners and transitional workers while implementing the new system. Document 26 divided the pensioners into three groups:

Group 1. Retirees that left the job position before 1997 maintained the original PAYG system.

Group 2. For those who entered the labor market in or after 1997 would be applicable to the three-pillar pension system.

Group 3. For those who had worked for several years but would retire after 1997 would be under the arrangement of transitional plan.

The transition cost mainly came from the basic pension provision for Group 1 and the input to establish individual account. The transition problem was obvious: no contribution that had been accumulated for the pension benefit for the older workers before the reform. Critics argue that transition from a PAYG system to a different system would require current employees to "pay double", which means during the transition period, the combination of the contribution required to pay retirees in Group 1 and the savings required to fund future benefits would be 40% (Frazier, 2004). In theory, as new retirees draw on their funded individual accounts as a source of retirement income, the contribution rate would gradually decline over time during a transition. However, the large unfunded liability of old pension system as well as the low contribution rate could not meet the legacy obligation. Therefore at the provincial level, revenues that should be pooled into the individual account (pillar 2) had to transferred to basic pension payment (pillar 1), which made the individual account empty or notional. For one thing, the underdevelopment of individual account created pressures for the satiability of Chinese pension system. For the other, central government subsidized individual account heavily, from more than ten billion RMB in 1998 to nearly 40 billion in 2000, which exert financial pressure on government budget (MOLSS, 2001).

3.4.2 Demographic Pressures

According to the UN projections for 2050, the age group of above 60 years will arrive 34% of all Chinese population (UN, 2013). As the life expectancy rate continues to rise, the old age dependency ratio-the number of population aged 65 and over divided by the 15-64 working age group-gradually increase and is estimated to reach around 40% on 2050 (See Figure 18). The accelerating population aging and the rising responsibility on supporting the old-age group impose much more pressure on pension system.

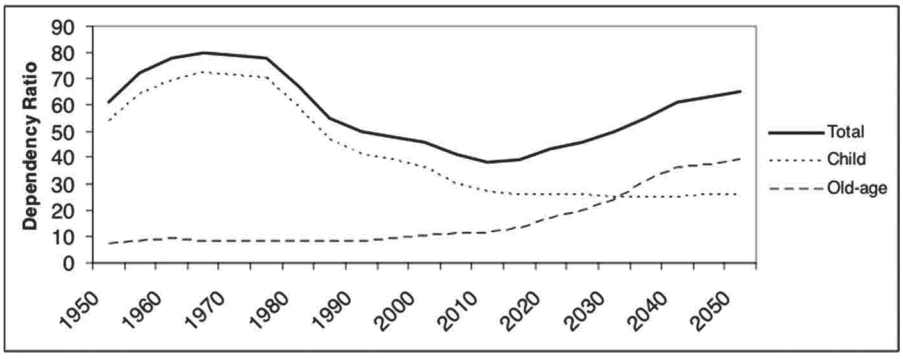

Figure 18
Dependency Ratio of China.
Source: China Statistical Yearbook 2006.

3.4.3 Critical Analysis of CHINESE PENSION Reform 2000-2010

Achievement---National Social Security Fund

Concerned about the pension deficit at the provincial level especially from the transition cost and the accelerating population ageing, the state created the National Social Security Fund (NSSF) as a reserve fund in 2000 under the supervision and management of National Council (Leckie, 2011).

According to the regulation, there are mainly four sources of the assets: fiscal transfers from central government budget, capital and equity asset transfers from SOEs share sales, national lottery income and investment returns. As can be seen from Figure 19, the total assets markedly increased from $2.4 billion at the establishment to around $120 billion at the end of 2000. The fund invests in both equity and bond and other assets in domestic and international markets, and has generated around $36 billion profit by 2009. The establishment and operation of NSSF strategically serves the long-term pension fund to cover the transition cost and the sustainability of the multi-pillar system. Some professionals call for more rigid rules should be set on NSSF in terms of the portfolio limits and restrictions on secondary markets to reduce risks (Ma & Zhai, 2001).

Remaining Issues

(a) Lagging Rural Pension

Progress in rural pension reform has been very limited compared to ongoing reform of SOEs in urban areas. Due to household registration system, more than half of the Chinese population lives in rural areas. Although in 1991 the State Council decided to develop old-age social insurance system in rural areas and the next year the Ministry of Civil Affairs adopted the system as the basic operational level, the coverage was very limited. According to a survey on China's urban and rural elderly in 2000, only about 7% of old-age people received pension benefits or old age insurance, whereas 85% still relied on family support (Hu, 2006). In 1998 the old-age social insurance was replaced by a commercial insurance programme, which further led to the decline in coverage from 75 million in 1997 to 54 million in 2004.

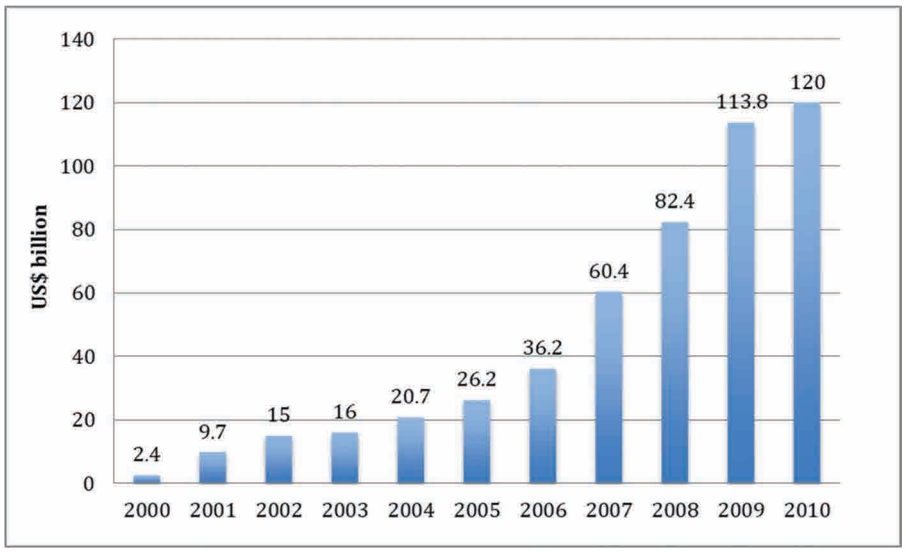

Figure 19
Total Assets of the National Social Security Fund
Source: NSSF. http://www.ssf.gov.cn/

Underlying the limited coverage of rural pension is the enlarging inequality between urban and rural incomes, which further imposed huge financial pressure on the security of rural elderly. Chinese economic reforms have not substituted the powerful command economy with a dependent market economy. Instead, traditional agriculture and modern industry, formal sector and informal sectors coexisted in the dual tracks (Fang, 2014). The enlarging income gap between rural and urban areas is notable. According to data from National Bureau of Statistics of China, urban workers could earn 3.3 times as much as farmers in rural areas, which partly explain the situation that poverty among elderly group in rural areas is much more greater than in urban areas. Based on 17,708 interviews on people over 45 years across 28 provinces, the research conducted by *China Health and Retirement Longitudinal Study* found that nearly 25% of elderly people in China live below the poverty line (CHARLS, 2013). Without a reliable income to secure basic living, the majority of the elderly continue to work at age 65-69, and more than 20% work even after age 80.

(b) Administration

In 2006 investigators disclosed that Shanghai Social Security invested a large part of its fund in a highly speculative projects and the leading official group of Shanghai was proved personal benefit from this investment (Salditt et al., 2007). This scandal started to raise public attention on the transparency and administration of pension system.

According to the framework since 1997 reform, central government and local government jointly share the administration responsibility of pension system. This decentralization, which refers to the distribution of decision power from central government to the local authorities in order to stimulate regional creativity and reform initiatives, started from the post-Mao era and more progressively in the economic reform such as the restructuring SOEs as mentioned above (Béland & Yu, 2004). The provincial funding of pension system (pillar Ⅱ) contributes to the misuse of pension assets such as the Shanghai pension scandal. Under a relatively underdeveloped capital market, the lack of accurate information or disclosure of statistics on NSSF portfolio threatens the reliability and public confidence in the system, leading to disastrous consequences on the sustainability of pension system and China's economic situation further.

Above critical analysis on the pension reform policies under economic and demographic pressures in 1984-2000 and 2000-2010 could demonstrate that Chinese pension systems in the era of economic reform and opening up are shaped by economic transition and demographic changes within these periods. However, the existence of remaining issues including the enlarging inequality between urban-rural areas and administrative problems, together indicated that the economic-demographic analysis cannot sufficiently explain the patterns of pension system change. Additional variable is required to provide a complementary explanation of why problems still remained in pension systems even after reforms.

4. SUPPLEMENTED POLITICAL EXPLANATIONS

In order to further explore pension reforms in transitioning China, additional variable from the political economics perspective will be added to supplement the economic-demographic explanation.

4.1 Rural-Urban Inequality

The long-term urban bias or discrimination against rural residents on pension protection derives from the heavy-industry oriented development strategy in Mao's era. Robert Bates (1981) states that the advantageous position of urban sector is because urban groups are politically powerful. However, the historical review of China's economic transition in Chapter 4.1 suggests that the formation of the heavy-industrial strategy was not an outcome of political pressures from urban interest groups, but from the government's desire to quickly catch up with the industrialized countries. Therefore the state institutions adopted interventions in output and factor markets to squeeze rural development for urban development, which could explain the urban-based reform pension system before 1984 (Yang & Li, 2003).

In the era of opening up, despite CCP corrected the previous development strategy and relaxed political controls with the cancellation of People's Communes, large urban-rural division in pension systems still existed even after the 1997 pension reforms. Institutions and policies inherited from the planned system had not been completely removed, for example the coercive intervention in labor markets, e.g. restrictions on labor mobility from rural to urban areas through household registration system, put great pressures on the urbanization of landless farmers and their old-age security.

4.2 Weak Pension Regulation

Except the lack of accurate information and a mature capital market, weak law enforcement and the regulator's incompetence that derive from the bureaucratic political structure and the agent problem between central and local governments, contributed to the disappointed outcome of pension reform in recent years. Till now, there is no national social security law in force, nevertheless a special pension law (Li & Gao, 2005). The pension system is only regulated through a series of decision issued by the State Council and the Ministry of Labor and Social Security.

CONCLUSION

This thesis investigates China's historical public pension reforms under the broad contexts of China's economic transition from a centrally planned economy to a market-oriented economy with a series of economic reforms started in late 1970s. It tries to address the question of whether Chinese government's efforts on pension reforms conformed to the economic and demographic changes underlined the context of economic transition in three periods respectively: 1951-1984; 1984-2000; 2000-2010. The major findings and implications of each period are indicated below.

First, China's pension reforms from a purely PAYG based and SOEs backed system to the multi-tires system were motivated by emerging economic reforms and demographic changes. SOE's financial burden on pension payment because of its loss of profit and declining workers-to-retirees ratio was eased by the introduction of this three-tier pension system in 1990s, therefore pension responsibility was jointly shared by enterprise, state and pensioners themselves. Besides, facing the shrinking coverage of pension because of the downsizing of SOEs and rapid labor force increase in urban areas, the government expanded the coverage from solely SOEs employees to the entire urban workers in order to broaden the pension coverage. During 2000-2010, the National Social Security Fund based on the three-tire pension scheme was created to solve the pension deficit from transition cost and rapid population ageing. Hence the analysis on the three period pension reform could demonstrate that primary efforts of government on reforming pension system were motivated by the economic reforms and emerging demographic changes.

Second, despite some amendments were introduced under evolving economic and demographic circumstances and had made some achievements, the pension reform is incomplete to solve all the challenges. Remaining issues including low public pension coverage rate, the insufficient measures to accelerate population ageing, and the lack of effective regulations and supervision on pension fund management. Within each period of pension reform, pension reform was incorporated in and served mainly for the economic development strategy, such as the industrialization in the first period, the SOE reform and marketization in the second period, but concerned less on demographic changes especially population ageing, and social issues generated from defective pension systems such as the imbalanced pension programmes between urban and rural areas.

Finally, considering the large amount of current and future retirees in China and the widespread old-age poverty in rural places, further researches need to be conducted on the directions of China's pension reform. Since universal pensions have been successfully alleviating poverty in old age in both developed and developing countries such as New Zealand and Mauritius, the debate on whether China should approach a universal pension system is increasingly heated (Jackson et al., 2009; Shen & Williamson, 2010). Undoubtedly the universal scheme could all old-aged be covered under the protection, whether the fiscal cost and transition cost can be manageable in transitioning economy needs further investigation.

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