

# THE SOCIAL SECURITY FUNCTION OF AGRICULTURE IN CHINA

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**Abstract:** On the basis of the Lewis model, this paper addresses the theoretical foundations of the social security function of the agricultural sector and investigates the impact of this function on Chinese development. We argue that the agricultural sector and secure agricultural land holdings are important means, in the absence of comprehensive government provision of social security, in insuring rural residents and rural–urban migrants against risks and uncertainties. Given a large rural population and massive rural–urban migration, secure access to land for both rural and migrant populations in China has helped the economy avoid systemic risk and helped to maintain social stability. Copyright © 2012 John Wiley & Sons, Ltd.

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## 1 INTRODUCTION

In the past 30 years, China has witnessed significant economic growth, and there has been a structural transformation of the economy from one dominated by agriculture to one where industry and services dominate. The number of people living in urban areas has increased from 18 per cent of the total population in 1978 to 47 per cent in 2008 (NBS, 2009). As part of this economic transformation, the country has experienced the largest labour migration in history. At the end of 2008, there were 225 million migrant workers; of these, 140 million worked outside their home county (NBS, 2009). These migrant workers have played a crucial role in the expansion of labour-intensive manufacturing industries and, thus, have significantly contributed to China's economic growth.

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Because of the large population and the rapid economic growth rate, there are extra risks in the urbanisation process in China. The migrants are employed both in the domestic sector and in the export sector. Both these sectors have been subject to fluctuations, and it is the migrants who have borne much of the burden of adjustment in terms of employment.<sup>1</sup> These migrants lacked formal social insurance. Given this lack, the sudden increase of unemployment could have been a huge challenge in maintaining stability and continuing with a fast but orderly growth.

These issues raise several questions. What are the mechanisms at work that enable a society to maintain a basic standard of living in the early stage of industrialisation? How can a society cope with highly volatile levels of employment in the absence of substantial formal social insurance? How can a society maintain its flexibility in terms of labour supply and absorption? A better understanding of these questions has huge implications both for economic efficiency and welfare, and this would enrich our understanding of the progress of economic transformation.

To address these questions, this paper investigates the under-appreciated social security function of the agricultural sector at a macroeconomic level.<sup>2</sup> This enables a comprehensive understanding of the current large scale rural–urban migration in China and draws some policy implications about the role of rural–urban Hukou (household registration) transfers and associated land appropriations.

This paper contributes to the literature in two major ways. First, it lays out a theoretical foundation for the social security function of the agricultural sector within the framework of a dual-economy model. Second, it applies the theory to China, explaining the importance of the social security function of the agricultural sector and highlighting the potentially dire consequences in terms of people's livelihoods and social stability if this foundation is neglected.

The paper is structured as follows. Section 2 provides a theoretical foundation for incorporating the social security function of the agricultural sector within a dual-economy model; Section 3 further explores the social security function of the agricultural sector in developing economies in general. Section 4 discusses China's Hukou system and land holding system, and Section 5 investigates the rural–urban divide in social security provision and the importance of the social security function of agriculture. The final section offers some conclusions.

## 2 THE AGRICULTURAL SECTOR AND SOCIAL SECURITY

This section investigates the social security function of agriculture and land rights in a dual economy. The discussion makes clear the source of this social security function and also lays the theoretical background for further discussion in later sections.

Two sectors may be identified in the early stage of development of an economy: the rural agricultural sector and the urban industrial sector.<sup>3</sup> At this stage, most economies

<sup>1</sup>Cai *et al.* (2009) provide a comprehensive review of the impact of economic fluctuations, both global and domestic, on migrants' employment.

<sup>2</sup>To be clear, our topic is therefore not an investigation of social protection for those in rural China *per se*. Although it is true that social protection has become a major theme in the development literature and policy debates (Devereux and Sabates-Wheeler, 2007; Sabates-Wheeler, Devereux and Guenther, 2009; Gentilini, 2009), the specific social security function of agriculture has, for a long time, been less researched.

<sup>3</sup>The key difference between the two sectors is in their labour allocation and wage distribution principles. All the 'other' sectors in the modern economy can be broadly said to belong to the urban sector if their wage is paid according to their MPL. In this paper, for simplicity, we assume that the agricultural sector is in the rural areas, and the nonagricultural sector is in urban areas, unless otherwise specified. See Wang and Piesse (2011) for more detailed classification of the two sectors.

are dominated, in terms of both output and employment, by a small scale family-based agricultural sector, which provides basic support for the population. The industrial sector is small. With economic development, the industrial sector expands and absorbs more people. This can be best described by the dual-economy models pioneered by Lewis (1954), extended by Fei and Ranis (1964, 1997) and recently discussed by Wang and Piesse (2011).

The main feature of this model's rural agricultural economy is that it mainly consists of family units engaged in agricultural production. All family members share the work and the subsequent output.

In the modern industrial sector, in general, firms can be presumed to follow a profit-maximisation principle to survive in the competitive market. These firms employ people to a level where the wage workers receive equals their marginal product.<sup>4</sup> Firms in the industrial sector are able to hire and fire workers following neoclassical principles without worrying about how these people will make a living if they are not employed or how a redundancy would affect people's livelihood. These firms are not responsible for employment, which makes them able to concentrate on production and adjust employment levels accordingly.

The primary focus of research on the agricultural sector has always been food supplies.<sup>5</sup> The social security function has been long neglected, especially in economies with dual characteristics.

The agricultural sector employs all the labourers that were unable to find employment elsewhere, and it also has to support all the labourers fired by the industrial sector. Surplus labour can exist in the traditional agricultural sector because this sector normally uses family units as the basis for organising production and shares output rather than allocating it on the basis of marginal productivity.

Thus, apart from the production of agricultural goods, the agricultural sector also has a social security function. Because governments in most developing countries have difficulties in funding the social security system for rural citizens, these are left for the agricultural sector itself. Agriculture and land provide two forms of defence against risks that are not available in the market in the absence of government-supported social security. First, it can provide subsistence to those who have no industrial jobs and have no unemployment insurance. For example, if migrants kept their agricultural land when working in cities, they can return to the agriculture sector and maintain a subsistence level of living when they lose their jobs in the urban industry sector.<sup>6</sup> Second, agricultural land also has an old-age support or pension function. When people become old and lose the ability to work, land is cultivated by other family members or a certain rental value can be obtained for old-age support.

In the early stage of development and industrialization, there are normally higher levels of volatility in employment, which makes migrant workers vulnerable to unemployment. It is important that migrants can return to the agricultural sector when they are unable to find work in the urban industrial sector if mass urban unemployment is to be avoided. The

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<sup>4</sup>If this sector were to employ all the surplus labour—this would require a lower wage, than the neoclassical 'wage equals marginal product' solution. This may drive remuneration below subsistence levels of consumption, which means that full employment by the industrial sector is not possible.

<sup>5</sup>Also, the demand from the agricultural sector for the industrial sector's output and the role reciprocity between the sectors play a significant role in early industrialisation but is incidental to our story.

<sup>6</sup>Fan and Wang (2008) provide some case studies illustrating the fact that, despite the persistently low economic returns from the agricultural sector, it is still a major source of subsistence.

agricultural sector's role as a provider of a certain level of social security not only acts as a buffer for those migrants but also reduces the systematic risk for the country and increases the flexibility of the economy.

Another important way in which the agricultural sector contributes to a social security function is via land. Land holding can provide a social insurance function which reduces vulnerability to risk and improves social welfare. Furthermore, the holding of land by a family may allow some members to migrate in search of any job, which would bring any net addition to family income.<sup>7</sup> If the land is not securely held, leaving for the urban areas can lead to losing one's rights to the possibility of subsistence. This could reduce the flow of workers to the urban area and increase the cost to migrate. The reverse would also follow; more secure land holding might increase the flow of labour, at a low wage level, to the urban areas. This is part of the explanation for the continued low price of urban labour in China. These workers are possibly working for less than their marginal product in the urban areas and are able to do so because of the support provided by their family's secure holding of land.<sup>8</sup>

In essence, the agricultural sector has been providing social security for societies in the early stage of industrialization process. This role is evident now in many developing countries and was evident in the early stages of development of many of the now developed countries.

### 3 THE SOCIAL SECURITY FUNCTION OF AGRICULTURE IN DEVELOPING COUNTRIES

In many developing countries, the industrial sector is small, the number of employment opportunities is low, and a significant number of people are engaged in agricultural activities. Imperfect markets in developing countries mean that those in the industrial sector are only partially protected from risk and shocks. If most of the population suffer from the downside risk, then their hardship may be magnified via a nationwide exposure to the risk of recession. Furthermore, at the macro level, governments of developing countries have even less resources and lower state capacity than in more developed countries, and this makes such an exposure to risk more problematic. For these economies, the key question is not whether the government should provide social security for these people, rather it is whether the government itself can afford the costs of adequate social insurance.

Before the industrial sector grows large, in terms of employment, and before the government has the capacity and can afford to provide full social security coverage to its people, the destruction of the social security function of the agricultural sector is potentially dangerous. In good times, governments may be able to sustain social protection schemes, but in bad times, things might be significantly more problematic. This might increase the systematic risks, and many governments tend to overlook this problem.

It is only when the agricultural sector becomes relatively small and is no longer able to provide social security for a big industrial sector that governments take on the social security function in order to facilitate a faster and smoother transition to an industrialised economy. For example, in developed economies, the agricultural sector's social security

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<sup>7</sup>De la Rupelle *et al.* (2009) find that secure family landholdings increase the probability to migrate.

<sup>8</sup>A theoretical discussion of this scenario is outlined in Wang and Piesse (2011).

role has typically been replaced by government-supported social security systems, which provide basic support for people who cannot find an industrial sector job or have been laid off by that sector. The industrial sector, unlike the agricultural sector, has no intrinsic ability to provide subsistence. The government has to step in and take the lead. In developed countries, the large industrial sector does, however, provide a tax base for this.

The lack of flexibility in many developing countries means any downside risk is likely to be more costly. For example, in times of economic crisis, migrant workers may lose their jobs and their source of income. In the absence of social security provision by the government, if they have secure land holding in rural areas, they might consider returning to their hometown. This land holding provides a potential means of living.

This insurance function of land has largely been neglected in the development process in many African, South Asian and Latin American countries. People have often given up their land without receiving its full value in terms of the social security it provides. They have done so without receiving direct social security coverage. In most developing countries, governments are unable to provide universal unemployment coverage, as they do in more developed countries. In such societies, landless populations often confront huge employment risks and have no social security. Landless people have nothing to rely on when unemployed. As a result of losing their land, many have ended up becoming part of the urban poor and may end up in urban slums. These economies not only have urban slums but have, in addition, lost some of the flexibility that the Chinese system has had, where workers come and work in the industrial sector in good times and return to the agricultural sector in the down turn.

The absence of the social security provision from land and agriculture not only makes people extremely vulnerable to external shocks at a microeconomic level, but more importantly, might create a systematic risk at the macroeconomic level, even when governments seek to provide redress. That is, taking a static view, given China's current growth rate and government revenue *vis-à-vis* the current number of people and the level of provision that is needed, the full coverage of social security is afforded by the Chinese government, but it might not be able to afford full social security if the growth rate is lower and/or government revenue is squeezed by other external shocks. In this sense, the failure to realise the importance of the agricultural sector's social security function is likely to be detrimental to the goal of a stable development.

#### 4 HUKOU AND THE LAND HOLDING SYSTEM IN CHINA

Before the founding of the People's Republic of China, land was privately owned. After the revolution and as a result of the collectivization movement in the mid-1950s, private ownership of land was eliminated. Urban land was owned by the state, and rural land was collectively owned and cultivated by the villagers.

After the introduction of the Household Responsibility System (HRS) in 1979–1984, the collective ownership of rural land at the village level remained, but land-use rights were assigned to households on an equal per capita basis. Because land-use rights are associated with Hukou, when rural people migrate to and work in urban areas, so long as their Hukou status remains unchanged, they still have rights to their share of the land.<sup>9</sup> Most of the time,

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<sup>9</sup>The Hukou system is a de facto internal passport mechanism where no unauthorised movement between sectors was legally allowed.

the young members of the family leave home to work in cities and leave the elderly to sow the land and obtain the harvest so that the family would have enough to eat.<sup>10</sup>

Since the reforms began, although there has been continuous loosening of controls and restrictions on rural labour moving to cities, it still remains extremely difficult for a rural person or household to become a permanent urban dweller (that is to obtain an urban Hukou). Because most rural migrants are not able to gain an urban Hukou or the right to stay in urban areas as permanent residents, they have to live in cities on the 'temporary' basis even though they might have worked there for decades. These migrants are called *nongmingong* (peasant workers).

Thus, these characteristics make the Lewis model particularly useful as a way of describing the processes and issues in China. There, the agricultural sector is the default sector. A family shares their agricultural production and guarantees its members a basic subsistence level of income and living. In the absence of social security provision by the government, when migrant workers lose their jobs in the urban sector, they can always come back to their village and return to agriculture.

## 5 SOCIAL SECURITY IN CHINA AND THE ROLE OF AGRICULTURE

Hukou and its associated rights mean that the classification of people as either urban or rural has different meanings, in terms of their Hukou status or in terms of their place of residence. The proportion of urban population, by residence, has increased from 18 per cent in 1978 to 47 per cent in 2009. The proportion of urban population, in terms of the Hukou status, only increased from 18 per cent in 1978 to 27 per cent in 2009. (NBS, 2010) There is thus a gap between these in 20 per cent of the population. That is, more than 250 million people live in urban areas but do not have urban Hukou. They still have land rights.

Although many people in urban areas have guaranteed employment and pensions, few rural people have any such guarantees or pension entitlements.<sup>11</sup> Because of the lack of social security programmes, the family has been the major source of support for the rural elderly in China (Zhao and Wen, 1999).<sup>12</sup>

When rural people migrated to urban areas to improve their living standards, because they do not have urban Hukou, they are not entitled to the social security coverage provided by city governments.<sup>13</sup> Things would be easier for migrant workers if they could settle down in cities on a permanent basis and obtain equal access to public services provided by city governments for their urban counterparts (Tao and Xu, 2007). However, they have

<sup>10</sup>Fan (2009) and Benjamin *et al.* (2003) both discuss case studies on the situations of rural households and their migration status.

<sup>11</sup>There are a couple of complications which are worth mentioning. There is now a growing self-employed urban Hukou group that has neither guaranteed employment nor full pensions, and there are now also many rural Hukou migrants to urban areas who have some rights via their labour contracts. But the average urban unemployment rate is only around four per cent (NBS, 2010), whereas more than 50 per cent of people in the agriculture sector are estimated to be surplus labour.

<sup>12</sup>Zhao and Wen (1999) indicate that many working in the government hold the view that there is no need for a social pension programme in rural areas because rural people have land as a means of old-age support. However, they argue that the amount of rent that the land is getting is not enough to guarantee subsistence if rent is the sole source of income.

<sup>13</sup>It should be noted that, after the recent reform which was started a couple of years ago, a small proportion of migrant workers coming from the rural areas have started to participate in some urban social insurance programmes, including basic health insurance and basic pension programme.

to go back to their rural village and rely on their families when unable to find urban work, become ill or retired. Thus, family and the rural agriculture sector act as a means of social insurance and provide a social security safety net for those who migrate and work in the urban sector.

This is especially true when looking at the employment structure. China's industrial sector, which employs rural workers, is mainly export-oriented. This sector faces huge international economic fluctuations, including foreign exchange risks. In the context where the sector produces for domestic demand, the impact is normally smaller despite the internal business cycle. This means there is the need for a sustainable internal industrial system that fulfils the internal demand before any destruction of the social security function of the agricultural sector.

The share of income for rural households coming from land is becoming smaller, especially for those who migrate, and its role is shifting into a means in providing social security, that is, guarantees a subsistence level of life. This has been especially true in economic down turns when firms cut employment. For example, in spring 2009, when the global financial crisis took its toll, about 20 million of China's migrant workers (15 per cent of the total migrants) returned to the countryside after losing their jobs. However, this did not cause a huge economic and social turmoil. In this case, the agriculture sector successfully acted as an economic and social buffer.<sup>14</sup> When there is employment opportunity, people can go back to the urban sector for higher earnings, but when they cannot find work, they can return to rural agriculture and maintain a subsistence level of life.

A suggested policy has been to simply allow those with rural Hukou to acquire urban Hukou in exchange for losing their land entitlements.<sup>15</sup> By doing so, rural people would not only lose the value of the production from the land and agriculture but also the social security it might be able to provide. A problem for many is that the urban Hukou alone does not guarantee social security provision from the government. This requires an established job in a state-owned enterprise or some other established form of employment.

Because many migrants live in dormitories provided by employers, when they to become unemployed, they would lose not only their income but also their place of residence. In addition, if they were to lose their job and had already lost their land in order to gain an urban Hukou, then they would also have no house to return to in the countryside. This would seem likely to lead to the development of a class of landless labour that are not covered by the urban social security and welfare system, and will inevitably lead to urban slums. Before the government is able to replace the agriculture sector's provision

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<sup>14</sup>However, one might argue that this was not really a proper test of the agricultural sector's role because many people were able to either end up working in the rural nonagriculture sectors or re-entered the urban labour market very quickly. This is thanks to the quick recovery of China's export sector. However, it seems likely that the rural sector was able to provide a backstop which the returning migrants felt able to rely on. Thus, the migrant's vulnerability to volatility of employment in response to business cycles was lessened by their rights to the land. This acted as a buffer. More obvious evidence is the existence of urban slums with large numbers of unemployed or underemployed in many developing countries (notable examples being Mexico City and Manila). Many of those people lost their land or means of living in the agricultural sector, but the industrial sector has been unable to provide continuous and sustainable employment.

<sup>15</sup>Because rural villagers collectively own their land, but land in cities is owned by the state, by transferring from rural Hukou to urban Hukou, rural people automatically lose their land ownership.

of basic social security, the loss of land may well have detrimental effects on poverty, equality and social stability.<sup>16</sup>

Large scale government provision of social security is not likely to be a solution either at this early stage of development.<sup>17</sup> This is because not only because of cost but also because of limited government administrative capacity.<sup>18</sup> This is especially true when the rural sector accounts for a very large proportion of the population. Any large scale agricultural land privatisation and expropriation in a mainly rural society should not only consider the production function of land and agriculture but also its social security function.<sup>19</sup> Thus, only if it were possible to provide a social security and welfare network providing a minimum living standard for nearly 800 million rural Hukou holders (that is near two thirds of the total population) in China would it be sensible to consider land privatisation.<sup>20</sup>

It is worth noting that there has been an extensive policy debate about land acquisition in rural China. Some researchers stress the benefits of land acquisition—typically, this is expressed in terms of increased productivity and efficiency in labour allocation by allowing some households to specialise in agriculture and others to participate in nonfarm employment. Diversification into nonagricultural employment, participation in land rental markets and various agglomeration benefits have all been examined as being potentially important (Jin and Deininger, 2009; Herd *et al.*, 2010; Ding, 2007; Kimura *et al.*, 2011). Other studies stress the importance of holding land with secure property rights, even for those who have migrated (de la Rupelle *et al.*, 2009; Yu *et al.*, 2010).

## 6 CONCLUSIONS AND POLICY IMPLICATIONS

Agriculture plays a major role in maintaining and sustaining a basic living standard for the rural population in developing countries. The production function of agriculture, principally food supply, has long been recognised, but its social security function has generally been under-appreciated. This has significant implications especially when a country is under structural change, that is, in the transition from agricultural to industrial (undergoing industrialization). Failing to take this into account might dramatically increase the vulnerability of those moving out of the agricultural sector. They lose the social protection provided by the land and enter the industrial sector in a way which typically does not guarantee full provision of social security. This microlevel problem of lack of social protection cannot simply be solved by the state because of the limits on the state's capacity,

<sup>16</sup>It can be argued that without urban Hukou restrictions migrants might not be forced to return to rural areas and might find much better alternative urban work and housing. Migrants also return to rural areas for health care as they are denied access to urban facilities. An alternative to this return to rural areas is expanding the inclusion and portability of social security systems. But the systemic affordability coupled with the political pressures means these alternatives are unlikely to be fulfilled in the near term.

<sup>17</sup>It is possible that state-owned enterprises could, through substantially higher dividends or tax payments to the public purse, provide more resources for the state to provide social security provisions. But before the social security for the rural areas has an economic or political priority for the Chinese state, it would be risky to rely on this.

<sup>18</sup>The recent experience of the rapid expansion of the New Rural Co-operative Medical System (NRCMS) suggests that the states administrative capacity is improving in this area, but many raise worries about the over utilisation of the scheme and its financial sustainability.

<sup>19</sup>Rural land-use alienation is not just a matter of privatisation but also of arbitrary expropriation by local state authorities and private developers. This is a major source of social unrest, and how these issues have tended to be resolved is indicative of the lack of political and economic power of many in the rural areas.

<sup>20</sup>Hui Qin and Tiejun Wen have both argued against land privatisation in several articles written in Chinese (eg. Wen, 2009). Qiren Zhou has also written extensively on farmer's welfare and land reform.



in addition to the cost. That is, an extensive provision of social provision by the state in the early stage of development would not only over stretch the government but also impose a systematic risk that the government may be unable to manage in bad times, such as when there is a downturn in the international business cycle.

In general, in a country with a large traditional agricultural sector in the early stages of industrialisation when many still have links to the land, any loss of rights to land should be undertaken very cautiously. When there is no mature formal social security system, any shock to the industrial sector could drive more people to the agricultural sector for subsistence. Because the agricultural sector has a stabilising role in the society, if peoples' agricultural base is removed, there may be serious societal problems. This is likely to be problematic especially when there are no alternative back up measures, and the process itself is likely hard to reverse.

The Chinese industry has been enjoying relatively cheap labour largely because of rural migrant workers and the support they receive and their reliance on their families in the rural areas. However, for the migration to be sustainable and lead to desirable outcomes, then there needs to be some way to insure against various risks such as unemployment and to allow for other aspects of social security provision. By applying the extended Lewis model, this paper has been able to provide an integrated analytical framework for a comprehensive understanding of the functions that the rural agricultural sector and land play in the Chinese economy.

The continued co-existence of a large amount of surplus labourer in rural China, the difficulties in achieving a rate of growth sufficient to absorb all of these in the urban areas and the possibility that urban employment and infrastructural capacity to accommodate migrants might be vulnerable to the economic fluctuations means that any reform of the Hukou system and the rural land system must be carried out cautiously and incrementally to ensure a smooth urbanisation. The buffering role of the current system needs to be understood in designing or adjusting any policies.

The policy recommendations from this paper are based on the observation that the rights to land of all those in the rural areas have been and are likely to continue to be instrumentally useful in any continuation of successful development in China. These rights have provided the basis for a social security system which the state has been unwilling and/or unable to provide.

If the importance of this social security role of agriculture is accepted, then there are several preconditions that need to be met before any large scale land reform in China is attempted. First, the industrial sector should no longer be so dependent on exports and the vagaries of world demand, rather the domestic market should have a far bigger role than at present. This would create a relatively more stable virtuous circle with less turbulence and a greater resilience in the face of external shocks. Secondly, migrants to urban areas should be covered by all the basic social insurance available to urban residents. Third and finally, China should already be in a late stage of structural change with a dominant proportion of people fully engaged outside of the agricultural sector. Given that China is still undergoing economic and institutional transitions towards this later stage of industrialisation and many reforms of social security systems are incomplete, land expropriation and the transfer of land-use rights from rural residents should be practised with great caution or even resisted.

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