

Surplus Labour and Urbanization in China

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Abstract

This paper distinguishes two types of urbanization and argues that urbanization without sufficient employment creation in the urban sector might have no economic benefit as it only involves surplus labour in the rural areas becoming urban surplus labour. It argues that China's Hukou system that has restricted rural-urban migration did not necessarily reduce economic efficiency rather it might have raised urban welfare at the expense of rural welfare. An under-discussed feature of the Hukou system is that it ties people not to just either rural or urban areas but to particular geographical locations. This paper argues that many of the recent "rural land for urban Hukou" programs, under the name of reducing the rural-urban income gap, do little to address the geographic specificity of the Hukou restrictions but may in effect amount to a land appropriation by local governments. This paper suggests that to improve economic efficiency and welfare, a "real" reform of the Hukou system should reduce barriers for cross regional migration.

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Keywords: surplus labour, urbanization, employment creation

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1. Introduction

Along with its significant economic growth, China has undergone an enormous increase in urbanization over the past 30 years. The number of people living in urban areas has grown from less than 18 percent of total population in 1978 to 51 percent in 2011 (NBS, 2012). That is, more than 520 million more people are now living in urban areas in China.

Although the level of urbanization is still below that of many developed countries which have more than 80 percent of urban population, the scale and the speed of Chinese urbanization is astonishing. There is a great urgency to have a better understanding of the urbanization process.

The literature on urbanization is wide ranging, from work examining why economic activity is so geographically concentrated, work looking at the questions about the efficiency of rural to urban migration, work discussing the way cities interact with each other and work on governance, institutions, and public policy and their effect on urbanization (Henderson 2005). However, there are still many questions that need to be answered regarding China's urbanization, given the scale and the speed of its urbanization process, given that China has huge number of surplus labour, given that China's rural-urban migration is strictly controlled by the government.

Many countries have pursued an urban bias policy. For example, public infrastructure investments in cities are enormous as compared to rural areas and government policies concerning land markets and migration are often favoring urban areas. Urban bias is more so for China as it explicitly controls population movement. As a result, the rural-urban income gap in China is now amongst the biggest in the world (Sicular et al., 2007, Wang and Piesse, 2010). Not only income, the rural-urban divide is multi-dimensional. China's rural-urban divide and inequality have risen both across regions and over time.

A big rural-urban divide in many countries has led to mass rural-urban migration. However, China's urbanization process has been subject to very heavy distortionary government policies. China's unique Hukou (Household registration) system which is a de-facto internal passport and visa mechanism, where no unauthorized movement across regions or from rural areas to urban areas was legally allowed, means that this migration has been less. The Hukou system created invisible walls and administrative barriers that divided China into two: those with urban Hukou who have access to certain government subsidies and those with rural Hukou are guaranteed a land use rights and access to subsistence.

Since the reforms began, there has been a continuous loosening of controls and restrictions on rural labour moving to cities. Although it still remains extremely difficult for a rural person to become a permanent urban dweller (that is to obtain an urban Hukou), many of them live in cities on the "temporary" basis without urban Hukou status. As of 2011, it is estimated that roughly 250 million people with rural Hukou status were resident¹ in urban areas (NBS, 2012).

Despite continuing government efforts aimed at improving rural development the rural-urban divide is still increasing. This has led many researchers to place the blame

for this on the Hukou system. They have added their voice to calls for the abolition of the system. Some local governments, such as Chongqing municipal provincial government, began to encourage some farmers to give up their land rights in exchange for urban Hukou status. However, this paper puts those questions into a theoretical framework and argues that this is not likely to reduce the divide or improve economic efficiency. Quite the contrary, it is likely that such policies would be used by local authorities as an excuse for land expropriation, which would tend to hurt vulnerable rural people.

The presence of a large rural population and a fast growing industrial sector means that China has a typical “dual economy” structure, which can be examined using Lewis’ framework (Lewis,1954; Wang and Piesse, 2013ⁱⁱ). We examine the two types of urbanization: one with industrialization and employment creation and the other without. The latter urbanization will not necessarily bring economic efficiency or welfare gains. Quite the opposite, it may cause welfare lose for the society and the farmers.

After identifying these two types of urbanization, we use China as an example to study the policy implications of urban biased polices. This paper does not attempt to present a formal model of urbanization.ⁱⁱⁱ Rather it tries to fill the conceptual gap that has been neglected in the existing literature.

The rest of this paper is structured as follows. Section 2 focuses on the relationship between industrialization and urbanization and identifies two types of urbanization; section 3 puts this into in the context of an extended Lewis model and provides a theoretical illustration; section 4 introduces China’s urbanization and studies the impact of government policies on China’s urbanization process; section 5 discusses the welfare and policy implications of the current Chinese urbanization process in the form of rural-urban Hukou transfer and associated land expropriation; The final section concludes.

2. Two Types of Urbanization and Growth

Urbanization typically involves the movement of people from rural to urban environments and this is accompanied by changes in the composition of national output away from rural agriculture into urbanized modern manufacturing and service production. (Henderson 2005)

In much of the urbanization literature, industrialization and the associated employment creation is taken for granted. The tendency is to assume that most of those who are resident in cities will be able to find work. While this is true for some urban areas, there are many cities in the developing world that have large numbers of unemployed people. It is useful to identify and distinguish two types of urbanization: one with industrialization and employment creation and one without.^{iv}

Agricultural production relies on land, the supply of which can be assumed to be fixed, has constant returns to scale and shows diminishing returns to labour. However, the industrial sector is different. It is based on knowledge spillovers, uses capital, which can be accumulated, and does not suffer diminishing return to labour.^v Further, because of agglomeration and spill-over effects, the industrial sector often has increasing returning to scales. These features of the industrial sector necessitate a concentration of

workers and firms to benefit from economies of scale and cluster effects: hence the resultant concentration of population in urban areas.

The employment opportunities created by industrialization induce labour migration from agricultural to industrial sector, which geographically is from rural to urban areas. Thus industrialization is typically the driver of urbanization.

However while urbanization is often associated with industrialization, urbanization does not necessarily the result of industrialization. There are other factors which can cause urbanization. For example, it may be that conditions in rural areas have deteriorated, perhaps government policies are too biased in favour of urban areas, or some migrants come to the cities based on false expectations. When any or all of these happen, an economy can easily have huge urban unemployment. Such an economy may be described as being under-industrialized and/or over-urbanized.

Efficient urbanization is a result of industrialization. It is not urbanization per se, but industrialization that drives economic development of a country. What matters in the process of urbanization is not about locations but sectors. Henderson (2005) argues that there is no econometric evidence linking the extent of urbanization to either economic or productivity growth or levels. An implication of this is that if a country were to enact policies to encourage urbanization per se, typically this wouldn't improve growth. Rather to ensure an efficient and orderly transition, urbanization should be accompanied by industrialization and employment creation.

3. Urbanisation in Dual Economy Model

Let us now put the discussion of the two types of urbanization into a dual economy framework. In the neo-classical world, labourers in both the rural and urban sectors are paid according to their marginal product of labour (*MPL*). When the *MPL* and wage in the urban areas is higher than that in the rural areas, rural labourers migrate to cities. This type of urbanization is driven by industrialization and leads to increased productivity and wages. However, in most of the developing countries, and in the early stages of development in many of the now developed countries, labour in rural areas is not paid their *MPL* and the neo-classical model might be less appropriate than the dual sector models.

In dual economies labour in the rural agricultural sector is plentiful, frequently having a zero or extremely low marginal productivity. Production is normally based on family units, with all family members working together and sharing the output. Each might receive the average product of labour (*APL*). If a person's marginal product of labour *MPL* is lower than their *APL*, they can be classified as surplus labour (Lewis, 1954; Wang and Piesse, 2013).

Labour in the urban sector has a positive marginal product. In the dual economy world, there is an income gap between the two sectors and rural surplus labour has an incentive to move to the urban sector. The population in the rural sector is sufficiently high that there is an unlimited supply of labour able to move to the urban sector at a subsistence wage in a given period without lowering the rural sector's output. This

unlimited supply of labour from the rural sector keeps wages in the urban sector low, ensures that capital accumulation in the urban sector is sustained over time, and thus leads to a rapid economic transformation.

There are two driving forces that determine the amount of surplus labour and affect the transfer of labour from the rural to the urban sector. On the supply side, the marginal product of labour (MPL), the average product of labour (APL) and the rate of technical change in the agricultural sector all determine the amount of labour that can be released. The level and changes in agricultural productivity play a significant role in this regard.

On the labour demand side, the rate of urban sector expansion and its absorptive capacity determines its ability to create employment. The extent and the speed of the urban sector expansion in output and/or employment depends on the nature of technological change in the industrial sector, the division of labour, the demand for its output and its terms of trade with respect to the rural sector.

When the urban industrial sector expands it typically needs more workers so it absorbs more rural labour and hence we have the process of urbanization. However, urban areas can expand with little expansion in industrial employment opportunities. Such urbanization without employment creation implies a transfer of rural surplus labour to the urban sector where it remains as surplus labour. Unlike the transfer of rural surplus labour to urban employment, which improves social welfare, changing rural surplus labour to urban unemployment, creates no added value for society. Labour efficiency will not change in either sector, and it has no growth effects for the economy, but rather might have important negative political and social effects.^{vi}

In essence, the way to absorb rural surplus labour is not to relocate rural people to the urban areas without considering their employment opportunities, rather the focus should be on promoting industrial expansion and employment creation in both urban and rural areas. Without such employment creation, we will have a situation whereby the rural poor become unemployed urban poor, living in urban slums, as is evident in many Latin American, African and South Asian countries.

It might help to clarify by referring to Figure 1 which illustrates the process of migration from rural to urban areas.

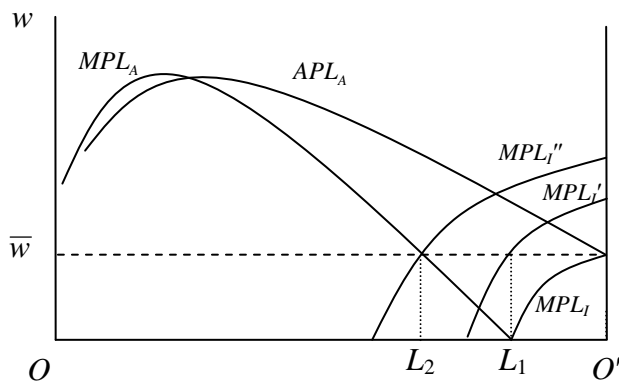


Figure 1. Surplus labour and Industrialisation

The horizontal axis, OO' , shows the amount of labour in the economy, assumed to

be fixed. The rural sector's labour is measured rightwards from the origin O . The MPL_A and APL_A curves are respectively the marginal and average product of labour in the rural sector. Industrial employment is measured leftwards from O' . The MPL_I curve is the marginal product of labour in the industrial sector. When the industrial sector expands, the MPL_I curve moves to the left.^{vii} \bar{w} is the subsistence level of output per capita (wage), and is also the average product of labour in the steady state (in a Malthusian equilibrium).^{viii} At the initial stage, because the urban industrial sector is small, the MPL_A and the MPL_I do not intercept with each other. In the later stage when the industrial sector expands, it moves to MPL_I' and intercepts with MPL_A .^{ix}

In the industrial sector, in general firms can be presumed to follow a profit-maximization principle in order to survive in the competitive market. These firms employ people to a level where the wage workers receive equals their marginal product.^x The agricultural sector employs all the labourers that were unable to find employment elsewhere. 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. The agricultural sector thus acts as a "sink" for the industrial sector.

In Figure 1, initially, everybody is in agriculture sector and is paid $\bar{w} = APL_A$, including surplus labourer L_2O' . These surplus labour are in the agricultural sector but their contribution to output is less than the amount they get paid.

Note that in the initial stage, there is no industrial sector. MPL_I is a hypothetical industrial sector's marginal products of labour curve, which shows the potential wage an industrial sector can offer if it exists. If individuals maximising their own income, they would stay in agricultural sector and get paid \bar{w} , which is higher than they would in the industrial sector. However, if individuals maximize household income they will migrate to the industrial sector willing to accept any wage that marginally above the extra cost of working in the industrial sector. Although a marginally higher-than-zero wage can exist, practically, this may be unrealistic. For reasons explained in Wang and Piesse (2013), the lowest wage the modern sector offers should be no lower than the subsistence. In this case, there is no industrial sector before MPL_I crosses with \bar{w} .

When industrial sector expands from MPL_I to MPL_I' , the worker at the point L_1 contributes zero output in the agricultural sector (because her MPL_A is zero) but would contribute \bar{w} when migrant to the industrial sector. This employment opportunity is driven by the expansion of industrial sector. The migration would not be possible if the industrial sector did not expand this far. When industrial sector expands further to MPL_I'' , the number of people between L_1 and L_2 also migrate to industrial sector. Although the net gain from this migration is less than the previous one. There is still net contribution to the economy.^{xi}

The growth effect of industrialization at this stage can be understood as transforming the zero MPL labour to a positive MPL labour. If urbanization is accompanied by this industrial expansion, it would positively contribute to economic growth.

4. Efficient Urban Bias and China's Hukou System

Given that growth relies on industrialization and its associated urbanization, governments often introduce policies to encourage the process of urbanization. However, in many developing countries rural households are "pushed" into the urban sector by growing populations and declining agricultural conditions. In this case, urbanization can lower wages and welfare across the entire economy (see, for example, Mourmouras and Rangazas, 2012). In these settings, there may be policies that discourage rural to urban migration and raise welfare for at least some households without lowering welfare for others. In particular, we are interested in the conditions under which migration restriction might be efficient in this sense.^{xii}

In many countries, explicit migration restrictions are not possible as it is regarded as open discrimination. There are many implicit ones. For example cities can refuse to provide legal housing development or basic public services for immigrants or the neighborhoods where they settle. Despite this many such cities tend to still draw in many migrants hence the development of slums, shanty-town or squatter settlements. (Henderson 2005)

In China, explicit migration restrictions have existed for about two thousand years since the Han dynasty (such a restriction was known as *Bianhu*) and historically there has been little resistance to this. An early version of the current system, known as the Household registration or the hukou system, was introduced shortly after the establishment of the People's Republic of China, for monitoring population migration and movements. However, as influxes of peasants into cities escalated and began to be a serious burden, the central government tried to stop what it called "blind flows" of rural labour with the implementation of formal controls. As a result, the Hukou Registration Act of the People's Republic of China came into force in 1958, which granted state agencies much greater powers in controlling citizens' geographical mobility through a system of migration permits and recruitment and enrolment certificates.^{xiii}(Chan and Zhang, 1999)

Under the 1958 Hukou system, every Chinese citizen was registered as resident in a specific place with a category of either agricultural (rural) or non-agriculture (urban). Residents with rural Hukou were assigned rights to land for farming, while those with urban were provided with various benefits, including state-subsidised food and housing and, for many, access to permanent jobs.

The Hukou system functions as a de facto internal passport and visa mechanism that confines the population to their place of birth and created two separate entities, a rural and an urban China, where migration between the two only occurred on an extremely small scale and under strict state control. Under this system, employment restrictions and state distribution policies created a highly segmented system, which still remains in many areas of the economy.

The rural-urban divide at a general level has been well documented but what is less discussed are the location specific features of the Hukou system and its policy implications. Every citizen is required to register in one and only one place of residence whether it be rural or urban. Almost all the entitlements, regardless of rural or urban

status have a specified locality. Thus the system restricted internal migration of its population not only between urban and rural areas, but also within the rural sector, between big and small cities, and between regions (Au and Henderson, 2006). For example a Shanghai urban hukou status is substantially different from a Chongqing urban hukou status!

The reforms over the past decades have seen many controls being loosened. However, it still remains extremely difficult for an individual or household with rural Hukou to establish a household in an urban area and obtain urban Hukou. Although temporary migration is now permitted, city governments impose restrictions on the employment of migrants in enterprises under their jurisdiction in order to minimise unemployment and maintain social order (Knight and Song, 2005, p184). When in the cities, migrants have little access to the benefits available to urban Hukou holders – these include unemployment support, health care, retirement pensions, or the Minimum Living Allowance scheme. It is even the case that migrant’s children are often denied access to urban public schools (Meng, 2012).

Governments used the Hukou system as an explicit tool of control of migration flow. Allow more migration when it thought more was needed reducing it when it thought it was not. These tools include temporary registration in origin and place of work, through application fees for required documents and through the level of implementation all of which affect the “cost” of migration to the migrants. In fact, the political and institutional arrangements gave urban residents privileged access to secure employment at above market-clearing wages and controlled the flow of peasants to the cities, allowing rural migrants to fill only the jobs that urban-dwellers did not want (Knight and Song 1999, Meng 2012).

In addition to migration controls, large amounts of government revenue are invested in urban development projects, while there is relatively speaking far less per capita in rural areas. What is defined as a public service in a city may not be considered so in the countryside. Much of the public sector infrastructure that does exist in the rural areas is provided by the rural population themselves. In the cities the local government typically builds the schools and roads whereas in some villages the villagers themselves are responsible for financing and constructing these.

The rationale of the Hukou system was to try to ensure the success of an industrialization strategy which not only needed a stable food supply but also a flow of capital from the agriculture sector to the industrial sector, through the application of the well known “price scissors” and agriculture taxes (Wang and Piesse, 2010). In the early stages of development, rural residents have large incentives to migrate to urban areas, but urban areas job creation is restricted by the speed of growth of its absorptive capacity. In order to fulfil the development strategy and prevent open urban unemployment, the Chinese government controlled rural-urban migration. Hence it can be argued that Hukou made it possible for a faster capital accumulation and industrialization. Without it, rural people would migrate from rural to urban areas to escape from rural hardship.

Without the expansion of absorptive capacity in the urban sector, any relocation of labour from rural to urban sector will not have any real improvement in terms of welfare and economic efficiency. Returning to our theoretical illustration, it can be seen using

the framework provided by figure 1 that in the absence of industrial expansion, if people between L_2 and L_1 migrate from rural to urban areas, this would amount to a shift of people from being surplus in the rural areas to being surplus in the urban areas. Only if the urban industrial sector expands and creates real employment opportunities, will the rural-urban migration, driven by economic forces, result in efficiency and welfare increases. For example, if the urban sector expands from MPL_r to MPL_u , surplus labour would be totally absorbed by the urban industrial sector. The economy then enters the neoclassical stage with a competitive labour market.

In the urban industrial sector in general firms follow a profit-maximization principle in order to survive in the competitive market. These firms employ people to a level where the wage workers receive equals their marginal product. However, in many planned economies such as China before the reform period, governments' objectives for the urban sector may not only be profitability but also employment. In this case, the planner may act as the 'head' of household and put employment as a priority above profitability; firms are organised in the same way as family units in the agricultural sector, thus making surplus labour in the industrial sector a possibility. In this case, surplus labour in urban areas is employed with very low MPL but gets paid higher than its MPL .^{xiv} Knight and Song (2005, p14) argue that the government actually creates surplus jobs in the urban state sector in order to avoid open unemployment. Thus the labour force in the urban areas is actually to the left of L_1 . As a result, disguised unemployment or overstaffing was prevalent in the state sector and the state-owned-enterprises.

In this case, the state policies restricting migration do not necessarily create efficiency losses^{xv}, as these barriers only prevent the transfer of extra rural surplus labour to extra urban surplus labour. This transfer is different from the situation where urban industry has a positive MPL , and migration of rural surplus labour might increase these labourers' own efficiency. Restriction on this kind of transfer prevents the transferring of disguised unemployment in rural areas to open or disguised unemployment in urban areas. Urban unemployment creates more political unrest and social instability than rural disguised unemployment.^{xvi}

5. New Development and Inefficient Bias

As discussed above, the Hukou system has contributed to China's growth by ensuring a relative orderly and smooth urbanization, but it also has reduced rural peoples' welfare by impeding their migration and this has led to possible welfare losses.

With China's rapid economic growth and urbanization, with reduction in subsidies for urban Hukou holders and the removal of the agriculture tax in 2006 and many other distortions, the difference in terms of treatment between rural Hukou and urban Hukou in small towns became smaller; the boundary between a county level urban Hukou and rural Hukou has been blurring.

There has been a shift of inequality away from urban-rural divide, to a divide between big cities and smaller ones, and between eastern coastal and inland cities.^{xvii} At present, the eastern provinces have a much higher real income than the central and western provinces, despite the fact that the income difference between the three regions was relatively small in 1978. The rural-urban divide becomes more of a geographical

divide across regions and between core and peripheral cities.

However, because of the long associated privilege with urban Hukou, many rural people have had a strong desire to get an urban Hukou, even when the benefits of this are diminishing. In fact, government in many county level towns and cities started to sell urban Hukous in the 1990s as an easy means of generating revenue. Recently as land has become more valuable, many local governments have introduced a “rural land for urban Hukou” program as a way to getting access to land which can then be “sold” to private speculators with enormous premiums.

Landownership structure in China is complex. Urban land belongs to the government and rural land is collectively owned by the villagers. In rural areas, people are guaranteed to have a piece of land which they are not allowed to sell individually. Only the village collectively can sell land.^{xviii} Once an area is declared as urban, the previously collectively owned land becomes public land at the disposal of the city government and there is very limited compensation for farmers. For this reason urban local governments have a big incentive to push for higher urbanization.

There has been rural land for urban Hukou swaps to accommodate the industrialization and urbanization process for a long time, but this has been intensified in the last decade with a soaring land “expropriation”. Many farmers, mostly in suburban areas of cities, have been encouraged to give up their land in return for urban Hukou status. The typical Hukou transfer is often a change of Hukou status from rural areas around a particular small town to the urban area. However, this urban Hukou status no longer has the provisions of welfare that was previously associated with it, and will not change the fact that many rural migrants may still be “temporary” migrants in the cities they work in, if it is different from their Hukou city.^{xix}

It might be argued that the transferring of rural Hukou to urban has become part of a strategy by city governments for the purpose of land acquisition. The release of land ownership to city governments, who then sell the lease of the land to developers for profit, is an emerging phenomenon. In most cases this has been done without providing any addition social security and adequate welfare support to the people who have lost their land.

One of the biggest movements of rural land for urban Hukou exchanges happend in Chongqing in mid 2010, where hundreds of thousands of rural famers gave up their land in exchange for urban Chongqing Hukous. Although this would mean the gaining of urban Hukou, the ones who got them were often working in the cities other than Chongqing and so still did not have the right Hukou they needed to access benefits.

A Hukou reform, under the name of giving rural people urban Hukou, without addressing its geographic restriction, might thus only be a method of land appropriation by the governments. This is an issue that has to be taken seriously. The danger of some of the current urbanization practice, is not only does it lead to the loss of access to the produce of the land but also the loss of the social security function that the land might provide. That is if their migration to the urban areas fails because the industrial expansion falters, then those without the right to the urban Hokou have no longer the option of returning to the land. One of the many reasons why China has been relatively stable economically is that rural agriculture has provided a basic social security for

hundreds of millions of people (Wang, Weaver and You 2013).

6. Conclusions

This paper has examined the relationships between urbanization and economic development, with special emphasis on the role of the Hukou system in shaping urbanization.

Urbanization should not be just a concentration of population, a transfer of population from rural to urban areas, but it should also be a switch of the sectoral composition of output and employment away from agriculture into industry. Urbanization without industrialization and employment creation will not improve economic efficiency and can be disastrous for a country.

China's Hukou system, that restricted labour migration from rural to urban areas, and/or cross regions, is part of a systematic urban bias in the policy. We argue in this paper that Hukou system did not necessarily create large inefficiencies associated with the allocation of labor. Indeed it might well have contributed to China's relatively orderly urbanization process.

With China's geographically uneven growth across regions, especially the coastal and inland areas, the problem with the Hukou system now is less of rural-urban divide but more of a regional barrier. The main barriers of migration are not the rural urban side of Hukou but the implications in terms of regional restrictions. While Hukou had played a positive role in China's development and it helped with an efficient urban bias, the system now is more one leading to inequity rather than efficiency. Migrants are unable to get settlement rights after a very long period of work and residence.

Moreover, China's dual structure of land ownership gives many local governments incentives to push rural land for urban Hukou exchange programs, under the name of Hukou reform. Many local governments advocating rural land for urban Hukou exchange use the policy as a means of land appropriation. This will not improve equality as the local urban Hukou still does not enable cross-province migrants to settle in the cities where they work.

For China to become a fairer society, this geographic barrier has to be recognized and removed. China should follow the international practice giving people rights to settle after certain years of work or residence. This will also help the establishment of a functioning social system. However, it faces huge obstacles from the local governments in the areas where migrants have moved into. These governments are not willing to allow migrants to "share" their public services and social security entitlements.

From this perspective there are two main problems that have to be tackled to improve China's growth and equality: one is rural-urban divide and the other is the pace of urbanization. These can only be tackled by the central government acting across regions, as many local governments are the seat of resistance to progressive Hukou reforms.

As the rural-urban divide become a serious social and political issue with an average urban income more than three times that of a rural resident, the Chinese

government started to explicitly address this issue in 2002 but the real impact of these policies has been very limited. Many people advocate the abolition of the Hukou system but this alone may not have a significant impact on reducing inequality, because it would not help if the rural poor moved and added to the stock of urban poor.

The pace of urbanization has to be inline with the pace of industrialization and employment creation. Local government pushes urbanization because they want a transfer or exchange farmers' land into public ownership so they have more of it at their disposal, but this could disrupt China's orderly transition and end up with many people losing the social security that was provided by their land and agriculture. In addition, there are some cultural and political implications of urbanization that should be considered. Urbanization moves populations from traditional rural environments with informal political and economic institutions to the relative anonymity and more formal institutions of urban settings. That in itself requires institutional development within a country that takes a very long period time for such transformations.

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Notes

ⁱ Residency here in this data is defined by the Chinese State Council as “at least three months” in the particular urban area.

ⁱⁱ Wang and Piesse (2013) provide a detailed study of microfoundations for dual economy models, which made it possible to examine the micro mechanisms of dual sector economy.

ⁱⁱⁱ On which there is a substantial body of literature, see Henderson (2005) for a review of these models.

^{iv} Of course, industrial development does not always lead to employment creation especially in the short run. One has to consider the way the industry expands. That is whether it expands through employment creation or labour-substituting technology. The patterns of technological change in the industry sector matter! It determines whether the expansion will end up with more employment or not. If we have labour-substituting technology then we can have the so called jobless growth. However, industrialization in the long run is typically accompanied by enlarging employment opportunities.

^v This should not be taken literally. Here we mean that per capita output will not decrease with population growth in the long run.

^{vi} When there exists type I surplus labour in the rural sector and there is a zero social cost associated with them leaving that sector, then, although the proportion of surplus in rural sector will be reduced, the social benefit may also be zero, because of the urban sector’s lack of absorptive capacity. Such a lack may mean that the urban sector may not even be able to offer the subsistence wage. It is in this sense, we say that the rural–urban migration of type I surplus labour need not create extra social benefit. If the urban sector were forced to hire these extra workers, then that sector itself would have surplus labour. See Wang and Piesse (2013) for detailed discussions.

^{vii} For simplicity we assume that employment expands with the industrial sector’s expansion.

^{viii} We assume there is no food constraint here for simplicity. That is, the urban industrial sector can supply its own food.

^{ix} We assume the agricultural sector does not change for simplicity.

^x 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.

^{xi} See Wang and Weaver (2013) for a detail explanation of the difference of the two types of surplus labour and the two turning points that involved in this transition.

^{xii} This paragraph has benefited from the constructive suggestions of Prof. Peter Rangazas.

^{xiii} See Chan (1994), Chan and Zhang (1999) and Knight and Song (1999) for a detailed description of the Hukou system.

^{xiv} This is sometimes called underemployment.

^{xv} Of course, it many have other negative impact such as inequality and fairness.

^{xvi} This partially explains why the Chinese government sets up huge institutional barriers to stop people migrating from rural areas to urban areas.

^{xvii} This is partly a result of the spatial concentration of industries in coastal areas, and partly a result of some wealth concentration programs that favouring different regions. For example, China’s uneven development strategy since 1978 had led to income inequalities between the coastal and inland regions.

^{xviii} Secure land ownership has been a key factor of china’s stability in the past. This partly explains why China's inequality is much higher than the UN Habitat international alert line but still relatively stable.

^{xix} More than 50 percent of the migrants work away from their home counties.