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Labour Market Reform, Rural Migration and Income Inequality in China – A Dynamic General Equilibrium Analysis

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Abstract:

Using a dynamic CGE model this paper explores the effects of reform of the household registration (*hukou*) system in China on economic growth and rural – urban income equality over the period 2010 to 2020. It addresses the specific questions whether reform of the household registration system together with the removal of other institutional barriers to rural labour mobility can accelerate rural labour mobility, and whether the enhanced labour mobility can improve the efficiency of the allocation of labour with the result of increasing labour productivity and reducing rural-urban income inequality.

Key Words: rural-urban migration, income inequality, labour market, China, CGE modelling

JEL classifications: J61, C68

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1. Introduction

Since 1978, rural economic reforms in China have released large amounts of rural labour to move to other more productive sectors such as construction, manufacturing and services. According to the second Agricultural Census China had 130 million rural labour who worked for more than one month outside of their township of residence in 2006. The corresponding data is 74 million in 1997. This large rural migration has proven to be a source of improvement in allocation efficiency and labour productivity. Though migration from rural to urban areas has been increasing rapidly in recent years, underemployment or disguised unemployment remains widespread in rural areas. Labour movement is still restricted by the household registration system (*hukou*) and associated regulations and policies. Notwithstanding the partial modification of the *hukou* system since the early 1980s, it is still the largest institutional barrier to rural labour migration in China. These institutional obstacles inhibit permanent migration of the rural labour force to urban areas. As a result, migration in China is restricted largely to a "floating population".

The gap between agricultural and industrial labour productivity is very large in China. In 2001, the labour productivity ratio of urban industry, urban services and rural-non-farm to agriculture in China is an astonishing 4-10 times larger than in other countries. More significantly, while the productivity ratios of other countries have generally been stable or falling, in China it has risen substantially over the last 25 years (Kuijs and Wang, 2005).[1] These extremely high ratios as well as their rising trend are symptomatic of the major distortions in the labour markets, especially in its bias against the agricultural sector.

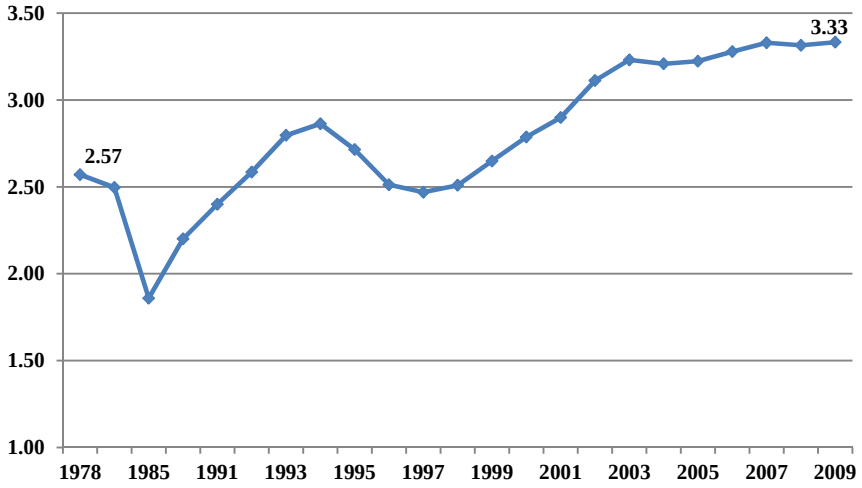
The persistence of the labour surplus in rural areas and of the very low productivity in agriculture causes rural incomes to increase at a lower rate than in urban areas. The ratio of urban to rural incomes has increased dramatically from 2.57 in 1978 to 3.33 in 2009 (Figure 1). 3.33 is a very high ratio by international standards. Rural-urban income ratios for other Asian countries fall between 1.3 and 1.8, with the exception of the Philippines. The increasing income inequality has become a source of increasing social unrest and also an impediment to sustained economic growth in China.

[1] [1]In China, the agriculture sector contributes 10 percent to GDP while the share of agricultural employment was 39.6 percent in 2008. This is another indicator of the low productivity in the agriculture sector.

There is a strong presumption, supported by some evidence, that rural labourers moving out of agriculture will significantly boost the incomes of those remaining in agriculture. Assuming the off-farm migration translates into rural-urban migration, the resulting expansion of the urban labour force will exert downward pressure on urban wages – particularly for unskilled workers – reducing the income gap and ameliorating the rural-urban inequality (Hertel and Zhai, 2004).

This paper explores the effects of reform of the household registration system in China on the economic growth and rural – urban income equality over the period 2010 to 2020. It addresses the questions whether reform of the household registration (*hukou*) system and removal of other institutional barriers can accelerate rural labour mobility, and whether the enhanced labour mobility can improve the efficiency of the allocation of labour with the result of increasing labour productivity and reducing rural-urban income inequality.

Figure 1: Widening income gap between urban and rural household



Source: China Statistical Yearbook 2010.

2. Modelling framework and data sources

2.1 SICGE model

The investigation employs a detailed dynamic CGE model of China economy -- SICGE model. SICGE (State-Information Centre General Equilibrium) model was developed by the Centre of Policy Studies, Monash University. The core CGE part of the SICGE model is

based on that of ORANI, a static CGE model of the Australian economy (see Dixon et al., 1982). The dynamic mechanism of SICGE is based on that of the MONASH model of the Australian economy developed at CoPS (see Dixon and Rimmer, 2002).

The version of SICGE model we used in this paper is based on 2002 input-output table of China. It includes 137 sectors. The major features of this model are:

1) Three tyres of dynamic mechanism: capital accumulation, liability accumulation and lagged wage rate adjustment processes.
2) A unique labour market module: For the purpose of the analysis of labour market reform and rural migration in China, the SICGE model we used in this paper includes a refined labour market module with categories of rural and urban employment.[2] This refined labour market module that recognizes important features of China's labour market such as imperfect labour mobility, labour market segmentation and rural labour surplus can capture more succinctly the impacts of labour market reforms.
3) A set of household disposable income equations: for the purpose of this paper we have introduced a set of household income equations disaggregated by rural and urban areas into the SICGE model. These equations make it possible to simulate effects of the reform of household registration (*hukou*) system on rural-urban household income inequality.

2.2 Categories of rural and urban employment

In the labour market module of SICGE, there are five categories of employment:

- **AGriculture** (**AG**): this category of employment includes those who hold rural residential status, live in rural area and engage in agricultural, forestry and fishing activities;
- **Rural Non-AGriculture** (**RNAG**): this category of employment includes those who hold rural residential status, live in rural area and engage in activities in the industrial and services sectors. People employed in township enterprises forms the bulk of this group;
- **Rural-Urban Employment** (**RUE**): this category of employment includes those who hold rural residential status, but work in industrial and services sectors in urban areas. This category represents the rural migrant workers;

[2] For the details of labour market module please refer to Mai et. al. (2010).

- **Urban UnSkilled Employment** (**UUSE**): this category of employment includes those who hold urban residential status and work in unskilled occupations in urban sectors; and

- **Urban Skilled Employment** (**USE**)**:** this category of employment includes those who hold urban residential status and work in skilled occupations in urban sectors. The skilled labour is defined as employed persons with following educational attainment: College, University, and Graduate and Over (these are categories of educational attainment used in China Labour Statistical Yearbook).

Table 1: Categories of Labour Supply

Categories	Description
AG	Agriculture employment
RNAG	Rural non-agricultural employment
RUE	Rural-urban employment
UUSE	Urban unskilled employment
USE	Urban skilled employment
RAGU	Rural agricultural unemployment
RUU	Rural-urban unemployment
UU	Urban unemployment
NRUR	New entrants rural
NURB	New entrants urban

There are also three types of unemployment and two types of new entrants to the labour markets:

- **Rural AGricultural Unemployment** (**RAGU**) or **rural surplus labour**: In the SICGE1 model with 1997 base year, this category contains rural redundant labour – those who hold rural residential status in 1997, live in rural area, in-name employed but is redundant in the production of agricultural, forestry and fishing products. SICGE with 1997 database is designed to address the question when rural redundancy will be exhausted. In this version of the model, two people employed half-day each is counted as one person-day of labour input in all the sectors including agriculture, forestry and fishing.

- **Rural-Urban Unemployment (RUU):** this category contains those who are temporarily out of job from the RUE category.

- **Urban Unemployment (UU):** this category contains those who are unemployed from the urban employment categories, UUSE and USE.
- **New entrants RURal (NRUR):** this category contains new entrants to labour market with rural residential status.
- **New entrants URBen (NURB):** this category contains new entrants to labour market with urban residential status.

The five employment, three unemployment and two new entrant categories form the categories of labour supply (Table 1). The five types of employment and the three types of unemployment form the types of activities.

Activities are what people do during the year. Categories of labour supply at the beginning of the year are determined by what activities people engaged in last year. If someone was employed in activity AG last year, then at the beginning of this year the person is in the AG category of labour supply. If an urban person was unemployed (or in activity UU) last year, then, at the beginning of this year, the person is in the UU category of labour supply.

Different categories of labour supply are subject to different constraints to their offers to labour market (Table 2):

- the rural categories of labour supply (AG, RNAG, RUE, RAGU, RUU, and NRUR) can only make offers to rural categories of employment[3] (AG, RNAG, and RUE) with the exception of rural new entrants;
- the rural new entrant category (NRUR) can make offers to rural as well as urban categories of employment. This is based on the assumption that some urban enterprises may recruit new entrants from rural areas and grant them urban residential status. Rural new entrants with university degrees may acquire a job in a skilled occupation in city and obtain urban residential status;
- the urban categories of labour supply (UUSE, USE, UU, and NURB) can only make offers to urban categories of employment (UUSE and USE).

[3] A change in the residential status of rural migrant workers can be simulated as a policy change that shifts the workers exogenously from the RUE category to an urban employment category (for example, UUSE). However, when someone is in the RUE category, he or she cannot make labour market offers to urban categories of employment.

- We assume no categories of labour supply offers to be unemployed in China.

The number of person employed in a category of activity in the current year is determined by the demand for and supply to that category of activity (refer to Mai, et al., 2009 for details about labour demand and supply equations). Those who made an offer to an employment activity but did not get a job will be forced into the relevant unemployed activity. They will make offer from the unemployed activity at the beginning of next year.

Table 2: Offers to labour market by categories of Labour Supply

	AG	RNAG	RUE	UUSE	USE	RAGU	RUU	UU
AG	*****	*	*					
RNAG	*	*****	*					
RUE	*	*	*****					
UUSE				*****	*			
USE				*	*****			
RAGU	*	*	*					
RUU	*	*	*					
UU				*	*			
NRUR	*	*	*	*	*			
NURB				*	*			

Note: * indicates where offers to labour market are made. *****indicates that most people prefer to offer to the category in which they were employed last year.

Based on China's statistical yearbooks and RCRE National Fixed-Site Survey of Rural Households, we introduce China's 2002 employment data into our database. We notice that the wage rate of urban workers including both urban unskilled and skilled workers is much higher than that of rural workers (Table 3). For example, the wage rate of urban skilled workers is nearly six times higher than that of agricultural workers in 2002. The wage rate of rural migrant workers (RUE) is nearly two times higher than that of agricultural workers, and

25 per cent higher than that of rural non-agricultural workers. This explains why moving out of agricultural and rural non-agricultural sector and working as rural migrant workers in the urban sectors can lift rural household income.

Table 3: Employment in China (2002)

Categories of employment	**Persons** (million)	**Wage rate** ('000 RMB)	**Total Payment to labour** (million RMB)
AG	312.08	3.982	1242618
RNAG	95.52	5.974	570666
RUE	81.99	7.507	615501
UUSE	209.12	12.325	2577393
USE	38.18	23.877	911723
Total	736.89	--	5917902

2.3 Household income and data sources

For the purpose of this paper we introduced a set of household income equations into the SICGE model. Rural household income includes the returns to three primary factors: labour, capital and land, as well as transfer payments from the government. When we incorporated the household income data into the model's database we met a problem relating to the returns to capital and land. Payments to labour (wage income) are straightforward and are reflected in the data shown in Table 3. But the aggregate payments to capital and land need to be allocated to households and government. But we don't know how much of the return from capital goes to the different owners. For the payment to land, we have the same problem. How can we solve these problems?

From China's Statistical Yearbook we find that rural household income is composed of four parts: wage income, net income from household business operation, property income and transfer income (Table 4). Household business operation income not only includes payment to labour and capital but also includes payment to land. To get the factor based composition of rural household income, we have to decompose the household business operation income

into three parts: payment to labour, payment to capital and payment to land (refer to Figure 2). This means that for the rural household their total income from labour input includes not only 840.2RMB wage income shown in Table 4 but also part of household business operation income. Their income from capital input includes not only 50.7RMB property income but also part of household business operation income.

Table 4: composition of rural household income in 2002

Net income	**2475.6RMB**	
By source	**from China Rural Statistical Yearbook**	
Wages income	840.2	33.9%
Net income from household operations	1486.5	60.0%
-- agricultural sectors	1135.0	--
-- non-agricultural sectors	351.6	--
Property income	50.7	2.1%
Transfer income	98.2	4.0%

Source: 2003 *China Rural Statistical Yearbook.*

Figure 2: composition of rural household income

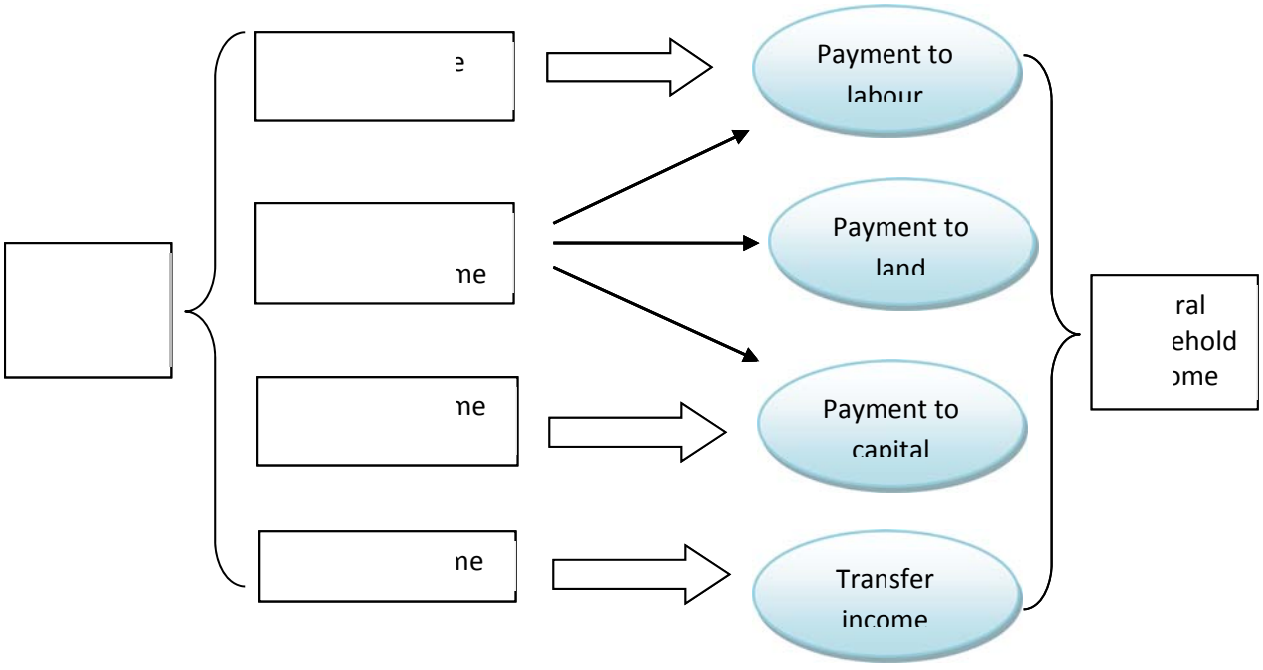


Table 5: Share of factor income from 2002 IO table

	Labour	Capital	Land
Agricultural sectors	0.833	0.111	0.056
Non-agricultural sectors	0.537	0.452	0.011

Source: 2002 China input-output table.

Table 6: Composition of rural household income in 2002

Net income	**2475.6RMB**		**2475.6RMB**		
By source	**from China Rural Statistical Yearbook**		**Model database**		**By factor**
Wages income	840.2	33.9%	1794.46	79.8%	Labour
Net income from household operations	1486.5	60.0%	339.48	13.7%	Capital
-- agricultural sectors	1135.0	--	63.56	2.6%	Land
-- non-agricultural sectors	351.6	--			
Property income	50.7	2.1%			
Transfer income	98.2	4.0%	98.20	4.0%	Transfer

Source: data in the left side is from 2003 *China Rural Statistical Yearbook* and right side is from author's calculation

Based on the factor income data from the 2002 Input-Output table (Table 5) we calculated the proportionate composition of factor income. We notice that China's agricultural sectors are still very labour intensive. Labour input accounts for more than 80 per cent of total primary factor inputs while in non-agricultural sectors labour input is only slightly more than 50 percent. By using the shares of factor income displayed in Table 5 we decomposed the reported net household business operation income into payment to labour (wage income), payment to capital (property income) and payment to land (land income). This gives us the factor based composition of rural household income in 2002 (right part of Table 6). We notice that wage income accounts for nearly 80 percent of rural household income while capital income accounts for 13.7 percent. Income from land input only contributes 2.6 percent

to rural household income. In the model we use these shares in Table 6 to build the rural household income database. We use the same approach to get the shares of factor income in 2002 for the urban household (Table 7) and incorporate urban household income data into the model. We assume urban households do not derive any income from land ownership.

Table 7: composition of urban household income in 2002

Net income	**8177.40RMB**		**8177.40RMB**		
By source	**from China Rural Statistical Yearbook**		**Model database**		**By factor**
Wages income	5739.96	70.2%	5918.33	72.4%	Labour
Net business income	332.16	4.1%	255.91	3.1%	Capital
Property income	102.12	1.2%			
Transfer income	2003.16	24.5%	2003.16	24.5%	Transfer

Source: data in the left side is from 2003 China Statistical Yearbook and data in the right side is from author's calculation.

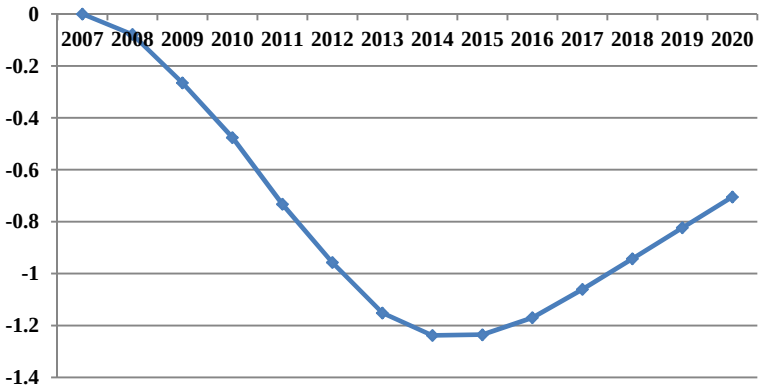
3. The effects of *hukou* system reform

In this section we discuss the effects that reform of the *hukou* system may have on the movement of rural labour and on rural urban household income. Our simulation assumes that the policy is implemented for five years starting in 2008. We assume the Chinese government removes some institutional barriers that will make labour movement from rural to urban areas easier than before. The reduction in institutional barriers is simulated by increasing the variable Bt(c;o),for c = AG, RNAG and RUE, and for o = RUE in the model. This relaxation increases the willingness OR eagerness of agricultural (AG) and rural non-agricultural (RNAG) workers to work as rural-urban workers (RUE) and for existing RUE workers to stay as RUE workers. The increase in the relevant Bt(c;o) variables was calibrated to reduce the gap between the wages of RUE and AG workers by about 28 per cent at the end of the policy implementation period in 2012. Shi (2002) found that approximately 28 per cent of the rural-urban wage difference can be explained directly by the institutional barriers to rural-urban labour flow.

3.1 The effects on rural and urban income inequality

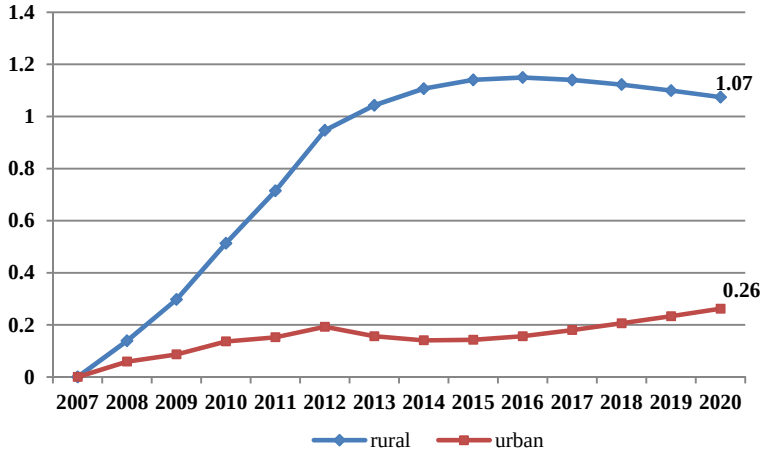
The removal of institutional barriers will reduce the income gap between urban and rural households. Figure 3 shows that by the end of simulation period in 2020 the income gap between rural and urban household will be 0.7 percent lower than the baseline scenario.

Figure 3: The income gap between rural and urban households
(Percentage deviation from baseline)



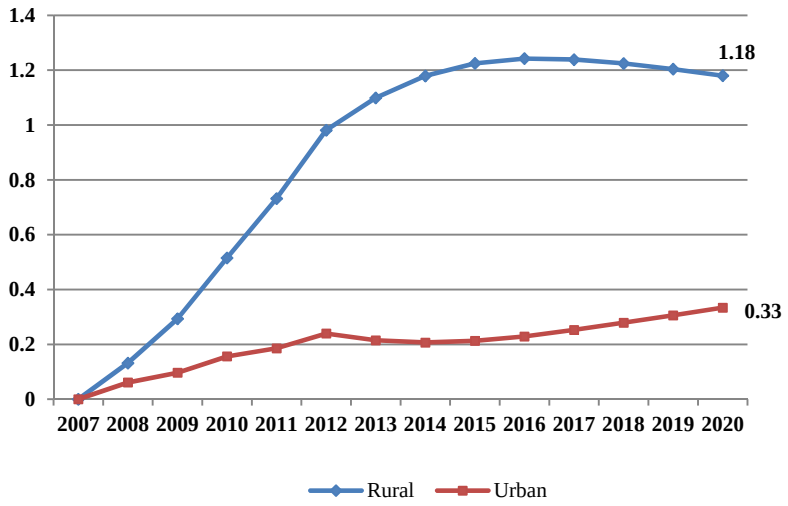
The reason for the narrowing income gap between rural and urban household is that rural household income increases at a faster speed than urban household income (Figure 4). By the end of 2020 rural household income will be 1.07 percent higher than the baseline scenario, while urban income will only be 0.26 percent higher than in the baseline case.

Figure 4: Simulation results:
urban and rural household per capita disposable income
(Percentage deviation from baseline)



Why does rural household income increase at a faster speed? Because labour income, the main income component of both types of household, increases faster for rural than for urban households. Figure 5 shows that income from labour will be 1.18 percent higher than in the baseline scenario for rural household, while for urban household it will be only 0.33 higher than in the baseline scenario.

Figure 5: Simulation results: Income from labour input
(Percentage deviation from baseline)



The reason for the faster growth of the labour income for rural households is the increased labour movement from rural to urban areas.

- First, the reduction of the institutional barriers will increase rural workers' movement to the urban areas. Employment in the rural urban employment (RUE) market increases rapidly. Table 7 shows that by the end of simulation period 2020 RUE will be 10.1 percent larger than in the baseline scenario. This means that there will be 11.40 million more rural workers working as rural urban migrants (Table 7). Given that the wage level in the RUE category is higher than in the AG category, any switch from AG to RUE employment contributes to faster growth of rural household income.

  However, the increased labour supply in the RUE sector will create an excess labour supply in the RUE labour category and push the wage rate in this category down. By the end of 2020, the RUE wage rate will be 13.6 percent lower than in the baseline scenario but it is still higher than the AG wage rate (Figure 6). Though the reduction of

rural migrant worker wages constrains the fast improvement of rural household income, with the positive wage differential in favour of RUE the massive employment switch from AG to RUE will improve rural household income. As a result, the rural household income will be 1.07 percent higher than in the baseline scenario.

- Secondly, as more rural workers move into urban areas, the supply of workers in the agricultural and rural non-agricultural sectors will decline. Table 7 shows that by the end of the simulation period there will be 5.11 million and 5.42 million less workers in agricultural (AG) and rural non-agricultural sectors (RNAG) relative to the baseline scenario. Workers moving out of the agricultural and rural non-agricultural sectors will create excess labour demand in these two sectors and drive those wage rates up. The wage rate will be 6.2 and 5.2 percent higher in the agricultural and non-agricultural sectors, respectively, relative to the baseline scenario (Figures 7 and 8). The increase of the real wage for AG and RNAG workers will further contribute to the growth of rural household income. However, the increase of real wages in AG sectors will drive up food price which will tend to slow down the improvement of rural household living standards. Furthermore, given constant labour productivity, the decrease of employment in the agricultural sectors will reduce the agricultural output and cause the price of agricultural product to increase further.

To summarize, rural household income improves because of the switch to higher wage employment in rural sectors and the increase in agricultural and non-agricultural wage rates. This is partially offset by reduction in RUE wages caused by excess labour supply and increased food prices.

Table 7: Simulation results - labour movement

	Baseline 2020	Deviation from baseline 2020	
	Employment (persons, million)	Employment (percent)	Employment (persons, million)
AG	228.68	-2.24	-5.11
RNAG	135.36	-4.01	-5.42
RUE	112.42	10.14	11.40
UUSE	287.75	-0.07	-0.214
USE	49.52	0.09	0.045
Total	81373.75	0.11	0.70

Figure 6: Simulation result: Labour market - RUE
(Percentage deviation from baseline)

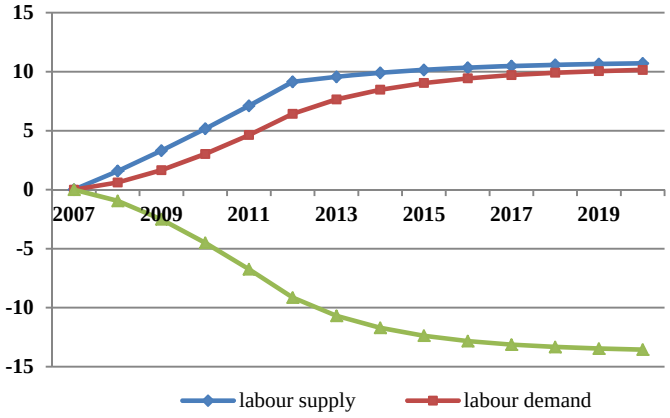


Figure 7: Simulation result: Labour market - AG
(percentage deviation from baseline)

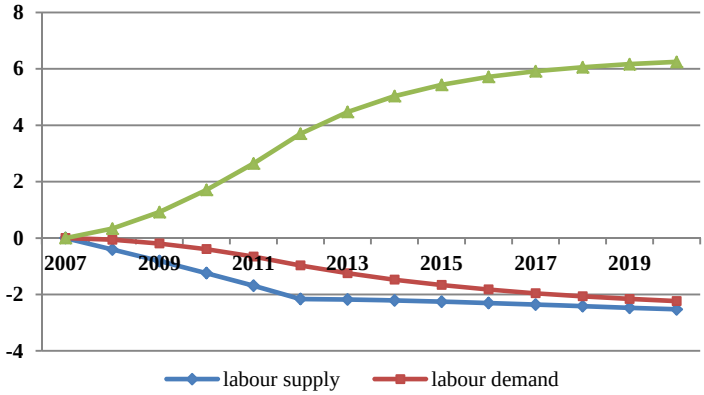
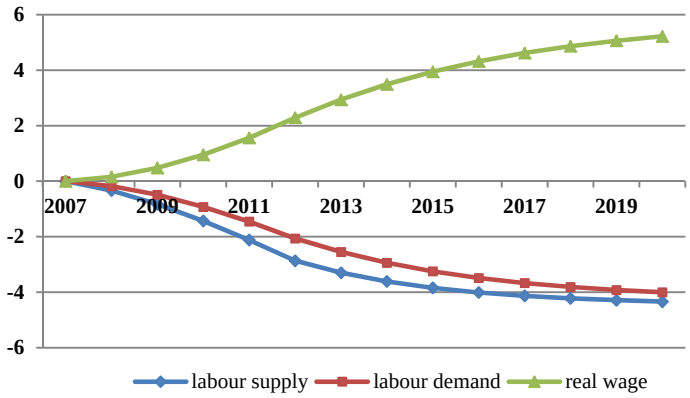


Figure 8: Simulation result: Labour market - RNAG
(percentage deviation from baseline)



For urban households, the increased rural labour movement increases competition in the urban labour market. This will reduce the demand for urban unskilled workers and create an excess labour supply in this labour category and reduce the real wage for urban unskilled workers. By the end of 2020, the employment of urban unskilled labour will be 0.07 percent lower (Table 7) and the real wages will be 0.77 percent lower than in the baseline scenario (Figure 9). The demand for urban skilled workers will increase slightly since the expansion of rural migrant employment will create more management positions. However, the excess labour supply of urban skilled worker will drag the wage down. By the end of 2020, the employment for urban skilled labour will be 0.09 percent higher (Table 7 and Figure 10) and the real wages will be 0.68 per cent lower than the baseline scenario (Figure 10). The lower employment and wage rates in the urban labour markets slow down the improvement of urban household income.

Figure 9: Simulation result: Labour market - UUSE
(percentage deviation from baseline)

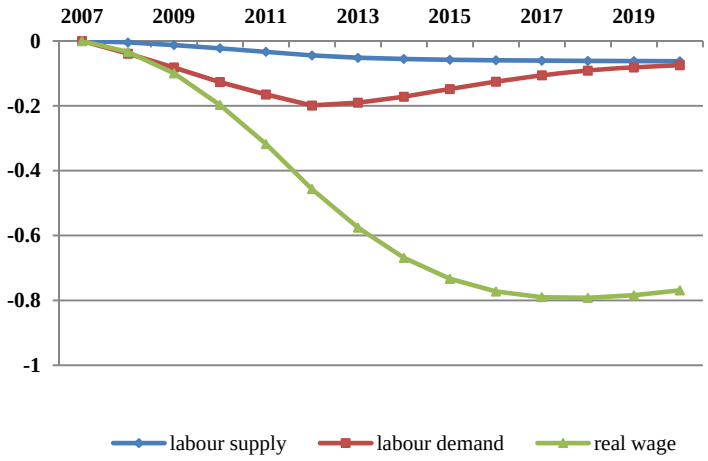


Figure 10: Simulation result: Labour market - USE
(percentage deviation from baseline)

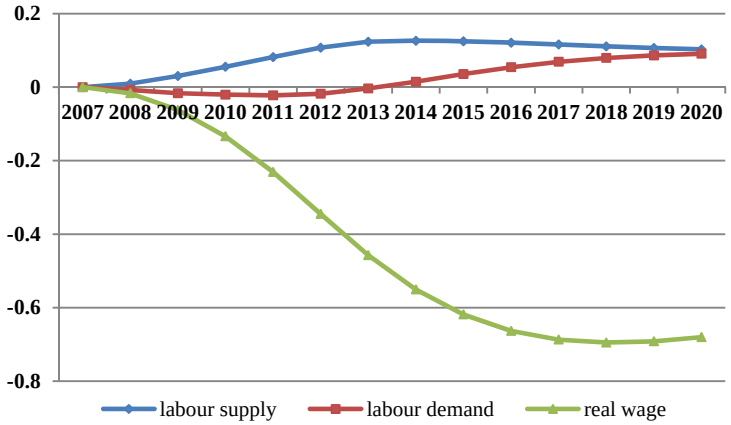
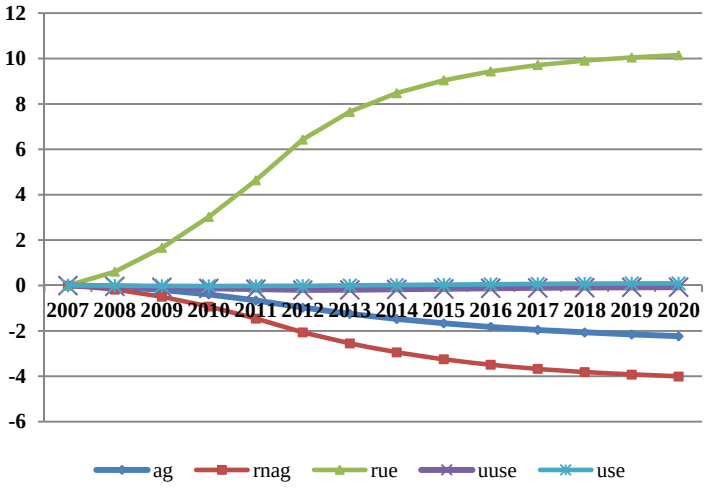


Figure 11: employment by activities
(percentage deviation from baseline)



In summary, the removal of institutional barriers to labour mobility will increase rural labour movement (Figure 11). By the end of 2020 there will be 2 per cent more agricultural workers and 4 per cent more rural non-agricultural workers moving out of rural areas. Rural - urban migrant workers will increase by more than 10 per cent. However the change of urban unskilled and urban skilled employment is very small.

3.2 The effects on macro economic growth

The increased labour movement is expected to boost all macroeconomic variables. For example, real GDP in 2020 will be 0.55 percent higher than in the baseline scenario (Table 9). There are two reasons for the higher growth of GDP. First, the increased movement of labour from the relatively low productivity agricultural sector into higher productivity urban sector

boosts economic growth directly. Even though the total labour supply is fixed at the level of the baseline scenario, the change in the employment composition of the labour force contributes to growth of GDP. The shift from low productivity agricultural activity into higher productivity urban sector increases the effective labour force. As a result, the total employment measured by wage bill weights increases. Table 9 shows employment measured in wage bill weights is 0.43 per cent higher than in the baseline scenario by 2020, while the employment of persons is only 0.11 per cent higher.

Why does the effective labour input increase by 0.43 per cent? Table 10 shows that 6.25 per cent decreases in AG and RNAG employment (column 4: -2.24 - 4.01) means about 10.55 million (column 5: 5.13m+5.42m) people are moved out of the AG and RNAG activities. The 10.14 precent increase in RUE employment relative to baseline means about 11.40 million jobs are created in RUE work due to the policy change. Urban employment decreases 0.02 per cent (-0.07+0.09) relative to baseline. It means 0.17 million urban workers lose their job. All these changes result in an increase of 232,177 million RMB in total wage-bill employment which is 0.43 per cent of the total wage-bill employment in year 2020 in the baseline.

Secondly, the relatively faster growth in the RUE activity driven by the labour shift from agricultural and rural non-agricultural activity creates more demand for capital, which stimulates the growth of capital stock. By the end of 2020, the capital stock in the policy scenario is 0.61 percent higher than base case. Relative faster growth of capital also contributes to the growth of GDP. Consumer goods becoming relatively more expensive than investment goods is another reason for the higher growth of capital stock.[4]

Due to the strong increase in capital stock, aggregate investment increases strongly relative to its baseline path. By the end of 2020, Investment growth will be 0.9 percent higher than baseline scenario (Table 9).

While, in the long-run, moving people from rural to urban activities lowers labour costs for the export sectors and increase China's export (export will be 0.53 percent higher than in the baseline scenario in 2020, (Table 9)).

[4] Please refer to Mai et. al (2010) for the details explanation of higher increase in the capital stock.

Table 9: Macro results – cumulative deviations from baseline scenario in 2020 (%)

	Simulation results
Real GDP	0.55
Employment in number of persons	0.11
Employment by wage bill weights	0.43
Capital stock	0.61
Investment	0.9
Consumption	0.38
Export	0.53
Import	0.77
Real wage rate	-0.49
Terms of trade	-0.14
Output of agricultural sectors	-1.7
Output of industry sectors	0.79
Output of service sectors	0.85
Consumer Price Index	0.96

Source: policy simulation results

The increased labour movement also improves households' living standards measured by real consumption. As Table 9 shows, the real consumption is approximately 0.38 percent higher than in the baseline scenario. We notice that the increase of consumption is lower than that of real GDP. One reason is the deterioration of China's terms of trade associated with the expansion of her exports. In 2020 the terms of trade are 0.14 percent lower than in the baseline scenario (Table 9). The second reason is faster growth of the price of the agricultural products. The shift of labour from rural activities to urban activities causes the agricultural wage rate to increase, raising the price of agricultural products (the wage rates change has been discussed in section 3.1). The contraction of agricultural output as a result of increased moving out from agricultural to urban sectors also drives the food price to increase (agricultural output will be 1.7 percent lower than in the baseline scenario in 2020 while output in industry and service sectors will be 0.79 and 0.85 percent higher, respectively (Table 9)). Since the food consumption represents nearly 40 percent of households' income,

the higher price of agricultural products slows down the improvement of households' living standards.

Table 10 Why does effective labour input increase by 0.43 per cent?

Categories	Baseline 2020			Deviation from baseline 2020		
	Employ-ment (million persons) (1)	Wage rate ('000 RMB) (2)	Wagebill employ-ment (10million RMB) (3) =(1)*(2)	Employ-ment (per cent) (4)	Employ-ment Million persons) (5) =(4)*(2)	Wagebill employ-ment (10 million RMB) (6) =(1)*(5)
1 Agriculture (AG)	228.68	30.56	698742.7	-2.24	-5.13	-15633.4
2 Rural non-agriculture (RNAG)	135.36	44.46	601765.2	-4.01	-5.42	-24100.8
3 Rural urban (RUE)	112.42	56.25	632315.8	10.14	11.40	64144.71
4 Urban unskilled (UUSE)	287.75	92.53	2662702	-0.07	-0.214	-1980.16
5 Urban skilled (USE)	49.52	174.98	866539.3	0.09	0.045	787.3387
Total or Average	813.74	--	5462068	0.11	0.70	23217.69
Percentage increase in effective labour input = 100* 23217.69/5462068=0.43%						

4 Conclusion

Using a dynamic CGE model of China economy, this paper explores the effects of reform of the household registration system in China on the economic growth and rural – urban income inequality over the period 2008 to 2020. We found out that the reduction of institutional barriers will enhance the movement of labour from agricultural and rural non-agricultural sectors to urban sectors. The increased labour movement will

- Boost China's economic growth and increase GDP by 0.55 percent
- increase consumption (combined public and private) by 0.38 per cent; and
- Increase the real wages of agricultural and rural non-agricultural workers by more than 5 per cent while reducing the real wages of rural-urban workers by about 13.6 per cent. Even with these wage changes, rural-urban workers stay considerably better paid than agricultural and rural non-agricultural workers.
- accelerate the growth of rural household income by increasing the growth of labour income and slowing downing the growth of urban household income
- Narrow the rural urban household income gap and reduce rural-urban income inequality.

The basic policy message of the simulation exercise is that the Chinese government should undertake effective action to complete the reform of its *hukou* system and to remove other institutional barriers that restrict the flexibility of labour markets. Integration of the national labour market will reduce the systematic gap between rural and urban labour market outcomes. It will help rural migrants to enjoy employment opportunities, wage payments, public services and social security protection that are increasingly comparable to those experienced by urban residents.

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