

Looking at Rural Labor Surplus from the Point of Farmers' Labor Input

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Issues raised:

- Various study findings show that in the recent years there are about 80-120 million agricultural labor surplus in rural China;
- In rural investigations we found that rural hollow and aging problems are increasingly prominent in rural areas;
- How to look at these two paradoxical phenomena ?

Analysis:

- Looking at demand and supply relationship and surplus state of rural labor force from the view of labor input in household management (family labor input and hired laborer input)
- Main data source: the Fixed-Site Rural Survey System
 - Fixed-Site Rural Survey System: established in 1984 and put into formal practice in 1986. It covers 23, 000 farm households in all 31 provinces, municipalities and autonomous regions of Mainland China.
 - Data period: from 2005 to 2009

Labor Input Change in household Management:

1. Labor input in household Management is declining

Unit: work day

	2005	2006	2007	2008	2009
Total amount of labour input in household management (average of all)	317.6	299.2	290.7	273.4	264.7
# Rural labor export regions	306.2	287.3	281.3	261.8	256.1
Total amount of labour input on crop farming (average of all)	153.2	150.0	140.5	133.6	125.4
# Rural labor export regions	161.7	151.0	146.7	139.9	128.6

Data source: Investigation of the Fixed-Site Rural Survey System

Labor Input Change in household Management:

2. The ratio of household with hired laborer is decreasing

Unit: %

	2005	2006	2007	2008	2009
Ratio of household management with hired laborer	15.4	15.3	15.2	14.2	14.1
# Rural labor export regions	15.9	15.5	15.7	14.3	14.4
Ratio of household management with hired laborer in crop farming	15.2	14.9	15.3	14.5	14.2
# Rural labor export regions	15.5	15.3	15.7	14.5	14.6

Data source: Investigation of the Fixed-Site Rural Survey System

Labor Input Change in household Management:

2. The ratio of household with hired laborer is decreasing

※ there is not a constant rise or drop in annual hired laborer quantity per household measured by work days. Instead, it shows a great fluctuation.

Hired laborer quantity per household in those family having hired laborer

Unit: work days

	2005	2006	2007	2008	2009
Work days of hired laborer in household management	161.3	146.6	154.8	150.4	151.7
# Rural labor export regions	96.4	100.8	88.2	98.8	99.9
Work days of hired laborer in crop farming	29.8	29.3	33.2	37.6	34.8
# Rural labor export regions	27.9	27.1	31.2	34.0	31.3

Data source: Investigation of the Fixed-Site Rural Survey System

Labor Input Change in household Management:

2. The ratio of household with hired laborer is decreasing

※ there is not a constant rise or drop in annual hired laborer quantity per household measured by work days. Instead, it shows a great fluctuation.

Hired laborer quantity per household in all surveyed households

Unit: work days

	2005	2006	2007	2008	2009
Work days of hired laborer in household management	26.4	22.4	23.5	21.3	21.4
# Rural labor export regions	15.3	15.6	13.8	14.2	13.5
Work days of hired laborer in crop farming	3.8	3.7	4.1	4.3	3.9
# Rural labor export regions	3.8	3.6	4.2	4.1	3.5

Data source: Investigation of the Fixed-Site Rural Survey System

Labor Input Change in household Management:

3. Substitution of machinery for labor force is accelerating

Agri-machinery quantity possessed and service received per household

	2005	2006	2007	2008	2009
Agri-machinery power (KW)	5.3	5.7	5.6	5.8	5.9
Original value of Agri-machinery (yuan)	1353.8	1487.1	1447.4	1523.9	1741.00
Expenses of Agri-machinery operation (Yuan)	207.49	237.34	250.46	316.21	340.83

Data source: Investigation of the Fixed-Site Rural Survey System

Rationale of Labor Input Reduction in Household Management

1. Per household area of cultivated land is shrinking

- from 2005 to 2009, per household area of cultivated land decreased from 7.25 to 7.12 mus.

Per household area of cultivated land

Unit: Mu

	2005	2006	2007	2008	2009
per household area of cultivated land	7.25	7.25	7.22	7.16	7.12

Data source: Investigation of the Fixed-Site Rural Survey System

Rationale of Labor Input Reduction in Household Management

2. Family population and labor force structure is changing

Number of Population and labor force per rural household

Unit: people

	2005	2006	2007	2008	2009
Number of rural family population	4.00	3.98	3.98	3.98	3.92
# Rural population of per household	3.77	3.76	3.78	3.77	3.74
Number of labor force of per household	2.90	2.89	2.90	2.88	2.82
# Rural population of per household	2.84	2.75	2.75	2.73	2.65

Data source: Investigation of the Fixed-Site Rural Survey System

Rationale of Labor Input Reduction in Household Management

2. Family population and labor force structures are changing

Employment structure of rural labor force Unit: %

	2005	2006	2007	2008	2009
Labor of household management engaged in agricultural production	55.7	55.1	52.7	51.8	51.0
Labor of household management engaged in non-agricultural industry	9.5	9.3	9.5	9.4	9.4
Hired laborer workers	21.9	22.5	24.5	25.7	28.4
Operator of partnership enterprises	2.4	2.6	2.5	2.3	2.1
Operator of private enterprises	1.1	1.2	1.1	1.1	1.0
Grassroot cadres	1.5	1.4	1.4	1.4	1.3
Labor involved in education, technology, medical care, sanitation and cultural sectors	1.2	1.2	1.1	1.0	1.0
Miscellaneous	6.8	6.8	7.2	7.2	5.8
Total	100.0	100.0	100.0	100.0	100.0

Data source: Investigation of the Fixed-Site Rural Survey System

Rationale of Labor Input Reduction in Household Management

3. Rural labor price rises rapidly

Average income per work day of different type of labor force Unit: yuan/work day

	2005	2006	2007	2008	2009	Annual growth rate (%)
All surveyed samples	---	---	---	---	---	---
Hired laborer in household management	25	29	33	40	47	16.9
Hired laborer in crop farming	24	28	32	34	40	14.3
Samples from labor export regions	---	---	---	---	---	---
Hired laborer in household management	20	25	33	35	39	17.5
Hired laborer in crop farming	23	28	32	36	40	14.2
Migrant workers	29	32	35	39	45	12.1

Rationale of Labor Input Reduction in Household Management

3. Rural labor price rises rapidly

The price rise of rural local labor force makes the utilization of agricultural machinery more economical.

※ If the labor input of unit area maintains unchanged, assuming that all the reduction of agricultural labor input is substituted by hired labourer, then the average expenditure of per household on crop farming in 2009 is 1013 yuan more than that in 2005.

※ The average expenditure of per household on purchase of agricultural machinery and machinery service only increased 521 yuan in the same period. In other words, because of the substitution of machinery for labor force, the average expenditure of per household decreased by almost 500 yuan, accounting for 10% of net income on crop farming.

※ The state that utilization of agricultural machinery is more economical than labor work started in 2007.

Re-discussion of Agricultural Labor Surplus

Why machinery utilization is more cost-saving than labor work for agricultural production when there is a huge agricultural labor surplus?

- Quantity of agricultural labor surplus exists in the form of surplus labor-time so the absolute number of agricultural labor surplus is not as much as the figures.
- Agricultural labor usage shows a strong seasonal character. The shortage and price rise of hired labourer at once worsen the imbalance between demand and supply of agricultural labor force.
- Employment's conception and inclination of rural labor is changing.

Re-discussion of Agricultural Labor Surplus

The development of agricultural mechanization brings forward a new challenge to the transfer of agricultural labor surplus.

- The size of agricultural labor surplus is still very large and more and more employment opportunities are being replaced by machine.
- In terms of supply structure, the rural labor force is increasingly marked by aging and insufficient education.
- In terms of demand structure, the demand of labor market for young and well-educated rural labor force is growing.

The overlapping of total quantity and structure issues makes it more difficult for rural labor surplus to transfer for employment.

Re-discussion of Agricultural Labor Surplus

3 strategies should be adopted in order to solve the transfer problems of rural labor surplus for a time:

- **Upgrade the quality and employment capacity of rural labor to change the supply structure of rural labor force.**
- **Adjust the industrial structure of national economy to expand transfer employment opportunities for rural labor -- Along with upgrading the industrial level, the balanced development of capital, technology and labor intensive industries should be vigorously pushed and coordinated development among eastern, Midwest regions, and urban and rural areas should be highly promoted.**
- **Timely adjust the urbanization strategies and further deepen the reform of household registration system.**
 - **Urbanization strategy: a special attention to the development of medium-sized cities.**
 - **Reform of household registration system: determination is more important than plan**

Thanks !

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