

We found that the probability of deriving income from non-agricultural self-employment increases due to:

- The presence of unemployed household members;
- Ownership of farm machines (the possibility of providing services for members of the community);
- The community's remoteness from the district's center;
- The existence of a place of interest in the area;
- A lower level of economic development in the district (for Ivanovo Oblast).

To what extent does non-agricultural employment compete with other types of employment? In terms of workload, we found that alternative employment and working one's private subsidiary plot cannot be seen as mutually complementary because they involve comparable workloads with employment peaking in the same season. Indeed, households with both a core employment and a private plot hardly have any time left for alternative employment, except in the off season.

An absolute majority of respondents (88%) prefer to earn a living as hired workers and only 12% as entrepreneurs, with the share of potential entrepreneurs among those engaged in the non-agricultural sector standing a little higher, at 17%. Among those employed in the non-agricultural sector, a larger share than in the average sample plan to change jobs or are afraid to lose their job, which indicates a lower job satisfaction. This may be due to greater social vulnerability of the non-agricultural sector workers.

Considering the above, it is not surprising that in order to diversify incomes households will seek employment in a more stable sector of the economy and not in the non-agricultural sector. Self-employment is likely to develop towards increased activity working private subsidiary plots and not expanding non-agricultural employment.

### Poor Regional Policies

Up until now government support of rural employment has been unduly biased in favor of promoting agricultural production (including in private subsidiary plots). A lack of a coherent policy in support of alternative employment limits the opportunities for such employment, as our detailed case studies in five districts have shown. Successes achieved in some districts can be attributed mainly to the efforts of individual enthusiasts.

A quantitative analysis of the efficiency of the policies in Perm Krai and Ivanovo Oblast (through a comparison of pairs of districts on various indicators) revealed that the existence of formal municipal policy to support alternative employment has yet to make a difference to the incomes of rural dwellers. Even so, unemployment was on average higher in the districts unaffected by policy. There are more car owners in the districts affected by policy but the same cannot be said of household appliances, mobile phones and computers. On the whole only the municipal policy of one district can be described as having a real impact on the well-being and employment of the local population.

The reason why policy has had no pronounced effect is firstly due to the fact that support for non-agricultural activities does not as yet figure prominently in rural development programs. Far more attention is paid to the informal employment in working subsidiary plots, which does not remove the problems of rural employment and is fraught with aggravated and persistent rural poverty. Unfortunately, there is also inertia in ways of thinking among the rural population. It is thought to be reprehensible not to cultivate land if you live in a rural area. Despite the fact that investments in private subsidiary plots are often not recouped by proceeds from the sale of produce, this activity takes so much time and effort as to leave no room for engaging in alternative activities.

The development of rural areas requires the development of rural infrastructure; coordinated policies in the field of education and healthcare; the financial support of small rural enterprises, including a cut of interest rates on entrepreneurial loans; information support and consultancy services to rural entrepreneurs; and educational campaigns among the rural population to change their attitude to non-agrarian activities.

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*Yevgenia Serova is the President, Tatyana Tikhonova and Olga Shik are researchers with the Analytical Center of Agricultural and Food Economy at the Institute of Economies in Transition (IET); and Dmitry Zvyagintsev is Senior Lecturer at the Higher School of Economics (Moscow). The full text of the paper is available at: [www.iet.ru](http://www.iet.ru). BT*

## Health Shocks in Rural China

Households living in villages, which held elections, can avoid income reduction due to health shocks

*Yang Yao*

Major illnesses are the most unpredictable and devastating shocks for farm households in developing economies, few of whom have adequate health insurance. A family loses on two fronts when a major health shock comes: it has to spend a considerable amount of money to treat the sick member, and it loses part of its labor capabilities when the sick member is a major laborer in the household. In the

short run, the family has to reduce its consumption due to imperfect insurance; in the long run, it may fail to accumulate enough productive assets including children's education. As a result, experiencing a major health shock may well send a family into both short-term poverty and a prolonged poverty trap.

Using household-level data over the period of 1986-2002 from 48 villages in

eight Chinese provinces, we assess the impact of major health shocks on farm households' long-term income, children's school attainment and the role played by village elections in attaining more equal income distribution in the village and helping households to mitigate the negative impacts of health shocks.

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## Long-term Negative Impact

In 2002, only 20% of Chinese rural residents had some form of health insurance. The most popular insurance system still was the traditional cooperative medical system, financed by the commune budget.

A 2003 survey asked households to recall health shocks — i.e. illnesses requiring treatment in hospital or a total medical expenditure of over 5,000 yuan (roughly twice of the average annual per-capita income) — happening to their

*In the first 16 years after a major health shock a household's income drops below its normal trajectory by over 12%*

family members in the period of 1987-2002. The 5,000 yuan cutoff was chosen in 2002. Among the 676 reported cases of health shocks, 28.0% were inpatient treatments with a cost of more than 5,000 yuan, and 5.9% were illnesses with a cost of more than 5,000 yuan but without inpatient treatment.

What are the negative impacts of health shocks? Our estimations show that a major health shock has strong and persistent negative impacts on household income. In the first 16 years after the shock, the affected household's income drops below its normal trajectory by an average of 12.3%. Therefore, health shocks lead to a prolonged poverty trap.

## Primary School-age Children Most Vulnerable

What is the effect of an adult family member's illness on children's school attainment?

In our sample, among the families with children of 13-19 years old (the middle school age range) in 2002, about 20% had experienced at least one shock during their prime-age as adults during 1987-2002.

Our analysis shows that primary school-age children are the most vulnerable to health shocks. Experiencing a family health shock in his/her primary school age will reduce a child's chances to enter middle school (the final level of compulsory education) by 9.9%. At the same time, people of middle school age are not affected by family health shocks, possibly because the families have become more resilient to the damage brought about by these shocks.

Girls are more susceptible than boys to the damage of health shocks, and this adds to a 5.6% gender gap that exists without any shock happening. Having a seriously sick adult member forces a family to reduce its daughters' chances to attend middle school by 12.5%.

We have found that birth order matters, too. On average, the third or higher order child trails the first child by 13% in his/her chances to get into middle school. Interestingly, the misfortune is reversed when health shocks happen to a family. In this case, the family reduces the first and second child's chances to

attend middle school, but leaves the third and higher order children intact.

Although China set a law for compulsory nine year education as early as 1986, the record shown in our sample has not been impressive. Among people who entered primary school in or after 1986, only 58.4% completed nine years of schooling. Therefore, while providing better school facilities and more qualified teachers is important, more attention should be paid to farm households' weak abilities to deal with unexpected risks, among which health shocks are the most important.

## Elections Mitigate the Effect of Health Shocks

Village elections may help farm households to deal with health shocks and, more generally, to ensure better provision of public goods. They can also reduce income inequality. Democracy does this by enhancing the accountability of the village government; conducting pro-poor policies (e.g. income redistribution or more spending on public projects that enhance the income capability of the poor); and providing an institutionalized mechanism for villagers to take collective action, for example, a health care plan that benefits both the rich and the poor.

China began to experiment with village elections in 1987, and 12 of the villages in the sample were among the first in the nation to introduce elections. By 1990, more than half of the sample villages had held at least one election.

Our estimations show that the introduction of elections has indeed had the direct effect of reducing the village Gini

coefficient on average by 14.3% during 1987-2002. This is despite the rising income inequality during the same period (from 0.29 in 1987 to 0.35 in 2000 in rural China). Moreover, elections tend to increase the income shares of poorer portions of population, so the reduction of the Gini coefficient has been a result of pro-poor policies. Moreover, elections significantly increase per-capita public expenditures. Since the level of public goods provision is generally low in rural China, it is reasonable to believe that poor households would benefit more from increased public investment because the rich can rely more on their own investment to generate income.

Have the elections specifically helped the villages mitigate the negative impacts of health shocks? We have found that this is the case. By our most conservative estimate, households living in villages, which have elections, are able to avoid the income reduction due to health shocks by 8.3 percentage points. In addition, villages are more likely to set up a health care plan after it has started elections.

## Policy Recommendations

Since 2003, the Chinese government has begun to establish a new insurance-based rural cooperative medical scheme. By September 2006, about half of China's 2,600 counties had established the new system. Despite limited benefits provided by the system, this is a good start. The system should preferably be combined with provision of educational loans to shock-hit households to release temporary liquidity constraints. Because dropping out in primary school will most likely result in a permanent deficiency in a person's educational attainment, providing health insurance and shock-related educational loans will bring large benefits to the children and the society as a whole.

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*Yang Yao is Professor at the China Center for Economic Research, Peking University, China. The article is based on the author's working papers: "Health Shocks and Children's School Attainments in Rural China" (jointly with Ang Sun), "Health Shocks, Village Elections, and Long-term Income: Evidence from Rural China" (jointly with Li Gan and Lixin Colin Xu), and "Grassroots Democracy and Income Distribution: Evidence from Village Elections in China" (jointly with Yan Shen). The papers are available on request from the corresponding author, e-mail: yyao@cceer.pku.edu.cn. BT*