

OFF-FARM ACTIVITIES IN WEIZHOU TOWNSHIP

The breakdown of household income as shown in Table 2 indicates that fruit cultivation, livestock raising, and other non-agricultural activities have emerged as important sources of household income. The dependence on traditional agriculture has, therefore, declined significantly.

Impact of Government Policies on the Development of Off-farm Activities

Off-farm activities in Weizhou began in the period of collectivisation, especially during the period of the "Great Leap Forward" in the late 1950s. The trees were cut down as fuel for backyard steel plants. In the early 1960s, and, in the course of the "Cultural Revolution", mining and forestry activities developed. These activities, however, were not very significant. Steady and fast growing off-farm activities emerged only after the full CPRH system was put into practice. The Central Government tried to bring about a change in the rural economic structure through a series of policies. Major policy innovations were permits to open individually and collectively-run businesses (1982); preferential credit for agricultural products' processing, storage, transportation, and marketing (1983); permits for migration and for changing employment inter-regionally and between rural and urban areas (1984); credit priorities and tax deductions for rural mining and other resource exploitation industries (1985); and the promotion of farming diversification business (1986).

Under the impetus of the above policy instruments, farmers tried to search for off-farm opportunities and business based on the comparative advantage of local resources within the constraints of capital and technology.

Types of Off-farm Activity in Weizhou Township

The off-farm activities in Weizhou township can be classified into three types: rural enterprises; family businesses and services; and off-farm activities based on forestry, animal husbandry, horticulture, and poultry.

Rural Enterprises. Rural enterprises (referred to as Type 1 activities) in Weizhou are collectively owned and run by townships or villages. Individually-run enterprises have not emerged as yet. Table 4 shows the situation of such enterprises. These enterprises employ 504 persons or 13 per cent of the total labour force. The sales from these enterprises were around 2.8 million RMB, 85 per cent of which accrued to township-run enterprises.

The enterprises consist of a cement plant; a farm machine factory; an oxygen plant; marble and jade mines, and plaster and lime factories; a hotel; cargo trucks; and a marketing outlet. Six out of the total 11 enterprises are related to construction materials. These enterprises have 435 employees, accounting for 86.3 per cent of the total employment, 83.7 per cent of the total gross production value, and 91.8 per cent of the total sales' income. The production of construction materials is the leading industry amongst all the rural enterprises.

Table 4: Basic Situation of Rural Enterprises in Weizhou

	Total	Township run	Village-run
No. of Businesses	11	7	4
Including:			
Industries	8	5	3
Retail	1	1	-
Transport	1	1	-
Services	1	-	1

Family Businesses. Family businesses (referred to as Type II activities) are run by farm families. There are 321 people, 8.29 per cent of the total labour force, engaged in this type of businesses. Such businesses include restaurants, barbers' shops, repair shops, blacksmiths, carpenters, stone-masons, and transportation and agro-based processing. However, the total business turnover cannot be specified. This type of business is characterised by small-scale operations, self financing, and flexible operations. The growth of such businesses depends on personal skills.

Off-farm Activities related to Agriculture. These activities (referred to as Type III) are based on products from the land. In Weizhou these consist mainly of apples, Sichuan chilli pepper (S-pepper), poultry, and livestock. Apples and S-pepper are the major activities taking advantage of favourable local natural conditions. Out of the total gross production value of fruits and forestry, the share of apples is 60.5 per cent, S-pepper 33 per cent, other fruits 3.7 per cent, and forestry products 2.8 per cent. Presently, this type of business is a part-time business for cropping farmers. Almost every family farm has apple trees, S-pepper, some pigs, and chickens. Around 75-80 per cent of the total labour force are to some extent involved in these types of activity.

In general, these off-farm activities have become the major income source of farmers and account for 67 per cent of the total income (even 90% in some villages with larger scale off-farm activities) and 50 per cent of the labour force. This is indicative of the structural transformation from a subsistence to a commodity economy, which is a crucial step in the rural modernisation process.

Spatial Distribution of Off-farm Activities

The nature and extent of off-farm activities in Weizhou are dependent, to a large extent, on the geographic location of the village or settlement. Out of the total number of collectively-owned enterprises, 70 per cent are located in the three villages of the basin, 25 per cent on the mountain slopes, and only five per cent in the high mountains. Mining on a small scale is the only activity in the high mountains. Poor transportation and geographic conditions inhibit the development of off-farm activities in the high mountains.

In terms of industrial structure, construction materials, chemical industries, services, and transportation are mainly located in basin areas. Mining takes place in mountainous areas and forestry and horticulture in the semi-mountainous areas. Agro-processing and retail trade activities are generally found in all the villages in Weizhou.

Factors Contributing to the Growth of Off-farm Activities

In order to investigate the various aspects of off-farm activities in Weizhou, Binli, a typical village, was selected for detailed study. Twenty farm households in Binli, 26.7 per cent of the total households, with a labour force of 69, one third of the total, were visited and interviewed.

Binli is located at an elevation of 1,642 metres above sea level and is 25 km by road from the central town. There are 410 inhabitants, all of *Qiang* nationality, including 215 labourers. Most families in the village belong to the *Zhou* or the *Ma* clans and have strong kinship ties. Income per capita in 1990 was 732.75 RMB, the second highest in Weizhou. The total land is 1,440 *mu* including 574 *mu* of farmland, 200 *mu* of forests, 200 *mu* of virgin hill area, 200 *mu* of orchards, and 300 *mu* of sparse grassland. The main crops are corn, wheat, and buckwheat. The areas under apples and S-pepper have expanded rapidly in recent years, due mainly to suitable natural conditions. These have become the major income source for most families, contributing, in some cases, up to 90 per cent of their total income. Animal husbandry, poultry, blacksmithing, agro-processing, transportation, and retail shops are all run by individual farmers, apart from a collectively-owned lime mine and factory.

Organisation and Management of Off-farm Activities

After the introduction of CPRH in most rural areas, off-farm activities were usually established by individual farmers. Generally speaking, county or township governments could only communicate the related central policy to promote the off-farm sector. The village (community) collective economy in most areas was too weak to introduce new activities. Individual farmers, therefore, took the initiative for off-farm development. Such activities have no defined management pattern and operational schedule and incur negligible overhead costs and capital investment. Off-farm business operations in Binli village depict this process.

Exemplary Role and Effect. In the beginning, how to select an appropriate business and how to find market opportunities are the crucial questions for farmers. They usually watch their enterprising neighbours starting an off-farm activity and follow the same approach if the pioneers are successful. Within one or two years the same business spreads out all over the region. The growth of apple and S-pepper in Binli is a typical example. In 1983, Binxu Zhou, an accountant in the village, started land reclamation along hill slopes to expand his orchard of apples and S-peppers. In the course of 1985-1987, his orchard began production. In 1991, his income from S-pepper sales reached 3,500 Rmb and 3,100 Rmb from apple sales. The income from S-peppers and apples was 3.2 times the income from grain production, the highest in the whole village. In the same period, most farmers in Binli began to expand their orchards and started to benefit from this business. When asked what off-farm activities they would undertake next, all the farmers in Binli indicated that they would further expand their orchards of apples and S-peppers. This implied that there was a lack of information and lack of opportunities to start other off-farm activities.

Off-farm activities expand rapidly in a short period through this process of copying one's neighbour. In such a situation, a single activity dominates the village economy. The danger here is that any sudden change of policy or natural calamity would lead to farmers incurring huge losses or even becoming bankrupt.

Sources of Capital and Technology. Type I businesses (collective rural enterprises) basically have three types of funding source: (i) funds accumulated in the old collective organisations at township or at village level (these account for 20 - 60 per cent of the total capital involved); (ii) private investments (about 10%); and (iii) bank preferential loans (30-70%), of which the principal can be repaid within 3 - 5 years. Depending upon the scale of enterprises, the proportion of the above funding sources differs. The first two are the major investment sources for the smaller enterprises and the third one is the source for larger enterprises.

Type II activities (family businesses and services) usually involve fixed assets to the value of between 2,000 - 6,000 Rmb from private borrowings or bank loans. Whether their borrowing can be repaid depends upon their operations as well. In our sample survey, only two farmers with transportation businesses remained in debt and all others had cleared their debts.

Type III activities (agriculture-related, off-farm activities at the farm household level) do not need very much capital investment and 100 Rmb would be sufficient to start a business. Usually S-pepper seeds and apple saplings are provided by neighbours for free, and it is seldom necessary to purchase these from the market.

The technology and skills required for off-farm activities are acquired by farmers in different ways. The technicians in Type I activities, i.e., enterprises, are formally trained by the collectives or enterprises in appropriate disciplines where the workers learn the skills on the job. On an average, 15 per cent of the employees in Type I businesses acquire their skills through the family. In Type III activities, horticultural skills were learned or acquired by farmers from pioneer neighbours.

Market and Marketing Channels. Type I activities are rural enterprises and their products can be sold in local markets without inter-regional trade. The exception is an emery factory which delivers its products to Leshan County. Type II businesses, in most cases, serve customers in the home village or township.

Type III businesses are mainly S-peppers and apples with two basic marketing channels: (1) farmers sell their products directly in the local market place; or (2) farmers make a contract with intermediate merchants who usually come to the village and purchase produce during the harvesting season. There is a wide price differential between the two types of marketing channels. For instance, at harvest time, the market price of apples is 0.80 Rmb per *Ji* (500 g), 1.20 - 1.50 in the following two months, and 1.80 - 2.00 in fall and winter. In contrast, the procurement price set by marketing contractors was 0.66 per *Ji* on an average. According to the results of the survey in Binli, 90 per cent of the farmers sold 70 per cent of their total apple produce themselves in the local market. Despite the price differential between direct marketing and indirect marketing through merchants, the total sales' income from both transactions are similar as the loss of weight, perishability, and individual labour costs offset any additional gains from direct marketing.

Comparison of Earnings in Agriculture and Off-farm Activities

In Binli village, the earnings and profit from off-farm activities are much higher than from agricultural activities. In the 20 sample households, the average annual wage per capita from agriculture was 114 Rmb in 1990. The highest wage was 300 Rmb and the lowest was 40 Rmb. In contrast, the comparable earnings from off-farm activities were about 1,148 Rmb; the highest being 3,200 Rmb and the lowest being about 73 Rmb. Sample households where at least one labourer was engaged in off-farm activities had an annual agricultural income of less than 100 Rmb. This was the case with about half of the sample families in Binli. Households with an average per capita agricultural income of over 200 Rmb invested proportionally more time and labour into agricultural work.

It is reported that all the townships within Wenchuan County, including Weizhou, produce enough grains for the local population. However, corn is exchanged for rice at the Township Grain Purchasing Station.

In contrast to earnings from agricultural crops, the average annual income of households from off-farm work was much higher. In Binli, 14 households, out of the 20 sampled, had annual off-farm incomes of between 500-2,000 Rmb. The households with incomes of between 1,000-2,000 Rmb per year were engaged mostly in Type III businesses and often had special skills which they applied in taking care of their orchards. The households with annual incomes above 2,000 Rmb were usually engaged in Type II businesses such as retail shops, blacksmithing, and employment in government establishments. Households with annual off-farm incomes of less than 1,000 Rmb usually had large family responsibilities or their orchards had not started producing fruit.

The output-input ratio (i.e., the ratio of outputs at market prices to inputs such as seeds, fertilizers, draft power, and labour at fixed prices) in the 20 sample households was 3.21 for all activities. The ratio was only 0.87 for agriculture and 5.17 for off-farm activities.

Comparison of Earnings within Off-farm Activities

Table 5 presents the output/input ratio (O/I) of major off-farm activities in Binli village. S-peppers and apples have very high O/I ratios among off-farm activities in Binli.

S-peppers do not need much management and labour input as they are planted at the edge of the fields, orchards, and gardens. The only labour required is during harvesting. Only 10 labour days are required per *mu* (for 70 plants). Apples, on the other hand, need more labour input but relatively less capital input. It is the second highest profitable business for farmers as there is no labour supply problem. Type II businesses, in spite of the high incomes accruing to some families, cannot be ranked as highly profitable activities because of the high costs and capital investments needed.

In Weizhou township, the efficiency of individual farmer-run, off-farm businesses is greater than the efficiency of village or township-run enterprises. Three of the 11 collective enterprises are running at a loss. These enterprises are those of cement, marble mining, and marketing (Table 6). The cement factory, the largest business in Weizhou, ran at a loss of 446.5 thousand Rmb. Only one village-run plastic factory had a respectable O/I ratio of 2.27.

Table 5: Output/Input Ratios of Major Off-farm Activities

Activity	O/I Ratio
S - Peppers	10.44
Apples	7.84
Livestock	3.0
Agro-processing	1.61
Blacksmithing	1.59
Transportation	1.3

Table 6: Profit and O/I Ratio of Collective Enterprises, 1990
(‘000 Rmb)

	Profit	O/I
Total	-193.2	0.93
* Cement	-446.5	0.76
* Farm Machinery	8.5	1.43
* Cargo Trucks	88.7	
* Oxygen	28.1	1.33
* Marble Mining	-48.9	
* Jade Mining	36.7	1.08
* Marketing	-8.0	0.53
** Plaster	72.5	2.27
** Lime Factory	13.7	1.49
** Hotel	44.1	1.65

(Note: * indicates a township-run business and ** indicates a village-run business).