Shaanxi: Building a Future on State Support

Eduard B. Vermeer

ABSTRACT Shaanxi province has obtained substantial benefits from the Open Up the West programme. It has developed communications, sped up exploitation of energy resources, and subsidized industrial and agricultural restructuring. Conversion of farmland to forest or grass has been subsidized on a massive scale, even if its lasting effects are quite uncertain. Moreover, local governments were able to receive increasing amounts of subsidies for government services such as education and welfare, which meant the burden of human and social cost of marketization of the local economy could be alleviated. Of the three different regions of Shaanxi, the north has benefited most from energy development and agricultural restructuring. Central Shaanxi with Xi'an as the capital has profited from its advantageous location, existing industrial basis, administrative functions, and strong education and research facilities to improve its industrial structure and upgrade its services. However, the substantial industrial expansion over the past few years was fuelled by heavy policy-driven investment from outside and growing urban income, and most enterprises still have to prove their ultimate competitiveness in the national market.

For Shaanxi the campaign to Open Up the West represents only the latest in a series of attempts to integrate the province into the national economy. The province's modern age started when the Kuomintang government extended the Longhai railroad to Xi'an in 1935 and Baoji in 1938. The Wei River valley became an important military, economic and administrative basis for the war effort against Japan and the communists built their own basis in Yan'an. The First Five-year Plan of the People's Republic of China (PRC) relocated many coastal industries and designated Xi'an as the main industrial centre of north-west China and a stepping-stone to the western parts of China.[1] The "Third Front" strategy of the 1960s and 1970s led to central government investment in Shaanxi in coal mining, electricity production, defence industries (particularly aerospace and electronics), precision machinery, building materials and metallurgy, but also in textiles, sewing machines and watches.[2]

Shaanxi's tradition of state support for many of its industries had not

1. Eduard B. Vermeer, *Economic Development in Provincial China: The Central Shaanxi Since 1930* (Cambridge: Cambridge University Press, 1988).

2. 12.7 billion *yuan* was invested in capital construction from 1966 till 1975, according to Zhao Bingzheng, "Zhanlüe zhongdian xiyi yu Shaanxi jingji fazhan" ("Strategic emphasis on moving west and Shaanxi's economic development"), *Shaanxi shifan daxue xuebao* (*Journal of Shaanxi Normal University*), Vol. 25, No. 4 (December 1996), pp. 15–20, and 18.7 billion *yuan* in the same during 1965–78, according to Yue Long and Ma Yun, "Guojia jingji jianshe zhongxin bianqian yu Shaanxi gongye" ("Shifts in the centre of state economic construction and Shaanxi's industry"), *Dangdai Zhongguo shi yanjiu* (*Contemporary Chinese History Studies*), No. 2 (2002), pp. 103–112. General, uncritical overviews of Shaanxi's industrial development until 1999 are *Shaanxi wushi nian* (*Fifty years of Shaanxi*) (Xi'an: Sanqin Publishers, 1999) and Wang Shengxue, *Shaanxi chanye fazhan yanjiu* (*Research into the Development of Shaanxi's Industries*) (Beijing: China Statistics Press, 2002).

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prepared it for a market economy during the 1980s. Shaanxi fell behind the phenomenal growth experienced elsewhere in China, particularly in the eastern provinces. Its share in national investments dropped from over 4.5 per cent in the late 1970s to 1.7 per cent in the 1990s. In 1978 and 1990, the per capita disposable net income of its urban residents was 10 per cent below China's, but by 1998 this gap had more than doubled. The rural income gap widened from parity with China in 1978 to 22 per cent less in 1990 and 35 per cent less in 1998. Between 1990 and 1998, Shaanxi's industrial output value (in comparable prices) grew 24 per cent less than China's.[3] Already in 1996, the president of the Shaanxi Provincial People's Congress (a CCP Central Committee member) proposed that legal measures be adopted to give preferential policies to the western regions.[4]

In Shaanxi the campaign to Open Up the West represents a more comprehensive attempt at national economic integration than earlier measures, as well as an apparent return to the greater national planning of the pre-reform era. Yet there are significant differences with past policies. Planners now realize that under the market economy enterprises rather than governments sustain economic development, and that the government's function is to create an "open, fair, transparent, standardized and stable social and economic environment" which includes concern for the ecology.[5] The goals are more qualitative and society-oriented than before and include the development of infrastructure; improvement of the ecology; greater competitive power of agricultural and mineral products; more tourism; the development of advanced technology; urban improvement and urbanization; the creation of larger and more competitive enterprises; more foreign trade; and a solution to poverty.[6] The exploitation of natural resources (energy, water, minerals) to serve national economic construction continues to be an important goal, but is now placed within the context of a largely liberalized national market, at least in part undertaken by privatized or foreign companies.

Behind all this the strategy of the Chinese Communist Party (CCP) is aimed at strengthening both national unity and social stability. The economic measures designed to achieve these ends include the stimulation of demand; preparations for the effects of WTO and globalization; the creation of employment for the millions of laid-off workers from down-sized state-owned industries; the raising of educational levels to prepare young people for jobs outside agriculture; and, in general, making the local economy more competitive against the developed industries of the coastal areas.

3. *Zhongguo tongji nianjian 2001* (*China Statistical Yearbook 2001*), p. 304, and *Shaanxi tongji nianjian 2002* (*Shaanxi Statistical Yearbook 2002*) (*SXTJNJ 2002*) (Beijing: China Statistics Press, 2001 and 2002), p. 202.

4. Zhang Boxing, "Dui fazhan Shaanxi jingjizhong ruogan wenti de sikao" ("Thoughts on some problems in developing Shaanxi's economy"), *Shaanxi shifan daxue xuebao*, Vol. 25, No. 3 (September 1996), pp. 5–14.

5. Cai Lirang, vice-president of the Shaanxi provincial government research office, http://sxzb.shaanxi.gov.cn/add/nr.asp?nid = 1989.

6. http://Chinawest.gov.cn/Chinese/asp/showinfo.asp?name = 20020710.

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While these goals are achievable, Shaanxi's experience to date would suggest that the effect of improved infrastructure is more likely to be an outward shift of economic activities than local economic development. This trend is likely to be particularly acute for the poor mountain areas. The province has three very unequal economic regions each of which requires different types of support. A key question in assessing the impact on Shaanxi's development prospects is the extent to which the Open Up the West programme has been tailored to their specific needs. The lack of political transparency, displacement effects, autonomous economic change and the rather short time-span since its introduction all mean that the impact of central government policies and subsidies cannot be measured precisely, but some trends – urbanization, industrial and agricultural restructuring, energy development, increasing social support – are clear. In particular, industrial investment policies are a critical part of the programme. There is a deliberate attempt to move away from entrenched local government and business interests that seems to be based on a realistic assessment of the future market potential of Shaanxi's industries.

Comprehensive development programmes need to reflect shared national and local goals, and the degree of local involvement in planning and implementation will be crucial to a successful outcome. The existing channels of delivery for central government policies in Shaanxi have been able significantly to influence the Open Up the West programme and capture most of its funding. These channels include the state planning commissions with their five-year plans for infrastructural and industrial development; government provision of education, health and environmental protection services; the poverty alleviation programme; and the afforestation and water and soil conservation programme. As a result central and north Shaanxi are well positioned economically and geographically to take advantage of the programme to Open Up the West, south Shaanxi much less so. Success will come from strong institutions and the strong absorptive capacity of local governments and enterprises, an educated work force, and willing farmers.

Infrastructure Development in Shaanxi's Three Regions

Much of the campaign to Open Up the West is concerned with investment in infrastructure in the belief that this will lead to greater economic activity. However, for a backward region like Shaanxi this is by no means certain. New railways and roads primarily lower transportation costs because of easier movement of goods and shortened travel time for passengers. For goods the advantage accrues to the consumer in lower prices and to businesses in higher profits. Exports of local products become cheaper, but so do imports. Within a region, people are more likely to travel greater distances to work, and employment will become more concentrated. The chance of enhanced regional business is greatest if the region becomes a transportation hub, as many businesses tend to settle in an area with a central transport function and a supporting

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network of roads and railways. But risks are great that competition between regional governments will lead to excessive investments in transportation infrastructure. Will increased accessibility ultimately benefit or harm a regional economy? The answer is likely to differ between economic sectors and depends on the size of a region's population and economy, and their capacity to adjust to the market economy.

Shaanxi with its 37 million people is a medium-sized province. Though united administratively, its three distinct geographical regions are not integrated economically. The well-developed central region (the Wei River valley) has 60 per cent of Shaanxi's population, 85 per cent of its GDP and 90 per cent of its industrial output. The capital Xi'an has about 40 per cent of Shaanxi's GDP, and sufficient size to support and create major industries. It dominates in government, education, finance, tourism and other services. Since the 1990s, urbanization in the Xi'an–Xianyang area with its five million people has no longer been driven by the state-owned industries of machinery-building, textiles or defence, but by food processing, electronics, trade, tourism, communications, finance, high-tech, and the development of township and village enterprises.

Caught between the Qinling and Ba mountains, south Shaanxi is likely to remain a backwater. Hanzhong and Ankang cities are regional centres with urban populations of about 200,000 each and few large-sized industries. The 2000 census noted that over 11 per cent of Hanzhong's total population of 3.6 million had left the region in search of work or a living. While the least developed areas in the south such as Shangluo have expanded their economic activities on the basis of the new influx of capital, the old industries of Hanzhong have been plagued by industrial losses, high debts, backward technology and falling demand for their products. Hanzhong's per capita GDP even decreased between 1998 and 2001.[7] As for Ankang, local officials saw its remote location and administrative position as disadvantages, and doubted whether the preferential policies would last. "In concepts, system and manpower we are seriously unequipped, so it will be difficult to grasp this opportunity! … The problem of defective 'soft' environment has not changed fundamentally. The greatest bottleneck is lack of skilled manpower."[8] Indeed in Ankang and Shangluo less than 10 per cent of the population has a high school or specialized secondary school education.[9] The traditional orientation southward to Sichuan and Hubei may change as the construction of railways and roads under the programme provides better connections with Xi'an, Shaanxi's main economic centre. Processing of local fruits, herbs and other mountain products, and some mines and quarries will benefit. However, given the distance and lack of local skills and capital, not many industries are likely to venture into the southern mountain areas.

7. It dropped by 1% to 3,503 *yuan*, while Shangluo's increased by 37% to 2,489 *yuan*, *SXTJNJ 1999*, p. 57 and *SXTJNJ 2002*, p. 54. For the census see www.hanzhong.gov.cn/jjfx/12.htm.

8. Chen Ji, head of Ankang Municipal Research Bureau, http://ankang.gov.cn/htm/akjj/akjj010117.htm.

9. *SXTJNJ 2002*, p. 71.

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North Shaanxi with its 2.4 million population used to be extremely poor because of the marginality of agriculture on the dry loess plateau, but more recently national companies have increasingly exploited it for its energy and mineral resources. New power lines, pipelines and railways have linked its booming oil, gas and coal economy to north and east China, and much less so to central Shaanxi. In an unprecedented and rapid social transformation, many young people have left agriculture, at present still the main source of employment and income, in search of income and better living (if not working) conditions in the mines and oilfields. Improved communications have already affected north Shaanxi both positively and negatively much more than the south of the province.

The Open Up the West programme includes the construction of a national highway grid. However, from a provincial perspective Xi'an looks like a spider in a web with roads running in eight directions to the provincial borders and beyond. Annual road-building investment increased to five billion *yuan* in 1998, and thereafter mounted steadily to about ten billion *yuan* in 2001 and 2002.[10] The east-west railway (now double-tracked between Baoji and Lanzhou) has been complemented by a north-south railway running from Shenmu to Xi'an and further south to Ankang and south-east to Hefei.

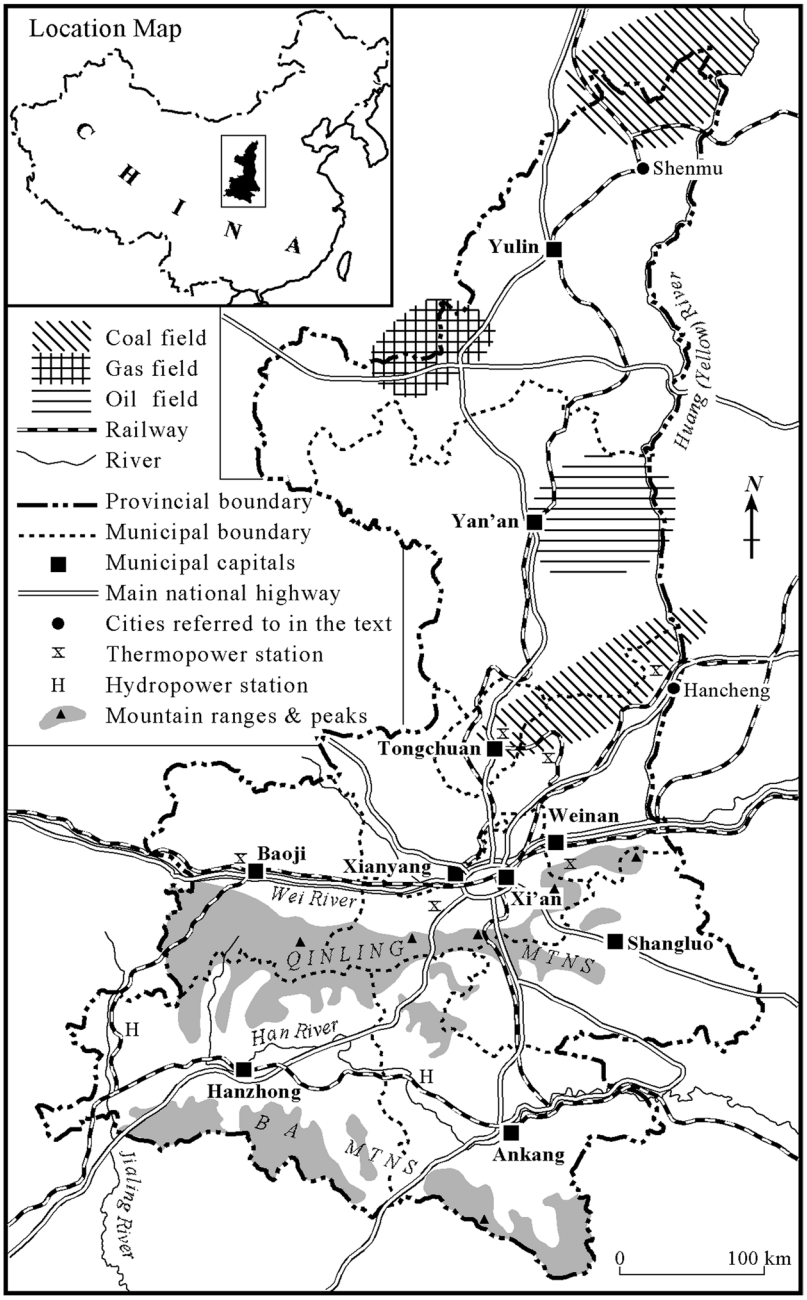
Xi'an's direct connections to the north and south have been a long-cherished desire of the provincial government, and their rationale was political as much as economic: reinforcing provincial control of and access to outlying localities and their resources. The new connections may or may not redirect outward-oriented trade to Xi'an and doubts have been expressed about the need for and cost of many new highways.[11] So far, the 50 per cent increase in railway transport between 2000 and 2002, and similar increase in road transport after 1998 (see Table 1), suggest a great demand for transport. Like most investments in infrastructure, a cost-benefit analysis critically depends on future growth expectations. Road building has been a highly visible, employment generating and politically popular activity, but its socio-economic effects on remote areas are hard to predict. It is most likely that their (partly unintended) effect will be a rapid inflow of modern products and increased commuting and outflow of young people from the rural areas of north Shaanxi to local urban and mining areas, and from south Shaanxi to other provinces. Between 1990 and 2000, the southern municipalities of Ankang and Hanzhong had already lost over 4 per cent of their population, and Hanzhong now has fewer young people and more old people than any other region.[12] With the relaxation of permanent settlement restrictions for migrant workers, many rural migrants from south Shaanxi and other mountain regions may never return to their home province or town.

10. http://ist.shaanxi.gov.cn/jbqk/index.asp; Shaanxi Development Plan Commission, www.sjw.shaanxi.gov.cn /report/2–2–9.htm.

11. Bai Yongxiu, "Xibu dakaifa zhongdi tizhi zhuangxin" ("System renewal in the Open Up the West"), *Xibei daxue xuebao* (*Journal of Northwest University*), Vol. 32, No. 1 (February 2002), pp. 9–15.

12. Over this period, provincial population grew by 9.6%, *SXTJNJ 2002*, p. 70.

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Map 1: **Communications and Energy, Shaanxi**

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Table 1: **Sectoral Output Shifts in Shaanxi, 1995 and 1998-2002**

	1995	*1998*	*2000*	*2001*	*2002*	*2002/ 1998*
Light industry output (billion *yuan*)[a]	39.8	50.2	57.8	64.2	69.6	1.38
Heavy industry output (billion *yuan*)	67.1	79.9	105.2	118.5	134.8	1.69
Fruit (million tons)	2.9	4.3	4.9	4.9	5.1	1.18
Meat (1,000 tons)[b]	793	852	921	963	1058	1.24
Cotton (1,000 tons)	40	23	27	50	43	1.87
Cloth (million metres)	790	640	720	690	727	1.14
Washing machines (1,000)	136	101	39	44	97	0.96
Colour TVs (1,000)	286	978	803	506	815	0.83
Refrigerators (1,000)	639	496	376	298	140	0.28
Coal (million tons)	42	23	35	45	59	2.56
Oil (million tons)	1.7	3.2	7.5	9.2	10.6	3.31
Road transport (b tons/km)	10.4	11.1	14.4	16.0	16.5	1.49
Rail transport (b tons/km)	40	42	43	52	65	1.55
Foreign tourists (1,000)	442	541	713	759	850	1.57
Domestic travel income (billion *yuan*)		8.8[c]	12.7	14.2	15.8	1.80[c]

Notes:
[a]current prices
[b]provincial figures before the 27% downward revision by the State Statistical Bureau
[c]refers to 1999
Sources:
Zhongguo tongji nianjian 2003 (*China Statistical Yearbook 2003*), pp. 436, 509–513; *Shaanxi tongji nianjian 2002* and *2003* (*Shaanxi Statistical Yearbook 2002* and *2003*) and *2002 Statistical Report on Shaanxi's Economic and Social Development*, www.stats.gov.cn/tjgb/ndtjgb/dfnsdtjgb/12003050187.htm.

Local Input in National Development

Shaanxi's participation in the campaign to Open Up the West has been varied. Some large development schemes have been adopted, financed and implemented by central government and national corporations. Two of the ten large-scale national projects adopted in 2000 – the Xi'an–Hefei railway and ecological construction – and seven of the twelve in the larger and more broadly defined 2001 programme have been Shaanxi-based or touched the province. Of the 2001 listed projects these include the Tarim–Shanghai gas pipeline, ecological construction, specialized agriculture, central city infrastructure, education, high-tech enterprises and health care. Other developmental schemes have been undertaken by provincial or local authorities, including the building of secondary high-

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ways, power lines and water treatment facilities. The degree of involvement of provincial and local governments in project proposal and preparation, application for funds and implementation differs between sectors and regions, depending on existing planning and implementation procedures, the strength of local government organizations, and past experience.

The provincial authorities noted four stages in the formation of their ideas about how to develop Shaanxi. Their first concerns were how to match the idea to Open Up the West with their existing modernization programme and define Shaanxi's designated role as a "first step" in the development of west China. A second stage started with the October 2000 CCP Committee decision about Shaanxi's computerization and reliance on its technical and educational strength. The third began with Jiang Zemin's July 2001 speech on the CCP's duty to improve people's lives, particularly those of the poor. The fourth and final stage was based on Jiang's remark in March 2002 (echoing his comments of a year earlier) that Shaanxi should become a "strong province" in the development of the economy of the western region. There is no indication that central and provincial governments disagreed about these shifts in political emphasis. Simply put, they highlighted successive sectors in need of development: physical infrastructure, human capital, poverty alleviation, and the need for strong and outward-oriented industries. Yet the subtle political message carried by the description of a "strong province" may have been that Shaanxi should expect less financial support from the centre in the future.

The wider, qualitative aims of the campaign to Open Up the West are echoed and seem to be shared by the Shaanxi authorities. State-owned enterprises have been restructured, large corporations formed and small enterprises privatized. Industrial development should "follow a new road of electronic communication, high technological content, high efficiency, low-energy consumption, little environmental pollution, and optimal development of human resources."[13] Nevertheless, provincial authorities claim to pursue a development model of their own. "The present development model is inadequate, and to follow the tracks of others is not good enough. We must follow a new road that befits Shaanxi's conditions. We must develop our strengths, rely on innovation, and realize a leap-type development." Provincial priorities have not changed and still centre on high-tech industry and services, fruit production, animal husbandry, tourism, defence industries, and the petrochemical industry.[14] In 2002 some 36 key-point programmes involving 27 billion *yuan* of investment were arranged, and as many large renovation projects involving a further 16 billion *yuan*. Added value and profit-cum-taxes of the eight traditional

13. http://jmw.shaanxi.gov.cn/more/browse1.asp?id = 4236.

14. Shaanxi Planning Commission, *Kua shiji de hongwei lantu 1996–2010* (*Great Blueprint Across the Century*) (Xi'an: Shaanxi renmin chubanshe, 1996); *Shaanxi ribao* (*Shaanxi Daily*), editorial, 17 June 2002. Chronologies of implementation measures of the Open Up the West policy have been published by this CCP newspaper on 17 June 2000, 18 June 2001 and 17 June 2002; see www.sxdaily.com.cn/20020617.

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"pillar" industries are projected to double within five years.[15] Support for these industries reflects provincial, not national, priorities. So far, there have not been significant changes in the development programme, apart from a shift towards greater investment in human development such as education and in the conversion of farmland to forests.

Each municipality has indicated its priorities in a revised five-year plan.[16] General goals have been set by Beijing in a uniform manner: annual GDP growth of 10 per cent, development of infrastructure, exploitation of energy and mining resources, privatization of state-owned industries, regional economic specialization, improvement of urban facilities, and rural poverty alleviation. Within those goals, local governments exert themselves in tabling project proposals to be financed under the Open Up the West programme. Through approvals and subsidization national rather than provincial departments have a decisive influence on how and where municipal funds are spent.

Poor provinces such as Shaanxi have always closely co-operated with central ministries, and been dependent on budgetary subsidies. In 1998, provincial budgetary expenditure was 16.6 billion *yuan*, 20 per cent of which was spent on economic construction, but its budgetary income was only 9.3 billion *yuan*. In 2002, expenditure was 40.5 billion *yuan*, over twice as much, of which 15.0 billion *yuan* came from local tax revenues.[17] The deficit has been almost fully covered by central government subsidies. The province's regions differ in their financial strengths. Xi'an and central Shaanxi are able to cover most of their budgetary expenditure by themselves, north Shaanxi much less so, and the south Shaanxi municipalities depend for almost three-quarters of their budget on central subsidies.[18] Because of such subsidies, between 1999 and 2002 local budgetary expenditure could increase fast not only in capital construction (by 168 per cent to 6.1 billion *yuan*), support for agricultural production and services (by 150 per cent to 4 billion *yuan*), and in education (by 92 per cent to 6.3 billion *yuan*), but also in social security subsidies (by 356 per cent to 3.9 billion *yuan*), pensions (to 1.7 billion *yuan*), and relief (by 166 per cent to 1.1 billion *yuan*). The 2003 budget increases expenditure in capital construction and technical transformation by 8 per cent, but social security by 33 per cent and relief by 28 per cent.[19]

These increases in subsidy show the state's willingness to bear the social cost of economic restructuring for urban residents. As the CCP's concern for social stability was one of the driving factors behind the campaign to Open Up the West, this shift in funding clearly supported national developmental goals. Social and environmental considerations

15. From 43 and 15 billion *yuan*, respectively, in 2001 to 80 and 30 billion *yuan* in 2006, Report on Provincial Government Work, *Shaanxi ribao*, 21 January 2003.

16. Provincial and 13 sectoral plans and abstracts of municipal plans may be found at http:/www2.shaanx.gov.cn/15plan. Full plans are shown on municipal websites.

17. *Shaanxi ribao*, 4 August 2002; *SXTJNJ 2003*, pp. 164–65.

18. *SXTJNJ 2002*, pp. 176–78.

19. *SXTJNJ 2002*, p. 175; Report on the Implementation of the Shaanxi Provincial Budget in 2002 and Draft Budget for 2003, *Shaanxi ribao*, 20 January 2003.

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are part of the local political discourse within the campaign. All the same, it is doubtful that the present level of subsidization can be sustained for long: provincial finances will soon be put to a severe test and local political choices will become more painful.[20]

Recent Economic Performance

In 1997–98, urban Shaanxi was described as being in a "dramatic employment crisis" with many more laid-off workers than localities could handle.[21] When the campaign to Open Up the West started, Shaanxi had already reduced the work force in state-owned units by 20 per cent to 2.7 million, and in urban collective units by one-third to 360,000. By 2001, state-owned enterprises (SOEs) had lost a further 12 per cent, and urban collective enterprises 24 per cent. Many laid-off workers were reassigned on a temporary basis to state service units. This helped keep the registered (urban) unemployment rate low: in 2002 only 3.5 per cent in Xi'an and 4 per cent in Baoji. However, it was 10 per cent in Hanzhong and 12 to 18 per cent in the smaller cities of Weinan, Yulin and Shangluo. In Shangluo 42 per cent of the employees in SOEs were laid off, less than half of whom managed to find new jobs.[22]

Loss of employment in SOEs was not compensated by gains in the private sector. Shaanxi proudly noted that since 1999 its investment in fixed assets was the largest of all western provinces, amounting to 276 billion *yuan* over four years.[23] Nevertheless, between 1999 and 2001 employment dropped by 1.3 per cent to 17.85 million, while the number of people of working age (15–64 years old) increased by 4.5 per cent to 25.17 million.[24] Part of this reflected the rationalization of labour, improvements in the economic structure and the inevitable shift out of agriculture. There has been a move from industrial employment (minus 8 per cent since 1998) to construction (plus 9 per cent) and to services. The gains demonstrate the impact of the temporary injection of central

20. Over the period 1998–2002, pensions were subsidized by 24 billion *yuan* and laid-off workers by three billion *yuan*, urban wages by 15 billion *yuan*, and workers laid-off from bankrupt industries by 1.4 billion *yuan*. Reforms in grain distribution were subsidized by 2.5 billion *yuan*. Of a more productive character were expenses for education and S&T (29 billion *yuan*), rural production and development (13.4 billion *yuan*), and natural forest protection and conversion of farmland to forest (4.5 billion *yuan*). Increased provincial transfers to counties helped to reduce the average "peasant burden" of taxes and fees (according to official data, from 109 *yuan* to 66 *yuan).* 21.7 billion *yuan* of special item state bond funds were obtained, that contributed over 80 billion *yuan* of non-governmental investment, and 7.3 billion *yuan* in foreign preferential loans. www.sf.gov.cn/dbfnews/display.asp?key = 272.

21. "Now that the centre has taken the decision to transform the SOE system, it has left the local urban governments to deal with the adjustment costs," Andrew Watson, "Enterprise reform and employment in Shaanxi province," manuscript, 1998.

22. *Zhongguo gongye jingji* (*China Industrial Economy*), No. 3 (2002), p. 9.

23. *Shaanxi ribao*, 19 February 2003. Investments in 2002 rose by 14.5% to 97 billion *yuan*.

24. Employment in agriculture dropped by 5.5% to 9.94 million; in industry, construction and mining by 2% to 2.973 million; in trade, transport, education and other services employment increased by 9% to 4.935 million. Calculated on the basis of official data in *SXTJNJ 2002*.

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government funds, and the losses indicate that industrial investment has been selective and not driven primarily by traditional concerns about providing employment. In some sectors such as textiles and consumer durables, the loss of industrial employment indicates an official acceptance of Shaanxi's weak capacity to compete with products from other provinces. In other sectors, it demonstrates a readiness to consolidate and rationalize existing industries to restore their profitability. Cuts in urban industrial employment are likely to continue as production facilities are shifted to town and village enterprises (TVEs) with cheaper labour.

Even after shedding much of their work force, half of Shaanxi's SOEs suffered losses, as did one-third of the share-holding and foreign-invested companies. Sectors such as food-processing, textiles, chemicals and non-ferrous metals are in great difficulties. By the end of 2001, long-term debts were dangerously high (over ten times the annual profit from sales) in coal mining, the drinks industry, woollen and silk textiles, leather, chemical fertilizers, paper, glass, porcelain, car manufacturing, computers, electricity production and supply, machinery and spare parts, and several other sectors.[25] Some 80 billion *yuan* of loans were considered to be "bad."[26]

The manufacturing industry provides one-third of Shaanxi's GDP, and has grown by about 10 per cent annually, as against 2 to 3 per cent for agriculture. Together with Sichuan, Shaanxi scores well above other western provinces in terms of market orientation, capacity for innovation and other factors in industrial competitiveness.[27] In 2002, total industrial added value (not including construction) rose by 13.5 per cent to 69 billion *yuan*. Performance of SOEs improved over the previous year, with tax payments up by about 10 per cent to almost ten billion *yuan* and net profits up 60 per cent to almost six billion *yuan*. According to official figures, Shaanxi's industry was doing quite well, although there were winners and losers: in 2001 and 2002, 40 per cent of Shaanxi's above-scale industrial enterprises suffered losses.[28] Losses were highest in Hanzhong, Weinan and Tongchuan municipalities. The contrast between the performance of south Shaanxi's industries (with 12 per cent of Shaanxi's industrial work force and 9 per cent of its total assets producing

25. In 2001, the debts of all state-owned and other enterprises totalled 203 billion *yuan*, 52% more than their net asset value. After-tax profits from sales were 21 billion *yuan*. *SXTJNJ 1998* (Beijing: China Statistics Press 1998), p. 101 and *2002*, pp. 320–27.

26. Calculated by author; in 2002, bad loans decreased by 1.8 billion *yuan* and their percentage of Shaanxi's total loans – which rose from 256 billion *yuan* to 295 billion *yuan* at year-end – dropped by 4.8%, according to the PBOC Xi'an Branch, *Shaanxi zheng bao* (*Shaanxi Governmental Bulletin*), No. 2 (2003).

27. Wei Houkai and Wu Lixue in *Zhongguo gongye jingji* (*China Industrial Economy*), No. 11 (2002), pp. 58–59.

28. If one includes the non-state "scale and above" industries, 2002 industrial sales (excluding construction) were 125 billion *yuan* (14.3% up on 2001), added value 55 billion *yuan* (15.5% up), profits 7.4 billion *yuan* (up 46%), losses 2.9 billion *yuan* (down 3%) and tax payments 10.3 billion *yuan* (up 12.6%). Of these, industrial TVEs (including the private sector) saw their added value increase by 10.5% to 30 billion *yuan.* www.stats.gov.cn/tjfx/dfxx/100212310083.htm and /1200302210026.htm; Shaanxi TVE Bureau, 7 March 2003 in http://xzqy.shaanxi.gov.cn; *SXTJNJ 2002*, p. 303.

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only 7 per cent of its added value, and totalling a net loss of 150 million *yuan*) and those in north Shaanxi (with 7 per cent of Shaanxi's industrial work force producing 14 per cent of its added value and one billion *yuan* or 16 per cent of Shaanxi's total industrial profits) was striking.[29] In Hanzhong, food and drink industries, tobacco, steel, machinery and electricity production have declined severely, and this has been compensated only partially by new investments in steel rolling, cement, machine tools, pharmaceuticals and electroplating. Its 2002 industrial output value was only 7 per cent above 1995 – as against a 124 per cent increase for its tertiary sector.[30] Losses in the south and profits in the north are the result of national market forces and local factor endowments over which provincial government has little if any control in the medium and long-term.

The energy industry has fuelled much of Shaanxi's industrial growth. Growth has been highest in Yulin, mainly because of coal and gas production, and lowest in south Shaanxi. In 2002, the largest provincial earners were the oil and gas industry, which provided over seven billion *yuan* in taxes-cum-profits (over twice the 1999 figure) and the tobacco industry with two billion *yuan*, but most of their revenues accrued to national rather than local governments and companies. Public utilities, the pharmaceutical industry, oil refining, electronics and IT equipment, coal mining, and the drinks industry together provided another seven billion *yuan*. Even if all of their net profits were reinvested, it would be a small sum compared to the financial resources of national and international competitors. Other sectors generate even less taxes and profits, and seven sectors have mounting losses, notably plastics, chemicals, and non-ferrous ores.[31] Without outside funding (whether budgetary allocations, venture capital, or bank loans), Shaanxi's industrial enterprises could not invest in large-scale expansion or product development. So far, state funding, lower transportation costs, the expanding Chinese market, and soaring revenues from oil and gas have all enabled Shaanxi to restructure its industry and have it expand rapidly at the same time. But apart from the lower transportation costs, none of these factors will last forever.

Consumer demand and investments are the twin motors of economic growth.[32] Urban demand has soared, as Shaanxi's urban income has grown by 10 per cent per year between 1998 and 1992. However, the two-thirds of the total population who live in rural areas saw their per capita income rise by only 3.5 per cent per year. The result is that the

29. Figures refer to 2001, *SXTJNJ 2002*, pp. 395–97.
30. www.hanzhong.gov.cn/jjfx/14.htm and … 23.htm.
31. www.stats.gov.cn/tjfx/dfxx/100212310083.htm; www.jmw.shaanxi.gov.cn/more/browse1.asp?id = 4236.
32. In 2001, investment was responsible for 5% of economic growth and consumption for 4%, Shaanxi Development Planning Committee. The 12 billion *yuan* invested in road construction alone in 2003 contributed 1.5% to GDP. www.sjw.Shaanxi.gov.cn/report/2–2–1.htm and www.sxtz.gov.cn/sjw/new/news.asp? ID = 9884.

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urban–rural gap rose from 3:1 to 4:1.[33] Moreover, urban income differentials have increased as well.[34] These growing gaps are likely to force provincial and local governments to spend more on welfare, social services and employment-generating small industries, at the expense of productive investments in large modern industries and services. Once central government and banks stop pumping money into Shaanxi, the twin motors of growth may both falter. The big question is whether by then the present industrial expansion and restructuring will have produced enough viable "winners" with increasing sales also outside Shaanxi; enterprises that will support Shaanxi's economic growth, generate employment and taxes, and raise local income.

Investment and Sources

State-channelled investments are the most concrete evidence of developmental priorities. However, the Open Up the West campaign is financed from many different sources and is sometimes not distinguishable from other programmes. When the State Council's Leading Group was constituted in February 2000 and drew up a list of specific projects, the representatives of the various commissions and ministries included many of their ongoing activities and subsidy programmes. Some investment projects were new, while others could be advanced to an earlier date of implementation.

The largest infrastructure and energy projects with a trans-provincial interest are financed as capital construction, directly by central government. These are the three national highways passing through Shaanxi, main railways (including Xi'an–Ankang), the Tarim–Shanghai gas pipeline, and the Hancheng pit power station.[35] The central government also finances water savings in Shaanxi's large state-run irrigation districts. Technical transformation or renovation projects are financed from national and local government budgets on the basis of plans from planning committees and large SOEs.[36] In 2002, 29 such projects totalling 8.3 billion *yuan* were financed at a rate of 60 per cent from the central government budget (in the form of loans) and 40 per cent by enterprises in Shaanxi themselves. Another 90 technical renovation projects totalling

33. Urban income rose from 4,220 *yuan* to 6,331 *yuan*, and rural income from 1,406 *yuan* to 1,596 *yuan. SXTJNJ 2002*; Shaanxi Provincial Statistical Bureau, *Statistical Report on Shaanxi's Economic and Social Development in 2002*.

34. E.g. in Hanzhong city net income differentials between the top and bottom decile increased from 4.1 in 1990 to 7.4 in 2002, www.hanzhong.gov.cn/jjfx/23.htm.

35. For financing details see Wang Wenxiang (ed.), *Xibu kaifa zhongda jichu sheshi tourong fangshi yanjiu* (*Research on Methods of Financing Large Infrastructural Facilities Opening up the West*) (Beijing: Zhongguo jihua chubanshe, 2002).

36. In 2002, the province financed 89% of the 6.1 billion *yuan* of local budgetary capital construction, and the municipalities 11%. A small part of technical transformation (637 million *yuan*) was financed about equally from provincial and municipal budgets; *Shaanxi ribao*, 20 January 2003.

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10 billion *yuan* were financed by low-interest loans.[37] In addition, during 1998–2001, Shaanxi obtained 17 billion *yuan* from the state bond fund for almost 600 projects with a total investment of 84 billion *yuan*.[38] Other projects are financed through preferential state policy loans, or through subsidies to local government budgets.

The choice of a particular type of project funding depends on the initiating agency, the expected main beneficiaries and their capacity to provide counterpart funds. As a result, Shaanxi province's financial contribution to the programme to Open Up the West was varied. In 2001, its investment share in large projects was 18 per cent for railroads, 36 per cent for oil and gas, and 38 per cent for electricity generation. In contrast, capital construction investment in the manufacturing industry was 72 per cent local, in education 75 per cent, and in agriculture, irrigation, road transport and social services a full 100 per cent. The greater local content did not necessarily mean a greater local discretion in setting developmental priorities, as local bureaus needed to follow departmental guidelines and obtain approval from Beijing, while enterprises needed loans from state banks.[39]

Total investment in Shaanxi rose by 79 per cent between 1998 and 2002 to 98 billion *yuan*, that is, from 40 per cent of GDP to almost one-half. The investment share of SOEs dropped slightly to about 60 per cent. Investment in non-state, non-collective enterprises expanded rapidly, and individually owned assets increased steadily. Provincial budgetary expenses rose by as much as 143 per cent, and as budgetary revenues rose by 57 per cent only, the annual provincial deficit more than tripled. These extraordinarily high levels of investment and budgetary spending produced very high growth in the construction sector (its added value increasing by 93 per cent), and high growth in industry and services (over 50 per cent). The agricultural share in GDP fell from 20 to 15 per cent.[40] The sudden increase in outside investment, together with the new infrastructure for highways, railways and telecommunication networks, has created development and marketing opportunities for both large, government-supported industries and new small industries. Traditional medium- and small-sized industries, and those in less favourable locations in the periphery have suffered. The resulting shifts in employment and income are creating imbalances that call for strong social policies.

37. Report by Shaanxi Provincial Economic and Trade Committee Chairman Qiu Shijie at the Provincial Economy and Trade Conference, 3 January 2003, www.jmw.shaanxi.gov.cn/more/browse1.asp?id = 4236.

38. *Shaanxi sheng xibu kaifa jianbao* (*Shaanxi Province Open Up the West Bulletin*), No. 8 (April 2002).

39. *SXTJNJ 2002*, pp. 111–14, 108.

40. *SXTJNJ 2002;* Government Work Report, *Shaanxi ribao*, 21 January 2003; www.sf.gov.cn/dbfnews/display.asp?key = 272; Hu Feng, *Report on Shaanxi's Economic and Social Development in 2002 and Draft for 2003*, http://news.Shaanxi.gov.cn/shownews.asp?id = 14470.

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Restructuring Agriculture

Shaanxi's agriculture benefited from the campaign to Open Up the West in many ways. Lowering transport costs was the most significant, but there have also been improvements in the supply of chemical fertilizers, irrigation water, processing facilities, rural education and communication networks. The modernization of agriculture and the continuous fall in grain and cotton prices led to a shift to other farm and non-farm activities. Since 1999, the area sown to grain has fallen by 15 per cent, without much effect on annual output, and in Yan'an and Yulin by over 30 per cent.[41] Rural employment was created in construction, mining and industry. By the end of 2002, 65,000 TVEs and 814,000 private households employed 30 per cent of the rural labour force and the figure was continuing to rise.[42] Agricultural specialization in fruit and other high-value crops has been very successful. So why do official figures show so little improvement in rural income in Shaanxi? Part of the answer is speculative: the growing non-farm income tends to be under-reported. Under-reporting is also stimulated by the liberal income subsidies provided under the programme. Yet the main reasons are structural and mostly beyond government control: most farming regions will continue to suffer from low agricultural prices, over-reliance on crop cultivation, water shortages, the great distance to urban markets and the loss of skilled manpower to other industries. Two specific policy measures that greatly affected the southern loess hills and mountain regions of Shaanxi are specialization (particularly in fruit) and conversion of farmland. Both built on previous local successes.

The campaign to Open Up the West has subsidized specialization in superior or scarce products; a high technological content and added value; enlargement of scale; and more local processing to increase added value. Between 2001 and 2005, the importance of crop growing should decrease from 71 per cent of Shaanxi's agricultural output value to 63 per cent. Already in the 1990s, for production, storage and marketing purposes provincial government had told counties to specialize. Grain and oil crops should continue to dominate in central Shaanxi. Tobacco, fruit, sheep and oxen should be the specialization north of the Wei valley and on the loess plateau of north Shaanxi; and honey, mulberry, medicinal herbs and fungi in south Shaanxi.[43]

Under the "Make the mountains and streams beautiful" programme of the late 1990s Shaanxi had received about one billion *yuan* of budget subsidies annually for converting farmland to forest and orchards, closing off mountains, and providing farmers' subsidies in grain relief. In addition, 51 designated poverty counties received 300 million *yuan* annu-

41. *SXTJNJ 1999*, p. 277 and *2002*, pp. 256–57; www.stats.gov.cn/tjfx/dfxx/1200211270366.htm.

42. They provided 35% of rural income. Shaanxi TVE Bureau, 7 March 2003, www.xzqy.shaanxi.gov.cn.

43. Li Xuzhong, general engineer of the Shaanxi provincial agricultural development office, sxzb.shaanxi.gov.cn/add/nr.asp?nid = 1005.

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ally.[44] After the 1998 Chang [Yangtze] floods the State Council expanded its farmland conversion programme. Conversion of farmland to forest would readjust the agricultural structure, improve the ecology and increase rural income. It should be linked with food security, farmland improvement, the relocation of people, a secure energy supply and a ban on grazing.[45] Shaanxi was designated as a trial area in August 1999 and was well positioned to take advantage of this scheme.[46] Erosion problems were serious on the loess plateau and in the Qinling and Ba mountains. According to the 1997 agricultural census, Shaanxi had 5.14 million hectares of farmland, much more than the official figure of 3.36 million hectares.[47] Much of the "hidden" land had a slope of more than 25 degrees and its cultivation was illegal for that reason. Falling grain prices, abundant stocks (the 1998 harvest had been a quarter above normal) and improved communications made cultivation of grain less attractive and local self-sufficiency less needed. Finally, Shaanxi had considerable experience in co-operation with international funding agencies in the fight against erosion and rural poverty.

After forestry departments had made preparations, during 1999–2002 Shaanxi supplied 810,000 tons of grain, 154 million *yuan* in cash subsidies and 266 million *yuan* for tree saplings to almost 800,000 farming households. Some 571,000 hectares of farmland (over 10 per cent of the total) were reported as converted to forest or grass, and 427,000 hectares of wasteland. Another 280,000 hectares of farmland and as much wasteland were scheduled for 2003. "If the state extends this programme for five to eight years and honours its commitments, a total of 11.7 billion *yuan* in grain and cash subsidies will be paid to farmers."[48]

Implementation has not been without problems. Inspectors mentioned single-minded pursuit of targets, planting of shrubs in too dry areas, inadequate preparation and financial irregularities. Some forbidden practices, such as intercropping of trees with grain, and planting too many fruit trees, were widespread.[49] Poor mountain villages and farmers have great experience in avoiding proper inspection, and local government

44. www.stats.gov.cn/tjfx/dfxx/200101800033.htm.

45. Telephone conference by the State Council Bureau for Open Up the West on 13 May 2002, www.sdpc.gov.cn/a/news/200205132.htm.

46. From 1 January 2001 for every *mu* of farmland converted to forest, the government promised to provide an annual subsidy of 150 kg or 100 kg of grain in the Chang upper or Huang middle and upper reaches. The grain would be paid by central government at 1.4 *yuan* per kg and its transport paid by local government. In addition, per *mu* the central government gave 20 *yuan* in cash and 50 *yuan* for the purchase of tree seedlings or grass seed. See State Council, "Opinions on implementation of some policy measures for the Open Up the West," 28 August 2001.

47. *Abstract of the First National Agricultural Census* (Beijing: China Statistics Press, 2000), pp. 134, 158 and 163.

48. *Shaanxi ribao*, 10 February 2003; Provincial Government Work Report, *Shaanxi ribao*, 21 January 2003. In 1999, 217,000 hectares of farmland and 66,000 hectares of wasteland were converted, in 2000 53,000 and 21,000 hectares, respectively, and in 2001 a total of 98,000 hectares. *Shaanxi ribao*, 17 June 2002.

49. Telephone conference of the State Council Bureau for Open Up the West and the State Development Planning Commission, 10 January 2002, http://chinawest.gov.cn/Chinese/doc/XBGZ/20020270560.htm.

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benefits directly and indirectly from maximizing subsidies from central government. Afforestation programmes have suffered from very low tree survival rates in the past, and questions remain about long-term effectiveness. Once subsidies have been received, good rainfall in spring may lure farmers on the loess plateau to sow their old fields again – by then with or without trees or grass. Declining profitability of fruit production may have the same effect. Further expansion of goat numbers may conflict with conservationist goals.[50] However, to the extent that subsidies will succeed in creating alternative sources of income and also more concentrated high-yield "grain base fields," beneficial effects on income and environment will last.

Fruit production is a definite success story. The fruit orchard area had increased six-fold between 1985 and 1996 to 700,000 hectares, but then declined as production soared and prices fell. The campaign to Open Up the West has reversed the downward trend, not so much because of tree planting subsidies but mainly by increasing effective demand through lowering transport costs, increasing storage and processing facilities, improving quality, and diversification. In 2002, the fruit area was back to its previous record level, with an output of five million tons (mostly apples) and a value of seven billion *yuan*.[51] Shaanxi has become the second largest apple producer in China, and the first in kiwis, pears and persimmons. It has some 1,500 demonstration orchards and an extensive technical support system.[52]

Most apples are processed for juice. Between 1995 and 2000, 1.4 billion *yuan* was invested in apple concentrate facilities, and by 2002 annual capacity was 300,000 tons, the world's largest. Sales income from fruit and juice increased to 14 billion *yuan*.[53] As international prices for apple juice are rather low, Shaanxi aims at increasing sales and exports of fresh fruit, and particularly "green" fruit that now covers 8 per cent of the fruit area. Chinese domestic consumption of fruit juice is still very low, and one may expect a continued and substantial rise. Shaanxi's production costs are considerably lower than Shandong's, but its transport and marketing infrastructure is not as good. The campaign to Open Up the West has made an important contribution to improvements of product quality, storage and transport, with lasting benefits to rural production and local income.

50. "The Shaanbei cashmere goat is considered world's best. 2.2 million goats yield 700 tonnes of cashmere per year at a price of 650 million *yuan* or 17.4% of total local agricultural output value," *Shaanxi ribao*, 28 June 2002.

51. Fruit constitutes 22% of Shaanxi's added value of crop cultivation. Hu Feng, "Report on implementation of Shaanxi economic and social development in 2002 and draft for 2003," http://news.shaanxi.gov.cn/shownews.asp?id = 14770; Statistical Bulletin on Shaanxi's Fruit Production in 2002, www.stats.gov.cn/tjgb/qttjgb/dfqttjgb/1200304070060.htm.

52. *Shaanxi ribao*, 11 October 2002; Provincial Government Notice 26, dated 3 June 2002, http://ewit.gov.cn/trsweb/detail.wct; *Shaanxi zhengfu gongbao* (*Shaanxi Government Gazette*), No. 23 (2002).

53. In 2002, fruit and fruit concentrate exports increased to 140,000 tons yielding US$68 million, nine-tenths of which came from juice, 43 and 25%, respectively, more than the year before. In 2002, Shaanxi exported 40,000 tons of apples. *Shaanxi ribao*, 18 December 2002 and 15 January 2003.

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Industrial Policies and Development

Shaanxi has a considerable industrial tradition. China's first civil aeroplane, first integrated circuit, pay-load rocket and colour television tube were produced in the province. "Aeroplanes, colour TV tubes, ultra-high voltage power transmission equipment, precision benches, heavy trucks, electronic information products and industrial automatic meters have an important position in the national market."[54] From 1996, the restructuring of SOEs and excess capacity hurt some sectors badly, particularly coal production, consumer durables and textiles. However, most sectors picked up again after 1998. Heavy industry, and to a lesser extent also light industry, continued its rapid growth, in general between 1998 and 2002 at a higher rate than China's (see Table 1).

Shaanxi province has given developmental priority to eight "pillars" of its industrial economy: electronics, petrochemicals, heavy equipment, processed food, pharmaceuticals, textiles, building materials and non-ferrous metals. The high-tech industry, defence and petrochemicals are considered to be provincial "specialities." Information technology, bio-engineering, new materials, new energy and environmental industry and space technology get special support. Four high-tech zones (one of which is for agricultural research) have been set up. The largest one in Xi'an had 4,500 domestic enterprises with 16 billion *yuan* of registered capital by the end of 2002, and 540 foreign ones with US$900 million: a modest success.[55]

In line with national policies, Shaanxi will develop 70 "strong brands." Non-state enterprises should comprise over half of industrial output by 2005. Plans have been worked out in great detail for sectors and individual enterprises.[56] By and large, priorities reflect the interests of Shaanxi's large industrial companies. The top corporations (apart from public utilities and mining) are the Xi'an Aeroplane Industry (aeroplanes, buses), Caihong Electronics, Shaanxi Yanchang Oil Industry, Jinhua (medicine, retail, real estate), Shaanxi Non-ferro, Xi'an Aviation Engines, Changling Huanghe Enterprises (refrigerators) and Weihe Coal Chemical Industry (ureum). Most are owned by the central government's ministry of defence. Somewhat smaller are Qinling Cement, Shaanxi Jiumian Cotton, Xi'an Electric Machinery (power equipment, ultrahigh-voltage exchanges, optic cable), Xi'an Janssen Pharmaceuticals, Jinchuan Machine Tools, Xianyang Deflectors and Baoji Non-ferro Metal. Most enterprises have a long tradition, and the Open Up the West programme (as the defence industry conversion programme before it) has helped them with financial support for restructuring and consolidation, with

54. Chen Yao, *Xibu kaifa dazhanlüe yu xinsilu* (*Strategy and New Ways of Thinking for Development of the West*) (Beijing: Zhonggong zhongyang dangxiao chubanshe, 2000), pp. 119–120.

55. www.xian.gov.cn/xinwen/list/5.asp.

56. Shaanxi Provincial Government, Notice No. 69, "On issuing the Tenth Five-year Plan about adjustment of the industrial structure," 21 December 2001; Report on Provincial Government Work, *Shaanxi ribao*, 21 January 2003.

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additional capital for product development,[57] and in general by improving the physical infrastructure (including communication networks) and increasing local demand.

The economic rationality of industrial investment decisions under the campaign to Open Up the West cannot be determined easily. As long as national and local market demand is expanding fast, many investments will turn out well, even if some will pay better than others. Probably the main benefit of industrial planning is that it legitimizes the withdrawal of financial support by government and banks from non-priority sectors. The local steel industries at Hanzhong and Xi'an, and the Shaanxi Steel Corporation have been declared bankrupt, and Lüeyang Steel and the newly established Longmen Steel Company face uncertain futures. Wasteful industries such as the paper industry have dragged their feet after being told to close down, but provincial government pursued them. In many other cases, the province seems more convinced than national agencies about the viability of Shaanxi's industries. By offering alternative investments and employment opportunities, the campaign to Open Up the West helped local governments to comply with demands and accept suggestions from above. As already noted, provincial and municipal development plans continued to support most of the traditional so-called "pillar" industries, at least politically. However, the extent to which this includes financial support is open to question. Slowly but surely, the "hidden hand" of the market constrains provincial subsidy and investment decisions, even if the short-term displacement effects of central government subsidies may be considerable.

Some of the "pillar" industries have a mainly local market, such as chemical fertilizers, cement and food-processing, and their consolidation and improvement makes sense also from energy-saving and environmental perspectives. However, others such as pharmaceuticals, heavy equipment and petrochemicals (which are dominated by companies under the central government) are nationally oriented, and without continuous new investment would face an uncertain future in the national and international markets. Consumer electronics have to cope with national overcapacity and falling demand; for instance, Shaanxi's colour television output fell by 37 per cent in 2001 to just over half a million, yet new investment has been poured into the Xianyang Colour Tube factory. As for non-ferrous metals, building an aluminium plant in Hancheng, while expanding the one in Tongchuan may have been motivated by a local surplus of coal, but prices are falling and demand from Shaanxi's aviation industry is no longer guaranteed. The severely trimmed down textile industry[58] saw its exports decrease to US$200 million in 2001. Shaanxi's exports have not shown any growth and in 2001, they dropped by 15 per

57. A survey of 106 large and medium-sized Shaanxi enterprises showed that in 2000, they invested only 1.95% of their turnover in R&D, *Xi'an wanbao* (*Xi'an Evening News*), 6 June 2002.

58. Qiao Guangxi, "Shaanxi fangzhi qiye de chulu" ("The way out for Shaanxi's textile industry"), *Jingji gaige* (*Economic Reform*), Nos. 3 and 4 (1997), pp. 4–9.

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cent to US$1.1 billion. The Shaanxi and Xi'an governments are deeply concerned about sluggish exports, blaming their inland position, belated enterprise and export management reforms, and the small size and great diversity of exports.[59]

The aeroplane industry, as the flagship of Shaanxi's defence industry, receives considerable state support. The Xi'an Aircraft Industrial Group under the Aviation Industrial Corporation of China saw its assets increase from 4.5 billion *yuan* in 1996 to 9.4 billion *yuan* in 2001. It co-produces Rolls Royce engines and supplied parts for the Airbus 320 in a contract worth over US$100 million. In 2002, turnover was four billion *yuan* (one-third of which was non-aeroplane related) and exports came to US$19 million.[60] Xi'an supports its ambitious plans to produce a new generation aircraft and expects to become China's largest base for civil aeroplanes and aviation parts manufacturing.[61] Even if Xi'an has some advantages (defence industry and research institutes, moderate wages, cheap land, dry climate), it lacks capital and political clout. The campaign to Open Up the West is not a proper vehicle for such a capital-intensive and contested project as the development of a commercial aircraft.

IT has been the fastest growing industry. It is stimulated by the presence of many universities and high-tech zones, and offers a venue for technical university graduates, most of whom have moved in the past to east China. In 2002, Shaanxi had 120 high-tech companies, with five billion *yuan* of share capital. Three-quarters originated in private enterprises, and the remainder from research institutes and universities.[62] Added value including services should increase from the present 4.4 per cent of GDP to 10 per cent, more than the national target.[63] High hopes have been pinned on this sector, but again, this is a very competitive international market, and Xi'an's position (as India's) critically depends on continued low wages for high-skilled labour. In conclusion, Shaanxi's industrial investment under the campaign to Open Up the West is a mixed bag. So many different sectors are receiving state support that (with the exception of the energy industry) it is hard to distinguish a selective industrial policy. Rather, its aim is over-all qualitative improvement.

59. *Shaanxi zheng bao*, No. 14 (2002) noted that only 15% was processing trade, and only 14% was conducted by non-state-owned units. In Xi'an, only seven enterprises had annual exports above US$10 million, Municipal Office Report No. 243, *Xi'an gongbao* (*Xi'an Gazette*), No. 2 (2003).

60. http://210.83.4.13/sei/sxjw/news.

61. The company sold over 100 commercial airplanes of the Y-7 family, of which the Y7–200A is a fuselage-extended version, with PW127 engines and Canadian propellers. Its performance corresponds with the level of the 1980s. Its Y-8 is a licensed version of the An-12 produced in the USSR from 1962 to 1973, www.fas.org.man/dod-101/sys/ac/rw/an-12.htm.

62. www.stats.gov.cn/tjfx/dfxx/200208210029htm.

63. Reports by vice-governor Pan Liansheng, 21 November 2001, www.chinawest.com.cn/xinxi4.htm, and the Provincial Government Office in *Shaanxi zheng bao*, No. 3 (2003).

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Mining and Energy Development

Shaanxi has rich mining resources. Its sodium salt and lime deposits are the largest in China. Its natural gas reserves in the north (300 to 400 billion cubic metres according to the provincial government, half that amount according to the State Statistical Bureau, but estimated as 750 billion by an oil industry) and molybdenum (22 billion *yuan*) in Weinan and Shangluo are the second largest in China. Oil reserves were estimated to be 117 million tons at first, but now to be 921 million tons.[64] Proven reserves of copper, zinc, lead, bauxite and phosphorous are rather modest, and of iron ore are scattered and small. However, because of their present exploitation they are considered as economically important.

By far the greatest value lies in Shaanxi's coal reserves. At less than 2000 metres deep they amount to 237 billion tons (one-third less according to the SSB), the third largest in China, and their quality is good. "The Shenfu coalfield is among the eight largest in the world, it is low on ash, sulfur and potassium, and very attractive to domestic cities and foreign buyers."[65]

The Ninth Five-year Plan had designated north Shaanxi as a centre for energy development. Local critics complained that national companies such as Huaneng Coal and Changqing Oil Exploration had overridden provincial and regional interests in the development and use of resources. They paid little if anything for their use of land, dominated labour allocation and distribution, caused serious pollution and used up much water. "Resource exploitation should contribute to poverty alleviation, not hurt local economy and population. Moreover, it should be undertaken by companies instead of by government, and through the development of processing industries create more added value and jobs."[66] Resource compensation fees received by local governments for coal and gas were very low, and almost all tax income went to the centre. People favouring rapid development urged that Beijing should lower local co-financing requirements from 30 per cent to 10 per cent, give greater budgetary support, and combat the increasingly serious water and air pollution.[67]

The Open Up the West programme has accelerated the ongoing development of energy. Investment, output, tax revenues (and local shares of it) and prices have all gone up. Since 1998, coal output has doubled and oil output tripled (see Table 1).[68] Recovery from the 1999

64. *Changqing shiyou bao* (*Changqing Oil Journal*), 12 December 2000.

65. www1.shaanxi.gov.cn/sxwindows/sxgk/zrzy.htm.

66. Yang Qiubao (Director of Economics Dept. of Shaanxi Normal University), "Xibei ziyuan fujiqu de jingji kaifa zhanlüe" ("Economic development strategy of a resource-rich area in the north-west"), *Shaanxi shifan daxue xuebao*, Vol. 25, No. 2 (June 1996), pp. 19–26.

67. Li Ping'an, "Xietiao liyi maodun, jiakuai difang jingji fazhan" ("Reconcile conflicts of interest, speed up local economic development"), *Shaanxi shifan daxue xuebao*, Vol. 26, No. 2 (June 1997), pp. 39–43.

68. In 2001, oil and gas output value increased by 22% to 17 billion *yuan* and oil refining by 17% to 10 billion *yuan*. In 2002, the coal, oil, and electricity industries realized 6.5 and 4.6 billion *yuan* in profits and taxes, 38 and 12%, respectively, more than in 2001 (coal prices rose by 15%). Shaanxi Provincial Statistical Bureau, *Report on Economic and Social*

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coal crisis has been fast, and demand and prices have picked up again. Through the building of pit power stations, Shaanxi aims at tripling its 2001 installed electricity generating capacity of 7.7 GW; this will put its coal to good use in the expanding electricity market.[69] Multi-billion projects include the Hancheng second power station, the Baoji power station, the Jinghe power transmission station, the Pucheng pit power station and the Changqing Oil Company oil field.[70] The Huxian and Lüeyang power stations are under development. Projects offered to outside investors include coal washing at Yushan; a 2.4 GW power plant at Shenmu (with a transmission line to Shanghai); a hydropower station at Xunyang; and a power station for the Tongchuan Aluminium Plant. In addition, downstream facilities are considered, such as production of acetic acid, chemical fertilizers and methanol, and upgrading of existing facilities.

The Shenfu coalfield is well positioned, even if future coal demand is uncertain. The additional thermal electricity stations funded under the programme to Open Up the West will guarantee greater and more stable income from coal. However, mining resources are not managed well. There is confusion and many different authorities hand out permits. In most places, exploitation is small-scale, by a host of different companies, and superficial mining is wasting resources. Moreover, investment in exploration is wanting.[71] As a partial remedy, half a dozen county coalmining companies in the Tongchuan–Hancheng belt, as well as the Shaanxi provincial coal exploration and trading companies, merged in 2003.[72]

Coal, oil and gas have boosted the economy of north Shaanxi. Positive and negative effects of exploitation by outside companies are most visible. Per capita GDP increased by 36 per cent between 1998 and 2001, more than Xi'an's (21 per cent), and much more than that of Xianyang, Baoji and Weinan (10 to 13 per cent) and Tongchuan (minus 2 per cent). Yan'an surpassed Baoji with a per capita GDP of 5,383 *yuan*.[73] Yan'an's over-reliance on the oil industry is seen as a weak point now, and its government insists on greater attention to new industries, improvement of the ecology, agricultural diversification and development of human resources.[74] Yet local governments and people are not yet up to these tasks.

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footnote continued

Development in 2001, 3 March 2002; *SXTJNJ 2002*, p. 160. www.stats.gov.cn/tjfx/dfxx/1200302210026.htm; http://jmw.shaanxi 20/1/2003.

69. *Renmin ribao* (*People's Daily*), 10 February 2003; Shaanxi Electric Power Company advertisement in *SXTJNJ 2002*.

70. During 1999–2001, renovation and upgrading investments in power production and supply totalled 6.5 billion *yuan*, in oil and gas exploration and processing 4.2 billion *yuan*, and in coal extraction 0.7 billion *yuan*, *SXTJNJ 2002*, pp. 120 and 131.

71. http://sjw.Shaanxi.gov.cn/report/2–2–6.htm.

72. *Shaanxi ribao*, 3 March 2003.

73. *SXTJNJ 1998*, pp. 57–58 and *2002*, p. 54.

74. Yan'an expects its electric power industry to have an output value of 3.5 billion *yuan* by 2005, local oil output to be 3.3 million tons, processed oil output 4 million tons, and petrochemical industry to have a turnover of 3.3 billion *yuan*. Coal output should reach 8

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Eventually, the steady flow of income from oil, gas and coal exploitation should provide the means to improve the quality of life, which has been severely affected. The responsibility and burden lie with national companies, inspection agencies, and municipal and county governments, and provincial government is not much involved. In addition, the safety of coalmines, many of which are small and run by local entrepreneurs, is a cause for concern. The province has urged the closure of small mines and oil refineries, and cut excess capacity, with some success.[75]

Tourist Industry

Tourism is an important element in Shaanxi's development strategy. Between 1999 and 2001, foreign tourists increased by about 20 per cent to 760,000, but their average stay was short and local expenditure just over US$400 per capita. Domestic travellers increased by 29 per cent to 34 million, and their local expenses by 62 per cent to 14 billion *yuan* (or over five times as much as those by foreign tourists). Key-point tourist development projects include the Qinshihuang Park, the Yellow Emperor Tomb, the Hanyang Tomb Museum, and somewhat further from Xi'an the Famen Temple Park, the Hua and Taibai Mountains, and the Shaanxi Natural History Museum.[76] Shaanxi abounds in cultural sites, museums, forest parks and conservation areas, but outside the Xi'an area few historical relics are conserved and properly maintained.

The Open Up the West campaign has proved both a blessing and a curse. Construction work since 1999 has led to emergency archaeological digs, including those for Yangshao culture on the Yulin–Jingbian highway, some Xia houses along the Jingbian–Beijing gas pipeline and the Warring States Tombs along the Xi'an–Hefei railway.[77] But archeologists cannot cope with the new finds and continue with their development of the Qinshihuang Tomb and other sites. The campaign to Open Up the West makes an enormous indirect contribution to the tourist industry by improving communications, accessibility and also environmental conditions in main cities. Moreover, it directly supports the development of nature reserves, also for tourism. For instance, in 2001 the Chinawest Development Corporation concluded a contract with Fengxian county to invest five billion *yuan* in the Chaibaishan Scenic Tourist Area.[78] The downside is a rapid destruction of ecology, environment and resources.[79]

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footnote continued

million tons. Zhang Shenian, *Report on Government Work in 2002*, www.yanan.gov.cn/zfgzbg/zfgzbg2002/htm.

75. In 1999, over 1,000 small pits were closed, and coal output was reduced by 15 million tons. Shaanxi Provincial Statistical Bureau, *Report on Economic and Social Development in 2001*, dated 3 March 2002; Provincial Government Office, Notification No. 29, dated 11 April 2002, http://sxzb.shaanxi.gov.cn/add/nr. asp?nid = 2152.

76. Report on Provincial Government Work, *Shaanxi ribao*, 21 January 2003.

77. *Shaanxi ribao*, 13 June 2002.

78. *Shaanxi ribao*, 11 August 2001.

79. Hua Rong and Kang Yuke, "Application of the theory of sustainable development in the tourist industry of Shaanxi," *Shaanxi zhengfu gongbao*, No. 5 (2002).

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With Xi'an as a magnet, the main challenge is to develop packages that make domestic and foreign tourists stay longer, spend more and go beyond visiting the Xi'an area. Xi'an estimates its income from tourism will double between 2001 and 2005 to 21 billion *yuan*, thereby increasing tourism's GDP share to 18 per cent of the municipal economy.[80] Baoji plans to increase tourism to 10 per cent of its GDP.[81] Projects such as the cableway and road to the Huashan peak will make scenic beauty accessible to many, and one can only hope that local governments will minimize the inevitable environmental damage. Direct and indirect subsidization may lead to hasty and wasteful property development by local governments and corrupt practices at the expense of present communities and future sources of income. Even so, the central and south Shaanxi tourist industry will become a most important provider of local employment and income.

Conclusion

The Open Up the West programme defies simple characterization. Seen from above, it is a combined effort of China's central government and different ministries with very diverse economic and social goals. Some elements, notably the development of infrastructure and energy, have been planned and implemented in the tradition of the planned economy, by a central government concerned about growing disparities between east and west China. Other elements, such as educational support and ecological improvement, have been implemented by local authorities on a much larger scale than before, reflecting an increased awareness of the importance of human resource development and restructuring agricultural communities. Again other elements are short-term: deficit spending to maintain a high economic growth rate for China, and subsidies to alleviate local unemployment and keep local government services and state-owned enterprises afloat. Seen from below, it is a tremendous opportunity to receive central funding for a variety of local projects and services. Any assessment of the success of the Open Up the West programme should take this variety of goals into account. The common denominator is integration – for better or worse – of local economies and communities with the national market economy. The short-term economic impact on Shaanxi is currently most visible. However, most investments in infrastructure and human resources take a long time to bear fruit, and their economic rationality and efficiency can only be measured over a longer period of time.

Obviously, Shaanxi has benefited economically and socially from immediate preferential policies, and probably more so than most other western provinces because of its less peripheral location, high technological level of industry and education, ongoing energy development pro-

80. Xi'an's Tenth Five-year Plan and Mayor Feng's report, *Xi'an zhengfu gongbao* (*Xi'an Governmental Bulletin*), No. 7 (2001).
81. www.bjic.sn.cn/hgjj/ycfx5.htm.

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gramme, and agricultural diversification. Local governments appear to have been quite capable of productively absorbing additional funding from outside, much of which was used to expand or speed up existing projects. The gradual shift in the Open Up the West campaign to social and environmental development goals may be explained in part by local governmental preferences and absorptive capacities.

Clearly, there are marked differences in the impact of the programme on the three different geographical regions of Shaanxi. The economy of north Shaanxi has grown fastest and changed most, because of the development of energy and communications and a structural shift out of grain cultivation to other industries. In the central region of the Wei River valley along the Longhai railway, Xi'an has been able to capitalize on its advantages as the provincial administrative, industrial and educational centre, and its tourist attractions. The programme has contributed to greater integration of the economies of the outlying regions with central Shaanxi by vastly improved rail, road and internet communications. Apart from the energy sector, support for high-tech industrial development policies has concentrated on the Xi'an–Xianyang region and Baoji. The smaller cities and particularly south Shaanxi and Shangluo suffer from high and rising unemployment. South Shaanxi as a whole seems to have been least capable of benefiting from the campaign to Open Up the West. Its poorest regions have made rapid progress, but its industrial centres have suffered. These great differences in impact suggest that the programme is best analysed at the municipal and industrial level, rather than at the level of Shaanxi province.

For a number of reasons, Shaanxi was extremely well positioned to take advantage of the subsidy scheme for conversion of farmland to forest or grassland. The use of these subsidies by individual households and their lasting effect on land utilization and vegetation cover remain open questions. The same goes for the eventual effects of local road-building programmes. It is most likely that they will speed up the concentration of people in urban places and depopulate remote rural areas. So far, the southern mountain regions have been least able to create gainful new economic activities except along new traffic arteries. While the infusion of capital and technology has pushed up urban income levels, rural income (except for the poorest regions) has remained stagnant. The increasing gap drives rural young workers to the cities.

Some investments have reinforced Shaanxi's economy and particularly its capacity to compete on national and eventually international markets. Other investments are more problematic. Development aid and preferential policies distort markets and bloat unproductive staff, and in the case of Shaanxi have aggravated the dependency of provincial government on central subsidies and of some major industries on easy money and protection. Thus, to some extent they have delayed painful but necessary consolidation or closures. Nevertheless, most state-owned industries have been forced to readjust and restructure. Time will tell which sectors have become stronger and which investments have been wasted.

Both consumers and producers of goods and services are profiting

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already from substantially reduced transport and transaction costs because of the programme to Open Up the West. Tourism, IT and other services have benefited greatly. However, as yet sluggish growth in foreign exports and foreign investment betrays a lack of confidence in most of Shaanxi's manufacturing industries. Many are weak or small, and face a losing battle for larger market shares with companies from the China's east. Others, like energy production, IT, pharmaceuticals, electric power equipment and fruit juice, have gained a strong position. Increased demand resulting from the central investment programme has pushed up the growth rates of construction and heavy industry to levels above the already very high national rates. The inflated demand should precipitate a crisis once the investment programme ends, but more likely government will do its utmost to create a "soft landing."

From Shaanxi's perspective, all outside financial support, whether for physical infrastructure, production facilities, education or welfare, has been most welcome. The redistributive powers and role of local governments have been enhanced. Under the Open Up the West campaign, local governments have had some room for indicating their own priorities, and in general implementation has satisfied both the centre and the localities. The present justification of the programme and an eventual assessment of its lasting economic benefits – primarily infrastructural development, marketization and national economic integration – are perhaps best seen not just in terms of local development, but as part of China's state-building efforts. However, one should not be optimistic about the economic chances of peripheral regions under a genuine market economy. An increasing shift to social subsidies even in the relatively developed province of Shaanxi was noted above. For reasons of social stability the CCP and central government will find it very difficult to reduce the current financial support levels for the western provinces, and increasing national tax revenues are providing the means to continue to do so. To the extent that local economies in the west will be unable to catch up with the developed regions of China, Open Up the West will change its primary function as an investment-driven development programme and become a social policy-driven subsidy transfer mechanism.

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