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**Productivity and labor management
in Shanghai state-owned industrial enterprises**

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Since 1979, the Chinese government has introduced into the economic system sweeping reforms designed to bring the Chinese economy back on the road to modernization. Despite official discourse, the system of planned economy that had prevailed during the past three decades had almost completely stifled its capacity for growth and innovation¹. When the high tide of “Politics in command” finally receded, Chinese statisticians and economists were able to get back to work and draw a more realistic picture of the state of national industries. It became clear to the Chinese leaders that their past policies of increasingly massive investments had not generated a proportional growth of production². Worse, the productivity of workers had hardly increased³.

The general lines of economic reform in China are well known⁴. In the field of urban economy to which industries belong, the major measures that were implemented were :

- the scrapping down of plannification for industrial products, except for those of strategic importance ;
- the reform of prices which entailed, first, a relaxation of government control until the late 1980s, then an almost complete reliance on market relations ;
- the reform of enterprise management designed to reduce the role of politics, to give more autonomy to managers, and to make enterprises responsible for their accounts.

The fundamental rationale of the reforms was to transfer to enterprises the power to decide on issues of production and marketing. The lack of vitality of industrial firms, especially state-owned enterprises (hereafter SOEs) contrasted sharply with the rapid and spectacular take off of rural industrial enterprises (*xiangzhen qiye*)⁵. The excessive influence of Party organization in management and the rigid and stifling controls by the planning agencies have been pointed out as two major causes for the poor management of industrial firms⁶. For these reforms to be successful, industrial firms had to meet two pre-conditions : that they become fully

¹ On Chinese economic development since 1949, especially with a direct concern for industry, Richman, Barry, *Industrial Society in Communist China* ; Field, Robert M. et al., “ Political conflict and industrial growth in China, 1965-1977 ” ; Field, Robert M., “ Chinese industrial development : 1949-1970 ” ; Field, Robert M., “ Slow growth of labour productivity in Chinese industry, 1952-1981 ” ; Hoffman, Charles, *The Chinese Worker* ; Reynolds, Bruce L., “ Reform in Chinese industrial management ” ; Andors, S., *China's Industrial Revolution* ; Brugger, William, *Democracy & Organization in the Chinese Industrial Enterprise (1948-1953)* ; Cheng Chu-yuan, *The Machine-Building Industry in Communist China* ; Lee Peter, *Industrial Management and Economic Reform* ; Kaple, Deborah A., *Dream of a Red Factory*.

² These evolutions have been studied by Hsueh, Tien-tung, Woo, Tun-oy, *The Economics of Industrial Development in the People's Republic of China* et Lee Peter, *Industrial Management and Economic Reform in China, 1949-1984*.

³ Field, Robert M., “ Changes in Chinese industry since 1978 ”, p. 744

⁴ On the initial stages of the reform of the urban economy, see Yves Chevrier, “ Les politiques économiques de la démaoïsation (1977-1982) ” et “ Les réformes en Chine ou la stratégie du contournement ” and White, Gordon, “ Evolving relations between state and markets in the reform of China's urban-industrial economy ”, pp. 7-25.

⁵ Voir Byrd, William A., Lin Qingsong (eds.), *China's Rural Industry. Structure, Development, and Reform*.

⁶ Gipouloux, François, “ Industrial restructuring and autonomy of enterprises in China... ”, pp. 107-117 et Stepanek, James B., “ China's enduring state factories... ”, pp. 440-454.

independent economic actors and that they adopt a system of management geared toward the market. In reality, none of these conditions have been really accomplished as of today. On the one hand, few firms have been forced to go bankrupt despite their desperate condition⁷. On the other hand, the reforms have been confiscated by local authorities which have partially altered the initial objectives of the reforms.

The implementation of reform among industrial firms has followed a trial-and-error path⁸. For more than ten years now, enterprises have been subjected to various sets of policies designed to make them genuinely autonomous and responsive to the market. Nevertheless, these years of efforts and transformation have not brought about the results Chinese leaders expected. It is generally considered by Chinese and foreign economists that, as far as SOEs are concerned, a third of them run a deficit while another quarter would come into this category if a more rigorous system of accounting was implemented⁹. These two figures highlight the heavy burden that weighs on China's public finance and the importance given to the reform of SOEs by the central government¹⁰.

The present paper is based on a large three-year survey we carried out among Shanghai SOEs from 1989 to 1992, with a follow-up to 1995. We tried to assess the extent of the reforms, their impact, and the capacity of Shanghai SOEs to adapt to a more competitive environment. In this paper, I shall focus on one aspect of SOEs' management, namely the issue of productivity. Low and declining productivity has been one of the major features of SOEs in China and in Shanghai. By the time of our survey, Shanghai SOEs had been under reform for 8 years (1984-1992). Reforms in management, labor, marketing should have brought substantial changes. They had a serious impact indeed, but they failed to materialize into a real rejuvenation of SOEs.

I. An assessment of enterprise productivity

Our sample of 100 enterprises was made up of firms of various sizes and lines of production¹¹. Our attention has focused on the relation between the size of the workforce and

⁷ In 1993, the Shanghai municipality has carried out "bankruptcy tests" which led its leaders to "merge" 100 industrial firms (out of a total of 13,000). *SWB*, "weekly economic report", 16 mars 1994, supplement, p. 3.

⁸ For a general survey of the reform of industrial enterprises, see Henriot, Christian and Shi Lu, *La réforme des entreprises en Chine. Les industries shanghaiennes entre Etat et marché*, Paris, L'Harmattan, 1996, pp. 5-22.

⁹ For a recent assessment that comes up with a similar set of figures, see Xu Renxiang and Xue Sasa, "Jianbing pochan yu gaohuo guoyou qiye" ([Enterprise] merging and bankruptcy and the invigoration of state-owned enterprises), *Shanghai qiye* (Shanghai enterprises), n° 6, p. 7.

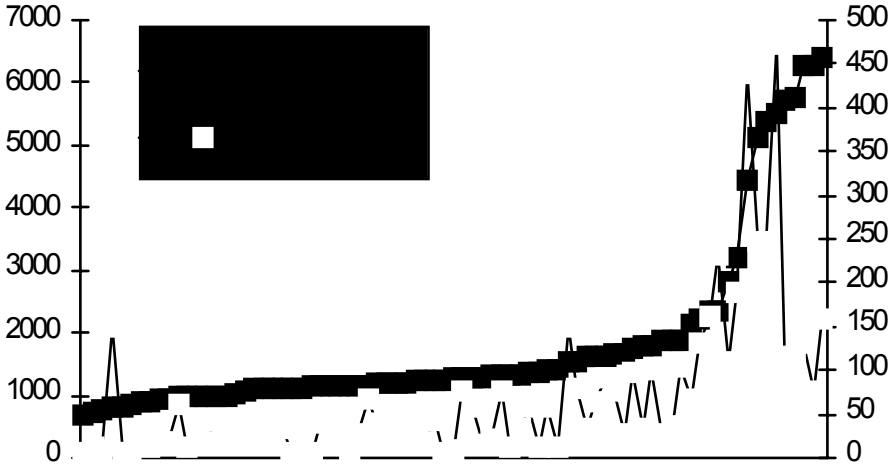
¹⁰ During the first quarter of 1994, one half of the Chinese SOEs ran a deficit against one third the previous year. Some enterprises were unable to pay the salary of their workers. In the NorthEast, for instance, the arrears in unpaid salaries amounted to several hundreds million yuan. *Far Eastern Economic Review*, 5 mai 1994, p. 77

¹¹ The 100 enterprises of our sample have been divided into four groups according to the size of their workforce: Small (300-999 workers), Medium (1000-1499), Large (1500-2499), Very Large (2500-12000).

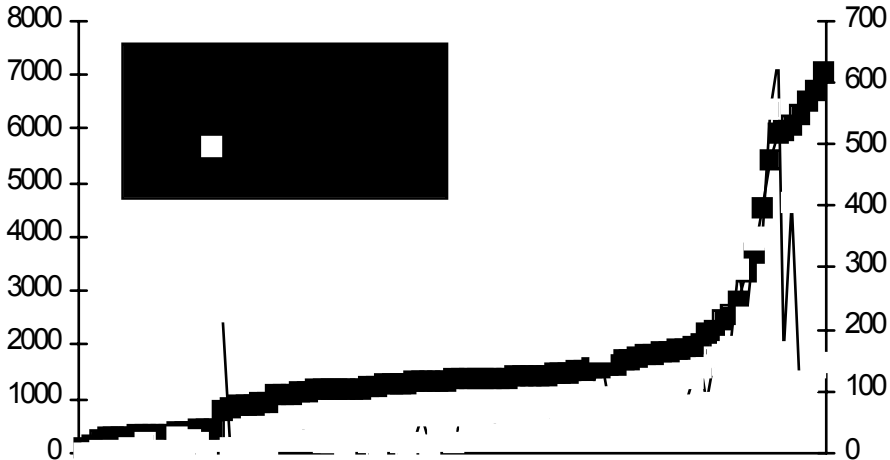
the firms' income to establish whether this was a determining factor. There was no real relation between the two variables, except for small enterprises (less than 1000 workers). In 1980, the income was very uneven among firms of comparable size. In 1985, except for a few medium-sized firms (more than 1000 workers), the income was generally proportional to the size of the workforce. In 1992, the situation was quite similar to that of 1980, except for large firms (above 1500 workers). One could observe, however, that in the very large firms, the income was disproportionate (lower than expected) given the size of the workforce for all three years.

Graph 8
Size of the workforce and income

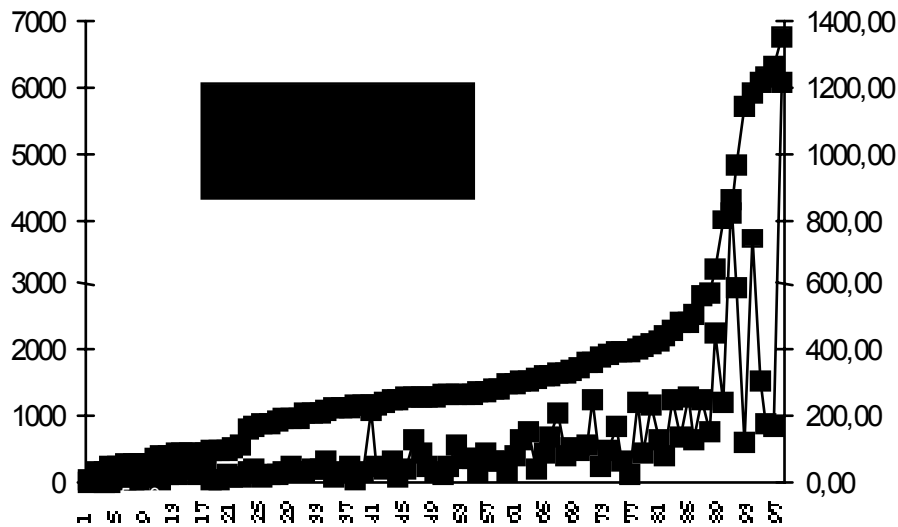
1980



1985



1992



Figures in the left column indicate the size of the workforce ; those in the right column give the amount of the income in absolute terms (millions of yuan). Enterprises are classed by order of size in the graph.

The productivity of enterprises was very uneven¹². In our sample, productivity expressed in constant yuan (base : 1980) actually declined. The production per worker amounted to 36,619 yuan in 1980, 35,847 in 1985, and 34,545 in 1992. Altogether, however, it was superior to the average productivity of all the municipal industrial firms in Shanghai, whatever the sector of activity. Although our sample included a few collective enterprises whose level of productivity was lower, it did not really influence the average level of productivity of the sample¹³. Among SOEs, the productivity averaged 36,455 yuan, 36,637 yuan and 34,974 yuan in the same years respectively. The decline was also obvious¹⁴. It should also be emphasized that at the same time as actual income was declining, the rate of indebtedness was climbing as firms relied on bank loans or inter-firm loans to purchase new equipment and/or maintain a certain level of cash flow¹⁵.

¹² Chinese industrial enterprises are characterized by a low level of productivity given the amount of their investments in fixed capital. The value of the latter increased ninefold between 1957 and 1978, while industrial production was only multiplied by six. This situation is related to the rapid increase of the industrial sectors with a low level of productivity and the slow increase of the sectors with a high level of productivity. The Chinese government gave the priority to employment and heavy industries to the expense of the efficiency of the industrial system. Field, Michael, "Slow growth of labour productivity", p. 650 ; Field, Michael, "Changes in Chinese industry...", p. 744.

¹³ The general average for Shanghai industries was 52,556 yuan (current) en 1992, and respectively 55,339 and 30,614 yuan for SOEs and collective enterprises. Calculated in current yuan, the same data for our sample were 71,983, 72,877 and 48,456 yuan.

¹⁴ The level of productivity of collective firms in Shanghai averaged 17,638 and 23,255 yuan in 1985 and 1992 respectively.

¹⁵ The total amount of loans received from banks represented 1074 million yuan, or 107 million yuan per enterprise, by 1992. In 1996, the rate of indebtedness (debt/capital) of Shanghai SOEs amounted to 72,7 percent. In 15 cities, this rate had increased from 42,1 percent in 1985 to 65,6 percent in 1990, to reach 78,9 percent in 1994. SOEs have been able to develop thanks to a very flexible policy by Chinese state banks. Li Sihong, "Guanyu guoyou qiye zichan fuzhailü de sikao"

We had observed in a previous examination of the 1985 industrial census that productivity was inversely proportional to the size of the workforce. The bigger the enterprise, the lower productivity was. This observation has been corroborated by a study carried out in Shanghai by Chinese economists¹⁶ Table 1 tends to support the idea that productivity is indeed, to a certain extent, related to the size of the workforce, though at variance with it. The figures in the shaded cells reveal a grouping of small firms at the two lowest levels of productivity. Medium-sized and large firms are spread evenly over the next two higher levels, while the very large firms offer a more contrasted picture with a perfect distribution by half in the lowest and highest levels of productivity.

Table 1
Size of the workforce and productivity
in Shanghai SOEs (1992)

Productivity	<1000	1000-1499	1500-1999	2000-2499	2500-4999	5000-12000
< 15000	14	9	3			4
15-29999	12	14	7	4	3	1
30-44999	1	3	4	2		
45-74999	3	1	3	4	2	3
75-315000		1			1	1
Total	30	28	17	10	6	9
Productivity	<1000	1000-1499	1500-1999	2000-2499	2500-4999	5000-12000
< 15000	46,7%	32,1%	17,6%	*	*	44,4%
15-29999	40,0%	50,0%	41,2%	40,0%	50,0%	11,1%
30-44999	3,3%	10,7%	23,5%	20,0%	*	*
45-74999	10,0%	3,6%	17,6%	40,0%	33,3%	33,3%
75-315000	*	3,6%	*	*		
Total	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Over time, however, there was definitely an evolution that differed widely according to the size of the workforce (table 2). Small firms were characterized by high growth rates, while the other categories — medium-sized, large and very large — followed a reverse order of increase in productivity. In other words, the bigger the firm, the slower the growth of productivity. A more significant feature was that all the extra income resulting from the growth of the income generated by the expansion of the workforce was simply annihilated in terms of extra productivity. This held especially true in the very large firms whose performance in 1992 compared favorably with that of the previous years.

(Reflection on the rate of indebtedness of state-owned enterprises”, *Shanghai qiye* (Shanghai enterprises), n° 1, 1997, p. 10-11.

¹⁶ Chen Bingzhao, Xia Nankai, Song Xiaodong, “ Shanghai jiu qu shi gongye buju de tiaozheng yu gaizao wenti ”, pp. 10-15

Table 2
Index of productivity by size of enterprise

	1980			1985			1992		
	Workforce	Income	Productiv.	Workforce	Income	Productiv.	Workforce	Income	Productiv.
S	100	100	100	111	147	126	99	209	173
M	100	100	100	115	125	110	113	126	115
L	100	100	100	115	114	100	124	131	107
VI	100	100	100	111	122	110	163	160	102
Average	100	100	100	115	113	98	128	120	94

Table 3
Index of productivity by industrial sector

SECTOR	1980			1985			1992		
	Workforce	Income	Product.	Workforce	Income	Product.	Workforce	Income	Product.
Chemical ind.	100	100	100	124	116	94	131	101	78
Electric./Applianc	100	100	100	118	166	141	123	214	174
Electronics	100	100	100	123	135	110	129	68	53
Mecanical ind.	100	100	100	115	121	105	149	165	111
Metallurgy	100	100	100	107	116	108	114	116	101
Pharmacy	100	100	100	108	91	84	114	81	71
Textile	100	100	100	116	91	78	120	75	62

An analysis of productivity according to the sector of activity did not reveal significant disparities (table 3). We should recall here that our study is based on sample years (1980, 1985, 1990, 1992). Nevertheless, it appears clearly that the textile and pharmaceutical industries experienced a drastic and continuous fall of their level of productivity. These two industries combined a drop of their income and an expansion of their workforce. This observation also holds true for chemical industries. Electronics underwent a fairly general and brutal fall in 1992, whereas its performance in 1985 had been good. Metallurgy was stable over the period and only mechanical, electrical and household appliances industries enjoyed a productivity increase. These sectors, with the relative exception of mechanical industries, were among those who had made the largest investments in new equipment. Although we did not collect new data on these firms, it appears that the productivity of SOEs remained low. In 1996, it averaged 100,000 yuan per worker, whereas it stood at 500,000-1,000,000 yuan in joint ventures¹⁷.

¹⁷ Cai Chenghua, "Qianxi qiye xiaoyi xiajiang de yunyi ji duice" (A preliminary analysis of the causes for the falling profitability of enterprises and the measure to be taken), *Shanghai qiye* (Shanghai enterprises), n° 2, 1997, p. 8.

II. Profitability and tax burden

The issue of productivity also has to do with the degree of profitability of industrial firms. This is — to say the least — a very tricky question. According to their own figures, the enterprises in our sample declared in 1992 their global profit as 577 million yuan or 5,77 million yuan per enterprise on average. This has to be put in perspective with their global income which amounted to 13,3 billion yuan. The benefit thus produced represented a mere 4,3 percent of the income. This very low figure, however, does not reflect the reality. Officially, 12 enterprises ran a deficit and 4 hardly balanced their accounts¹⁸. Another 20 firms declared a benefit inferior to one percent of their income. Taken together, we came up with a good third of the sample which was in trouble. Only a small group of 13 enterprises harbored a benefit that exceeded 10 percent of their income¹⁹.

I must acknowledge that, given the data we collected and because of the contradictions imbedded in the figures provided by the firms, we were not able to reconstruct a neat assessment of the final results of the enterprises of our sample. The very nature of the accountancy system that prevailed at the time of the survey made such an operation impossible. Furthermore, we were not intent on doing an audit of these firms. To assess the situation of these firms in a more reliable way, we made various calculations that took into account the normal variables to be included in the costs of production and the determination of profits, ending up with a “ minimum ” and “ maximum ” bracket which highlighted two main points. First, the classification of the profitable and non profitable firms was significantly altered, although we ended up with a greater number of plainly unprofitable firms (27). Second, the number of firms that enjoyed a benefit superior to 10 percent of the income jumped to 46, with 30 of them exceeding the 20 percent ceiling. The only conclusion we could make was that, besides the incompleteness of our data, the figures provided by the enterprises were contradictory and could not be reconstructed ; enterprises enjoyed sources of income other than those generated by their activity and sales.

Whatever the fragility of these figures, it was obvious that Shanghai’s SOEs, as they appeared in our sample, could not claim to be archetypes of profitability. And we suspect our data to be under the reality. One can state that in all probability industrial firms in 1992

¹⁸ One firm managed to report both a profit and a deficit ! We were unable to figure out how the firm could end up with such a reply, unless it was a lapsus. We classed this enterprise in the profit-making category.

¹⁹ According to Chinese statistics, the ratio of profitability of SOEs in Shanghai declined from 75,4 percent in 1980 to 63 percent in 1984. During the same period, the national average figures for Chinese SOEs were 24,1 and 23,2 percent respectively. Shanghai industries were apparently doing better. In 1988, however, there was a sharp drop to 32 percent. The cumulated deficit of SOEs in the city jumped to 1,480 million yuan from 586 million yuan the previous year. From 1989 to 1992, the deficit continued to swell, with a relative stabilization by 1991 : 2,820 (1989), 2,870 (1990), 2,530 (1991), 2,480 (1992) milliards. In 1993, the ratio of profit of industry was 15,3 pour cent, a mere 1,4 pour cent improve over 1992. Lin Zhimin, “ Reform and Shanghai ”, p. 246, 249 et 252 ; *SWB*, “ weekly economic report ”, 16 mars 1994, supplement, p. 3.

counted a larger number of unprofitable firms than our calculations make it appear, in spite of a favorable economic context and after 8 years of reform. According to their size, the profitability of enterprises varied significantly. The ratio between profit and income for the smallest and the largest ones was 12.2 and 13.4 percent respectively. Medium-sized enterprises had an intermediate ratio with 5.9 percent, while the largest firms posted a negative ratio with - 10.8 percent. A classification by sector showed that metallurgy, electrical and household appliances industries (with the exception of one heavily deficit-burdened firm) ranked first with ratios superior to 15 percent. On the opposite, pharmaceutical industries confirmed their image of a sector in deep trouble (- 18 percent). The other sectors fared better, though within a narrow bracket of 3.4 to 7.7 percent. As mentioned above, our data was not elaborate enough to allow for a clear determination of the reasons for the difficulties of these firms. It was clear, however, that the Shanghai SOEs were still on a downward slope which in turn was causing a decline in the revenue the authorities received from them²⁰.

One of the main features of the economic reforms has been the substitution of a regime of taxes to the previous direct collection of the enterprise's income by the authorities. The fiscal policy in China has also followed a fairly twisted road before a general reorganization was formally introduced in 1994²¹. In 1992, the enterprises in our sample paid 1,234 million yuan in taxes to the State, or 12,4 million per enterprise, or 6720 yuan per worker on average. In the Shanghai municipality, there was a continuous decline of the revenue generated by SOEs because of the sluggishness that affected this sector not just in Shanghai, but throughout the country. In the data we have collected, we have also been confronted to some contradictions between the total amount of tax declared by the firms and the sum of the various taxes. For one third of the firms, the discrepancy was superior to 15 percent (and more than 50 percent for 11 of them).

²⁰ This also holds true for SOEs at the national level. For the last three years (1994-1997), although inflation has receded, state revenue has stabilized, economic growth has continued, new reforms have been introduced, the profitability of SOEs has been on a downward slope. The total amount of benefit produced by SOEs in 1996 amounted to 76,4 billion yuan, or 15 percent less than in 1995, while the cumulated deficit of SOEs reached the staggering figure of 65,1 billion yuan, or 45 percent more than in 1995. Cai Chenghua, "Qianxi qiye xiaoyi xiajiang de yunyi ji duice", p. 7. Another study gives slightly different figures : a 35 percent decline of profit and a 48 percent increase of deficit. Zhang Guoyun, "Lun qiye 'duo bingjian, shao pochan'" (On 'more merging, less bankruptcy' for enterprises), *Shanghai qiye* (Shanghai enterprises), n° 4, p. 7.

²¹ The two major taxes that were levied were the income tax (*suodeshui*), calculated on the amount of profits, and the sales tax (*yingyeshui*) calculated on the gross income (the latter being the most important). Until recently, commercial and industrial firms were subject to a wide range of disguised levies (*tanpan*). Although this phenomenon was widespread throughout China, the enterprises in our sample did not report other forms of taxation than the official taxes. These levies have been repeatedly prohibited by the State Council since April 1988. It was reported that local authorities had garnered around 20 billion yuan from such levies. In a questionnaire, however, one can hardly expect this issue to be mentioned. It was obvious from our data that in many cases our enterprises paid more tax than the combined total of the sales and income tax. During our more recent interviews (1995) with factory directors, however, it was stated that the issue of levies was no longer a problem in Shanghai.

When compared to profits, the amount of taxes paid by enterprises comes close to an aberration. With the exception of two firms, unprofitable firms declared no income tax. As for the profitable ones, except for five whose ratio between profit and tax looked reasonable — between 6% and 34% percent — all the other companies posted ratios which were out of proportion with their officials gains : for 17 of them, the ratio amounted to 100-300%, for another 19, it reached 301-1000%, and for another 19, 1001-220,000%. These figures do not make sense. In other words, the income tax was not calculated on benefit, but on another basis. It was also clear that the figure provided by the firms as benefit was after-tax benefit. When compared with the general income, the ratio became more reasonable : one third paid less than 5%, one third paid between 6% and 15%, while one third paid more than 15%. One can even consider that such a low level amounted to under-fiscalization.

When compared to the size of the workforce, the amount of taxes produced by each worker was fairly low. In 29 firms, the amount was less than 1000 yuan per year, while in 38 firms it was comprised between 1000 and 5000 yuan. In the remaining 33 companies, “ tax productivity ” was above 5000 yuan (between 5000 and 10,000 in 17 firms and between 10,000 and 30,000 in 16 firms). The “ fiscal productivity ” of workers was exactly proportional to the size of the workforce. This confirms that the very large companies paid a large share of taxes — close to one half — and appeared as the genuine “ milk cows ” of the authorities. The contribution of small and medium-sized firms, however, seemed to be rather low (table 4).

Table 4
Fiscal productivity of industrial firms
by size and per worker (1992)

Size	Tax	Percentage	Tax/worker	Workforce
Small	41	3,3%	2719	8,2%
Medium	134	10,7%	3707	19,5%
Large	286	23,0%	6087	25,4%
Very Large	782	62,9%	9012	46,9%

Table 5
Fiscal productivity of industrial firms by sector and per worker (1992)

Sector	Tax	Percentage	Tax/worker	Workforce
Electronics	5	0,4%	640	4,2%
Textile	104	8,8%	2607	22,9%
Pharmacy	23	2,0%	3755	3,6%
Electric./Applianc	69	5,8%	4258	9,2%
Chemical ind	119	10,1%	7140	9,6%
Mécanical ind.	596	50,1%	9635	35,3%
Metal Lurgy	272	22,9%	10136	15,3%

Units : The total amount of tax and the amount of tax per worker are given in millions of yuan and in yuan respectively.

Table 5 clearly shows that heavy industries — metallurgy and mechanical industries — contributed the highest amount of taxes. Their share of taxes — 73% of the total amount of taxes — was far superior to their share of the workforce. Actually, these industries had the highest “fiscal productivity” per worker. By order of importance, the next significant industrial sectors were the chemical, pharmaceutical, electrical and household appliances industries. Their share of taxes was close to their share of the workforce. Textiles industries, however, appeared once again as the lame duck of Shanghai industries with a contribution to taxes far below their share of the workforce.

3. Productivity and wage policy

In our survey, productivity never appeared as a central concern of the firms’ leadership. The firms have been asked to define the objectives of the investment policy, ranking them by order of importance. We received 166 replies from the 100 firms. For 28 of them, there was a single and brief response to the question. We shall not review, nor examine in detail the nature of the replies here²². By rank of importance, modernization came first and most often, followed by the introduction of new products. Far behind came the adaptation to the market, diversification into new business lines. Last came at the same level (5% of the replies) the objective of setting up a joint venture, increasing productivity, and increasing production. Productivity was definitely not high on the agenda, and it was never linked to other considerations such as modernization or adaptation to the market. In other words, modernization was a goal in itself, but it was rarely detailed. Industrial firms looked toward the market, but failed to look into themselves.

Our survey also included a question about wage policy. The firms were asked to define the measures they had implemented and the goals they were pursuing. We received 197 replies. The evident pattern that emerged was that the wage policy of industrial firms conformed mostly to the policies spelled out by the central government and locally translated by the municipal authorities. Many enterprises indicated that these measures had been introduced a year before the time of our survey. To sum them up, the wages of workers (basic wage and bonus) were to be linked to their work performance, taking into account job rank, technical competence and productivity. Finally, 20 percent of the firms were carrying out the policy of general contractualization (*zhigong hetongzhi*) of their workforce, by then the most advanced stage of labor reform in Chinese firms²³.

²² For a study of wages and wage policy, see Henriot, Christian and Shi Lu, *La réforme des entreprises en Chine. Les industries shanghaiennes entre Etat et marché*, Paris, L’Harmattan, 1996, pp. 163-174.

²³ Sur la réforme de l’emploi, cf. Henriot, Christian, “La réforme de l’emploi dans les entreprises industrielles de Shanghai”.

Table 6
The wage policy of Shanghai industrial firms

Wage according to job rank	71
Wage according to skill	35
Wage according to productivity	24
Wage according to seniority	11
Wage according to function	7
Piece wage	5
Bonus according to job rank	11
Bonus according to technical skill	3
Bonus (undetermined)	2
Bonus according to productivity	1
Job-related contract	20
Miscellaneous	6
No reform	1
Total	197

Nevertheless, the attention to the issue of productivity, although it appeared more important than in the investment policy, came only third when it came to determine the criteria of the basic retribution of workers. Rank and technical skills came first. When it came to bonus and other financial incentives, productivity again came last. This does not mean that the issue of productivity was completely lost in the firms' reflection about the necessary improvement of their general performance. As table 7 shows, in the definition of the means to be used to stimulate workers, production-linked bonus came second. But it represented only one sixth of the replies gathered on the issue of motivation policies, and it was surpassed largely by a set of responses we have called "spiritual incentives". Taken together with the next two most important measures, industrial firms proposed a vision of workers' motivations which were more in line with the old socialist discourse than with a more production/productivity-related conception of firm management. Our study has shown that SOEs practiced a very generous wage policy without much consideration for actual returns in term of productivity. Wage increases between 1980 and 1992 exceeded by far the rate of inflation²⁴.

²⁴ A more recent study for the period 1993-1995 has revealed that this trend has continued unabated. Wages have increased 22.7%, 35.8% and 17.3% yearly during this period, while inflation ran at 13.2%, 21.7% and 12.5% respectively. Cai Chenghua, "Qianxi qiye xiaoyi xiajiang de yunyi ji duice", p. 8.

Table 7
Modes of incentive of workers

Spiritual incentives	66
Production-related bonus	36
Citation to the board of distinctions	16
Work attitude	11
Extra holydays	11
Extra social welfare	10
Technical skill-related Promotion	10
In-house competition	6
Product quality-related promotion	6
Trunover-based salary	5
Total wage amount-related bonus	4
Total	181

Conclusion

From the observations we have made above, we can conclude that although various sets of policies have been introduced to improve the situation of industrial firms, by 1992 they had failed to make a dent into the fundamental problems these firms were confronted to. Although enterprise performance cannot be linked to one single factor, it can be said with a certain degree of confidence that the measures that have been implemented with the highest degree of success were those that did not challenge the most sensitive issues of enterprise management and followed to a large extent past practices. It is undeniable, for instance, that industrial firms made a very substantial effort in modernizing their equipment, very often through the import of state-of-the-art machines. Nevertheless, the benefit these enterprises were able to withdraw from their new equipment in terms of productivity has been limited by two major constraints. On the one hand, the introduction of new technologies cannot be an end to itself. Industrial firms have failed to introduce a restructuring of the organization of production, of work relations and a genuine policy of human resources. These notions and their implementations are still at an early stage and take cadres as their main focus.

The second constraint has to do with the autonomy of industrial firms, especially in the management of their workforce²⁵. Even if the former system of job allocation has been dismantled, even if industrial firms have more freedom to recruit their own staff on the basis of their needs, most of them are still burdened with a workforce that largely exceeds their

²⁵ The issue of the autonomy of SOEs is a central issue as managers are not truly responsible for their actions, while supervising agencies neither assume any responsibility as to the actual management and results of SOEs. In many ways, this leads to some sort of mutual neutralization which is detrimental to the vitality of SOEs. For such a view, see Rui Mingjie, " Jinlai guoyou qiye jingji xiaoyi huabo de shenceng shenyan ji duice " (The root causes of the recent fall in profitability of state-owned enterprises and the measures to be taken), *Qiye jingji* (Enterprises economy), n° 197, January 1997, pp. 6-7.

objective needs, not to mention the fact that large and very large firms have been forced to take up workers from bankrupt enterprises closed or merged by the authorities²⁶. Our recent survey among Chinese factory managers in various cities has brought a constant reply : if they had the freedom to do so, they would reduce their workforce by 30% to 50%²⁷. And the weight of this extra workforce on the general performance of industrial firms is not just related to production and productivity. With it comes the whole set of social services these firms have to provide to their workers : housing, social insurance, retirement benefits, etc. These expenses represent a huge drain on enterprises and seriously limit their capacity to improve productivity and pull out from their deficits.

Reforming SOE's is an enormous challenge given the implications in economic and social terms. It has been suggested that SOEs should be trimmed down — although this term has not been used — by getting rid of activities and staff that are not related to their central activity. This has meant scrapping down the “big and complete” (*da er quan*) logic which had prevailed and encourage enterprises to develop “service industry” (*disan chanye*) and to autonomize whole sectors or departments of the original company²⁸. But at the same time, enterprises have been asked to “take care” of these new “siblings” (*zi qiye*) until they could survive by themselves²⁹. More recently, the State Council has selected one hundred large SOEs to carry out experimental policies³⁰. There is, so far, a persisting tension between the radical restructuring of SOEs and the preservation of all the various parts of the system. Local authorities bet on the development of local collective industries and “social service” jobs to provide employment to laid down workers³¹. Optimists have proposed that laid down

²⁶ There is still a strong support for policies that, ideally, would save enterprises from going bankrupt by merging them together or with profit-making companies. The intention is good and the rationale behind it can sometimes make sense. It cannot, however, become the sole creed for the reform of enterprises. It could even lead to a disastrous result by inflicting a heavy and unwelcome burden on healthy SOEs. Furthermore, so far merging has occurred at the initiative and under the control of state agencies, rather than as the result of an autonomous decision by factory management. For a supporting view of merging, see Zhang Guoyun, “Lun qiye ‘duo bingjian, shao pochao’” (On ‘more merging, less bankruptcy’ for enterprises), *Shanghai qiye* (Shanghai enterprises), n° 4, 1997, pp. 7-9 ; Xu Renxiang and Xue Sasa, “Jianbing pochao yu gaohuo guoyou qiye” ([Enterprise] merging and bankruptcy and the invigoration of state-owned enterprises), *Shanghai qiye* (Shanghai enterprises), n° 6, 1997, pp. 7-9. For a diverging view advocating bankruptcy as a mean of reviving enterprises, see Fu Baohui and Wang Weijing, “Pochao fangshi yi ke xing!” (Going bankrupt can also work!), *Shanghai jingji* (Shanghai economy), n° 2, 1997, pp. 26-28.

²⁷ At the national level, it is estimated that SOEs have around 30 million excess workers. Zhang Hao, “Yong ziji de shuang shou chuangzao meihao weilai” (Let us use our both hands to create a bright future), *Qiye jingji* (Enterprises economy), n° 201, May 1997, p. 10.

²⁸ For a recent and successful example of this policy in a textile factory, Yu Rongsheng, “Zhe ge guoyou qiye de fuyu renyuan nali qu le?” (Where did this state-owned enterprise's excess workers go to?), *Qiye guanli* (Enterprise management), n° 2, 1997, pp. 16-17.

²⁹ See for instance a recent paper along this line, Shi Tiehu, “fangxiao gaohuo’. Shenhua guoyou qiye neibu gaige” (Release and invigorate the small [parts]. Pursuing the internal reform of state-owned enterprises), *Shanghai qiye* (Shanghai enterprises), n° 5, pp. 13-15.

³⁰ After a year of implementation, one study showed that this policy had produced mixed results and failed to tackle some basic issues such as employment. Xue Feng, “’96 guoqi gaige shidian zonglan” (An overview of the ’96 state-owned experimental enterprises), *Qiye jingji* (Enterprise economy), n° 198, February 1997, pp. 21-23.

³¹ Ge Chenglin and Tan Feng, “Xiagang zhigong de fenliu anzhi wenti yu duice” (The problem of the disposal of dismissed workers and the measures to be taken), *Qiye jingji* (Enterprise economy), n° 201, May 1997, pp. 21-23.

workers take their future into their own hands and start their own businesses³². Recent events, however, have shown that disgruntled workers may take to the streets to voice their frustration and anger and ask for jobs³³.

Much has been written about the reform of SOEs in the more recent years. A large part of the debate is still heavily loaded with political and ideological considerations. Journals intended for entrepreneurs regularly play up single cases of success stories by directors who turned a lame duck into a profitable venture without jeopardizing the well-being of the workers³⁴. There is no doubt that such cases exist, as in any economic system. The issue is : can all the Chinese lame-duck industrial SOEs be turned into profit-making ventures by just relying on the wisdom and hard work of their directors ? Can SOEs be expected to make profits as long as they are burdened with a workforce that exceeds their needs and with social responsibilities that take away much of their lifeblood ? These issues have been raised more than once in Chinese academic journals, ending up with the same assessment : it is getting worse and the new official measures cannot bring much improvement³⁵. Recent debates have flared up on the issue of privatization, an option the government seems to be considering very seriously now, or turning SOEs into stock companies owned by the workers³⁶. Besides the obvious ideological *aggiornamento* such a decision will call for, there is the necessity to design a whole set of policies to address the problems to be generated (unemployment, social security) when SOEs will no longer be able to assume their role as welfare agencies³⁷.

³² Zhang Hao, “ Yong ziji de shuang shou chuangzao meihao weilai ” (Let us use our both hands to create a bright future), *Qiye jingji* (Enterprises economy), n° 201, May 1997, pp. 10-11.

³³ *Far Eastern Economic Review*, 11 September 1997, p. 13.

³⁴ For an example of this rhetoric and the promotion of new “ models ” like the Handan Steel Factory, see the editorial of *Qiye guanli* and the article by Chen Qingtai, “ 1997 nian qiye guanli xuyao zhuoli zhuhao de ji xiang gongzuo ” (A few tasks in enterprise management to be grasped forcefully in 1997) in the same issue, *Qiye guanli* (Enterprise management), n° 3, 1997, p. 4 and pp. 5-6.

³⁵ Bo Qiangzhong, “ Guoqi gaige ‘97 zai gongjian ” (State-owned enterprise. The 97’ new fortifications), *Qiye jingji* (Enterprise economy), n° 199, March 1997, pp. 21-23.

³⁶ On privatization, for instance, see the vigorous paper by Duan Zhongpeng, a member of the official CCP Central School. Duan Zhongpeng, “ Guoyou zichan zhengjuanhua shi guoqi shenhua gaige de zhongyao shouduan ” (Stocklisting of state-owned enterprises is a major way of pursuing the reform of state-owned enterprises), *Qiye jingji* (Enterprise economy), n° 200, April 1997, pp. 17-18. On stockholding workers, see Ye Gang, “ Zhigong chigu shi ge hao banfa ” (Workers’ shareholding is a good method), *Qiye guanli* (Enterprise management), n° 3, 1997, pp. 39-40.

³⁷ For a review of current issues related to the welfare dimension of enterprises, see Xing Xiaobo, “ Jiejue ‘qiye ban shehui’ wenti de duice he jianyi ” (Suggestions and policy for solving the problem of ‘the enterprise as a welfare agency’), *Qiye guanli* (Enterprise management), n° 1, 1997, pp. 31-32.

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