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Gradual Versus Rapid Liberalization in Socialist Economies: Financial Policies and Macroeconomic Stability in China and Russia Compared

Ronald I. McKinnon

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GRADUAL VERSUS RAPID LIBERALIZATION IN SOCIALIST ECONOMIES: FINANCIAL POLICIES AND MACROECONOMIC STABILITY IN CHINA AND RUSSIA COMPARED

by

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Abstract

From 1978 to 1992, China's liberalization was gradual with a fairly stable price level. Since 1989, more rapid liberalizations attempted in Eastern Europe and the former Soviet Union generated much higher inflation. Yet, both regions' fiscal policies were similar. And, like its socialist counterparts in Europe, the Chinese government's revenue share in GNP has fallen sharply; in 1991-92, its consolidated fiscal deficit may be approaching 10 percent of GNP.

China avoided resorting to the inflation tax in four ways. It first liberalized in areas like agriculture where subsequent productivity growth was rapid. It imposed very hard budget constraints on, and gave little bank credit to, the newly liberalized "nonstate" sectors in industry or agriculture. But it did retain price controls on, and (constrained) financial support for, traditional soft-budget state enterprises. Last, it set positive real interest rates on savings deposits. The resulting enormous growth in saving and stocks of financial assets allowed the liberalized sector to finance itself, the Chinese government, and the deficits of the slowly reforming state enterprises.

Important aspects of these dualistic Chinese banking and pricing policies could well be adopted in other transitional socialist economies. But such incredibly high real financial growth is not feasible in Russia and formerly socialist Europe. (Indeed, high financial growth may not be sustainable for much longer in China itself!) Thus, to prevent inflation, fiscal reforms should come much earlier in their transitions than in China's.

Revised, May 18, 1993

GRADUAL VERSUS RAPID LIBERALIZATION IN SOCIALIST ECONOMIES: FINANCIAL POLICIES AND MACROECONOMIC STABILITY IN CHINA AND RUSSIA COMPARED

by

Ronald I. McKinnon[1]
Stanford University

China is often cited as the leading example of a successful gradualist approach to economic liberalization.[2] In 1978, the Chinese began to break up traditional agricultural communes into small farm leases (now 10 to 15 years duration)--the so-called household responsibility system. From 1979 to 1983, with over three quarters of the population still in agriculture, farm output surged by 8 to 10 percent per year [D. Gale Johnson, 1990]. By 1984, the focus of rapid economic growth had shifted to rural light industry, which began to absorb much of the labor force released by productivity improvements in agriculture. Although small-scale private traders flourished, hundreds of thousands of the new manufacturing enterprises (now simply called TVEs) were owned largely by townships and villages. In this so-called nonstate sector, the TVEs were market-driven and outside the web of official price and output controls that still circumscribed activity in the old heavy-industry state sector.

In the traditional sector, the much larger-scale state enterprises (SOEs) remained under the ownership and control of the central government with no attempt at some form of rapid privatization or price decontrol. Step-by-step, the pricing and financial arrangements facing the old SOEs were also rationalized, but at a more deliberate pace lasting over a decade. Overall price stability in

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[1]I would like to thank Mikhail Bernstam, Yingyi Qian, and Christine Wong for generously sharing data and ideas in helping me prepare this manuscript.

[2]Two highly readable overviews of the gradualist Chinese approach are provided by Dwight Perkins [1992] and John McMillan and Barry Naughton [1992].

both the state and nonstate sectors was surprisingly well maintained, with retail price inflation averaging 6 to 7 percent per year since 1978 (Table 1).

The Chinese approach to freeing foreign trade was also gradualist. Instead of a "big bang" that suddenly opened up the whole economy to international competition and world prices, special economic zones somewhat outside the control of the traditional state trading monopolies were started in Guangdong in connection with the Hong Kong trade. These then became progessively more numerous and broader in scope. Inside such a zone, exporters could retain all of their foreign exchange earnings while having freer access to imported materials and foreign capital or trading services.

By the end of the 1980s, an export (and import) boom had become China's new engine of economic growth. Exports had risen from less than 8 percent of GNP in the early 1980s to about 20 percent in 1992. Real GNP growth itself averaged almost 9 percent per year from 1979 to 1992 (Table 1). By the early 1990s, however, the distinction between a "Special Economic Zone" and the rest of the economy has eroded. Now, a wide range of SOEs, TVEs, and private enterprises participate with more equal access to foreign trade and the domestic economy's insulation from world markets has diminished.

Although this great economic transformation has been very rapid, it seems fair to characterize the Chinese government's economic policies as being gradualist--with the possible exception of the "minimum bang"[3] necessary to get the ball rolling in agriculture in 1978-79. In 1985, these early Chinese successes encouraged Mikhail Gorbachev to embark on perestroika, and in 1986 smaller Asian economies like Laos and Vietnam adopted their fairly gradualist

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[3]Terminology used by John Williamson [1991].

"new economic mechanisms", which have been fairly successful[4] By 1989, the transition from central planning to more market-based economies had become a political imperative throughout Eastern Europe and the former Soviet Union (FSU).

But this poses a paradox. If gradualism in China and smaller Asian economies was successful early on, why did the Eastern Europeans in general, and Russians in particular, later attempt more of a "big-bang" approach to economic liberalization? Why were the Eastern Europeans so enamored with more sweeping tranfers of property rights (including elaborate voucher schemes for transferring state property), and sudden full-scale price and output decontrol in traditional enterprises. This big bang approach was often coupled with the intention--not always carried out in practice--to swiftly open the whole economy to unrestricted foreign trade with the hard-currency industrial economies.

At least in the initial stages of these rapid liberalizations, abrupt policy changes in Eastern Europe were associated with economic disorganization, sharp falls in output, and, in some cases, inflationary explosions [Aslund 1992]. For the much briefer time series on the transition processes in Bulgaria, Czechoslovakia (before its dissolution), Hungary[5], Poland, Romania, and the Soviet Union (before its dissolution), Tables 2 and 3 depict the sharp decreases in output experienced by virtually all these economies from 1989 to 1992. This falling output has been accompanied by high, sometimes explosive, inflation--nowhere more evident than in Russia and the Ukraine in 1992-93. In contrast, Chinese output rose sharply after 1978, and throughout the early 1980s, price

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[4]See recent studies done for the Asian Development Bank by Fforde and Vylder [1993] on Vietnam and by Vokes and Fabella [1993] on Laos.

[5]Because Hungary has been liberalizing gradually for some time, one could plausibly argue that Hungary does not belong in this group of rapidly liberalizing transitional economies.

inflation remained very low (Table 1).

Were Circumstances in Eastern Europe (including the FSU) Essentially Different?

To explain the output decline in Eastern Europe, there were exogenous political and economic circumstances that differ(ed) from those prevailing in China (and in similarly agrarian economies like Vietnam and Laos), and that were largely beyond the economic control of individual reform governments:

(1) Eastern Europe was more industrialized and (overly) specialized in heavy industry. Because agrarian populations were proportionally smaller than in the Asian socialist economies, the possibility of, and the immediate gains from, returning to small-holder agriculture were more limited.

(2) The collapse of the Council for Mutual Economic Assistance (CMEA) disrupted trade within the former Soviet Bloc, and then trade among the republics of the former Soviet Union was disrupted.

(3) The precipitate decline in the power of the communist party in most of Eastern Europe and the FSU was coupled with the weakening of centralized political control over the economy at large, and the weakening of decentralized party monitoring of state-owned enterprises.

In contrast to China, (1) denies typical Eastern European economies a substantial margin on which to liberalize to get immediate increases in output. So pervasive has been this pattern of falling output, that some observers suggest [Gomulka 1991 and Murrell 1990] that the transition from socialism must naturally have to follow a "J" curve: output must fall before a long-term growth path more characteristic of a liberal economy can be established. On this J-curve view, liberalization must first largely destroy the old order before economic resources can be efficiently redeployed.

Countering this view, others argue [Brada and King, 1991] that the trade shocks under (2) were so enormous that some decline in output was inevitable in any event--given the high degree of specialization in the old CMEA trading regime. And in the 1980s, CMEA trade was about half the total foreign trade of

Eastern Europe and the FSU. Then in 1991, CMEA trade imploded with 60 to 70 percent of member countries' trade with each other suddenly drying up [Borenstein and Masson, 1993]. Because this CMEA shock was so enormous, one could argue that a more rapid opening of trade with advanced industrial economies was imperative in Eastern Europe--unlike in the early stages of China's liberalization.

Under (3), ability of the typical European reform government to control resources centrally was so limited that rapid privatization and price decontrol in the industrial sector were more essential in socialist Europe than in socialist Asia. More crudely, ripoffs of the assets of the state-owned enterprises (SOEs) had previously had been prevented by the monitoring and oversight of the communist party. With the decline in the party's power, Jeffrey Sachs has argued [May 1992] vehemently for more rapid privatization of both industrial and financial enterprises to stem the tide.

Without denying the great importance of (1), (2), and (3) for what happened in Eastern Europe in general and Russia in particular, I hypothesize that China's longer running experience with the transition from a planned to a market economy still contains valuable lessons for Eastern Europeans. But rather than trying to cover the whole liberalization landscape at the microeconomic level, this paper focuses on the problem of macroeconomic control. Using China as a benchmark, what are the fiscal and monetary problems that a reform socialist government will typically face, and how can these be best resolved in ways that encourage ouput growth while maintaining price-level stability in the liberalizing economy?

China is by no means a paragon of virtue, however. The sustainability of its own macroeconomic policies, not all of which are transferable to Eastern Europe, is now in doubt. If inflation is to be avoided in the mid 1990s, China itself must undertake some radical fiscal and monetary restructuring--as we shall

see. But first I will review Chinese macroeconomic policies since 1978 in order to point out what is generally feasible in other transitional economies.

Then my analysis will shift to the Russian economy. Why did the Russian "big bang" liberalization in January 1992 have such a surprising outcome--with price inflation spiraling completely out of control while output fell sharply? Given the great receptiveness of the Russian government to Western advice in 1991 and much of 1992, in what important respects was this advice lacking?

A Chinese Puzzle: Price-Level Stability in the Face of Fiscal Decline

In the early 1980s, how stable was the "true" Chinese price level in an environment when most prices were still controlled? Figure 1--courtesy of Gelb, Jefferson and Singh, [1993]--shows that, as late as 1981, only about 10 percent of retail sales were free of price controls. By the early 1990s, more than 70% of retail prices and 85 percent of the output prices of the collectively owned enterprises (COEs) were market determined. (Even the output and input prices of SOEs were 70% decontrolled by 1991.) Consequently, three different consumer price are presented in Table 1. From 1979 to 1991, an urban employee's cost of living index rose the most, averaging 6.9 percent per year; while the more general retail price index averaged 6.2 percent and the "free market" index, made up only of commodities whose prices were decontrolled, rose by 6.5 percent.

Because of this relatively modest growth in the free market and other price indexes, it appears that China began its liberalization in 1979-81 without significantly repressed inflation. At the outset, no major macroeconomic adjustment was needed to work off a monetary overhang by a one-time inflation--as planned in Poland in 1990, or in Russia in 1992, or possibly by a currency reform where outstanding cash balance were cancelled--as in West Germany in June 1948.

Thus for many years after 1978, official price controls in trade among the old state enterprises could be effectively enforced with centrally determined deliveries at those prices.

But price liberalization occurred at the margin. In the newly burgeoning "nonstate" sector, the SOEs could sell their surplus output beyond what the state contracted for at market prices. Figure 1's lower panel shows the 20 to 40 percent premium in prices charged in this free market. Fortunately, the absence of a monetary overhang limited this price gap, and thus limited (but did not eliminate) the tendency for supply diversion--illicit transfers of scarce goods from the state sector to higher price nonstate uses[6]. As general liberalization proceeded by rapid industrial growth in the nonstate sector, the number of price controlled goods in the state sector was continually reduced. But even these pegged prices were rationalized as raw materials prices were increased in stages, and finished goods prices were sometimes scaled down.

China does not calculate a general producer price index (PPI). Because a PPI excludes services, it would show lower rates of price inflation--once the effects of price decontrol are removed--than do Table 1's retail price indices. Measured productivity growth in services is typically much less than in agricultural and industrial goods, particularly in a rapidly growing economy like China's. The upshot is that, since 1979, China has had a very stable price level in comparison to the often explosive price inflation in Eastern Europe.

Even without a monetary overhang at the outset, how was macroeconomic control in China subsequently sustained through 1991? One cannot look to Chinese fiscal policy for an answer. On the contrary, like all communist countries, China

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[6]This problem of supply diversion bedeviled the old Soviet economy in 1990-91, with price controls were in the state sector with very high price premia in the marginal free or "black" economy [Murphy, Shleifer, and Vishny, 1992].

depended on price controls and ownership of state enterprises for generating and then collecting huge surpluses from the industrial sector. By world standards, the domestic prices of industrial raw materials and agricultural wage goods were kept down compared to the prices of finished industrial goods. The resulting financial surpluses in most SOEs were then deposited in the state bank in blocked accounts as de facto government revenue.

But, in all socialist countries, this implicit revenue system begins to unravel naturally as liberalization begins [McKinnon, 1991a and 1991b]. First, the government owned share of industrial assets begins to fall. Second, price decontrol and industrial competition from both domestic and foreign sources tends to shrink the profit margins in all industrial enterprises--whether owned by the government or not. Indeed. many once (artificially) profitable SOEs become loss makers. This tendency toward fiscal deterioration was qualitatively the same in China as in Eastern Europe or the FSU.

Table 4 shows the very sharp decline in the revenue of the Chinese (consolidated) government from about 34.8 percent of GNP in 1978 to only 18.5 percent in 1991. To be sure, the government also curbed expenditures sharply, but the ambiguous financial position of loss-making SOEs makes the net deficit hard to calculate. By including "policy loans", i.e., "forced" lending to the SOEs by The People's Bank of China, Christine Wong, Christopher Heady, and W.T. Woo calculate that the "true" consolidated fiscal deficit may have reached 10 percent of China's GNP in 1991--as shown in Table 5.

In summary, we have ongoing fiscal deterioration in China since 1978. Increasing open and hidden deficits are largely covered by borrowing from the state banking system. Obversely, broad money growth in China has been very high--averaging about 23 percent per year for more than a decade. Whence our puzzle:

how did China succeed in containing this inflationary pressure better than the socialist countries in Eastern Europe facing similar revenue declines? (To be sure, China suffered significant price increases in 1985 and again in 1988-89--but successfully recovered by disinflating.)

Self-Finance and Hard-Budget Constraints for Chinese Farmers

After 1978, China moved swiftly to dissolve the communes in favor of small-holder agriculture--a change in incentive structures that immediately raised farm productivity. Equally important but less well appreciated, state marketing agencies sharply raised--toward world-market levels--procurement prices paid farmers for (compulsory) quotas of grains and other foodstuffs [Wong 1992]. The remaining surpluses could then be freely sold in private markets. Together with the increase in output, this big improvement in the (newly-independent) farmers' terms of trade greatly increased their cash flows. In the early 1980s, this improved cash position meant that farmers could self finance their on-farm investments--including residential construction--*without* borrowing significantly from the state banking system or from officially controlled rural credit cooperatives. In effect, very hard budget constraints, but improved terms of trade, were imposed on farmers as they entered the market economy.

As long as the price level remained relatively stable as it did in the early 1980s (Table 1), the newly independent farmers viewed themselves as being undermonetized for purposes of financing on-farm investments. In part because farmers did not have access to bank credit, their desired *stock* of liquid assets was too small relative their current income *flow*. They began building up their cash and savings deposits relative to their rising incomes. More by accident than design, farmers, who were over three-quarters of the population in the early

1980s, became big net lenders to the government through the state banking system.

To show this, farmers' financial position cannot easily be separated from that of the of the rest of the population. Compared to "urban" household deposits, Table 6 shows that "rural" household savings deposits, i.e., those accruing in rural credit coops--initially grew proportionately faster--rising from about 1.5 percent of GNP in 1978 to 6.3 percent in 1984. Nevertheless, the most important part of farm financial assets in the undermonetized state was probably hand-to-hand currency. Table 7 shows currency holdings also rising sharply in the early 1980s from about 6 to 11 percent of GNP, and one suspects that currency is more heavily utilized than savings deposits in agricultural pursuits. (A currency build up amounts to lending to the government through the central bank.) Finally, in Table 6, some unknown fraction of the the "urban" household savings deposits, i.e., those held in regular banks rather than rural credit coops, is undoubtedly owned by farm households and smaller scale rural enterprises. The rapid rate of growth of rural income, combined with the build up of farmers' financial assets relative to their income, greatly augmented the lending resources of the state banking system.

But also critically important for China's macroeconomic stability at this early stage was the relative absence of direct lending to the newly independent farmers. Table 8, courtesy of Yingyi Qian [1993], shows that the total loans of the rural credit coops to farm households, to TVEs, and to collective agriculture remained about a third to half of total deposits from 1979 to 1984. (Even by 1991 these loans were still only two-thirds of total deposits.) And farm households borrowed only about half of this reduced total of loans outstanding from the rural credit coops. What was not lent out was kept on deposit as an informal reserve requirement with the Agricultural Bank of China (ABC). Because the ABC

was a division of the state banking system, these funds were lent back to the government or its designees. Also taking their unrequited currency build up into account, farmers were big *net* lenders to the rest of the economy at the critically important outset of liberalization between 1979 and 1984.

Financial Deepening and Macroeconomic Balance: The Importance of Positive Real Interest Rates

From the mid-'80s to the present, this dramatic and voluntary buildup of savings by rural households was replicated throughout the rest of the economy as industry succeeded agriculture as China's leading growth sector. Table 7 shows the enormous increase in broad money holdings (M2) from about 28 percent of GNP in 1978, to about 97 percent in 1991. Because of the central government's continued ownership and control of the state banking system, it could offset its deteriorating fiscal position by borrowing back these rapidly rising financial surpluses of urban and rural households--or of the nonstate sector generally.

This government borrowing was not inflationary only because the relatively liberalized nonstate sector--including the TVEs--was itself not a major claimant on the state banking system. In Table 9, Qian [1993] shows that in the 1980s, loans to this nonstate sector--including its industry as well as all of agriculture--were generally only about 20 percent of the total outstanding loans of consolidated banking-type financial intermediaries. Although industrial output in the nonstate sector now exceeds that of the traditional SOEs, this 20 percent "limit" appears to be holding into the 1990s (Table 9). Without the government having to resort to a substantial inflation tax, the remaining 80% was sufficient to cover the financing needs of the old SOEs and the central government. This noninflationary mobilization of large-scale finance to cover the government's fiscal deficits, both open and hidden, was the precarious keystone of

macroeconomic stability in China in the 1980s--and remains so today in the absence of major revenue-raising tax reforms.

But why was the Chinese propensity to save in financial form so remarkably high? Price stability in China was (is) not perfect. Table 1 shows inflationary episodes in 1985 and 1988-89, and 1993 itself could be a year of a substantial cyclical upturn in the inflation rate. So China's interest rate policy--particularly on saving deposits--remains very important in preserving the incentives of households and enterprises to build up their financial asset positions. Table 10 shows that the authorities have done a pretty good job of keeping savings deposit rates positive in real terms--using annual inflation rates in the national retail price index as the benchmark. (As discussed above, these real rates might look even higher if one used a decontrolled producer price index as the deflator.) A major problem arose in 1988-89 when inflation soared to 17 to 18 percent per year. This turned the standard fixed interest rates on deposits and loans sharply negative (Table 10). But the government responded by fully indexing some interest rates. Nominal rates on three-year household time deposits were increased into the range of 20 to 26 percent in 1988-89 (Table 11) and so remained strongly positive in real terms. (Once inflation fell back to a very low level in 1990-91, indexing was discontinued.)

Thus did China preserve the incentives for the nonstate sector in general, and households in particular, to accumulate monetary assets--including, in more recent years, government and industrial bonds. Because potentially excess household purchasing power was soaked up, the supply and demand of "hard" money in the nonstate sector remained more or less in balance.

What about productivity growth in the nonstate sector? Although new industry in the nonstate sector did not get much in the way of bank loans,

financial deepening through higher deposit rates could still contribute to the nonstate sector's high productivity growth observed by Gelb, Jefferson, and Singh [1993]. In line with the arguments and evidence put forward in Mckinnon [1991, Ch. 2], having access to attractive liquid financial assets inhibits bad physical investments with low or negative yields; at the same time, such access encourages intertemporal arbitrage for making good investments [McKinnon 1973, Burkett and Vogel 1991]. In effect, attractive financial assets and productive physical capital are complementary[7].

Industrial and Financial Dualism in China: The Macroeconomic Role of Price Controls in the State Sector

If there was no hard money overhang in Chinese households in 1978-79, why then did the Chinese government retain (or only slowly remove) price controls in the old state sector after 1978? Unlike Eastern Europe, China did not attempt any sudden "big bang" liberalization or privatization of state-owned industry--which had been built up with distorted prices under the umbrella of central planning. Traditional heavy industry--whether in manufacturing, public utilities, or natural resources--remained firmly the responsibility of the central government.

The Chinese government recognized that parts of the old heavy industrial sector would inevitably become unprofitable as prices were decontrolled or "rationalized". State enterprises that became unprofitable with, typically, thousands of workers, could not be allowed to collapse just because of a change in economic regime. The social consequences were too dire, and the economic costs

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[7]In the early 1990s, important new empirical research for the World Bank over a huge 80-country, 30-year (1960-1989) sample pooled in cross section and time series provides further strong empirical support for the link between financial depth and high productivity growth--see particularly Levine [1992] and King and Levine [1993].

would be too great. While slowly raising the prices of raw materials relative to finished manufactured goods into a better alignment with world-market prices, the central government continued to prop up much of state-owned industry by low-cost bank loans and other subsidies. Because this perpetuated the syndrome of the "soft" budget contraint, state enterprises remained on a tight financial leash.

For example, at the outset of the liberalization in the early 1980s, the SOEs were not permitted to bid freely with each other for scarce domestic resources, or to bid unrestrictedly in an open market for foreign exchange. Producer prices in transactions among state-owned enterprises remained under centralized control--and were only gradually phased out as the decade progressed. However, the government allowed a two-part pricing system to develop. Once state enterprises had satisfied their delivery commitments to each other at centrally controlled prices, they could sell at the margin any excess production to rapidly growing nonstate enterprises at market-determined--and usually somewhat higher--prices as we have already seen in Figure 1. Similarly, the central government initially allocated all foreign exchange at the official exchange rate, and then gradually allowed an interenterprise swap market to develop at a variable but modest premium over the official rate. Only by the early 1990s did this open swap market become dominant for allocating foreign exchange among enterprises.

Contrast this cautious approach with the "big bang" price decontrol followed by Russia on January 1, 1992. Suddenly state-owned enterprises (with very soft budget constraints) could bid, and negotiate prices freely, for all goods and services or foreign exchange purchased from each other. Russian households, however, remained somewhat wage and cash constrained. The result in 1992 was a price explosion at the producer level--see Figure 2. This explosion was led by a tremendous increase in the ruble price of foreign exchange--from

about 5 rubles to the dollar at the beginning of the year to about 500 rubles at the end. (This Russian experience is more fully analyzed below.)

Unlike in Russia, the Chinese authorities correctly recognized that price controls are necessary to anchor the producer price level when (1) enterprise budget constraints are still very soft, and (2) there wasn't yet sufficient competition in the provision of individual raw materials or more complex producer goods from a hard-budget nonstate sector. Even if the government succeeded in controlling both wages in SOEs and the stock of "hard" household cash in circulation among households and the nonstate sector, this by itself would be insufficient to peg the producer price level. Although the Chinese authorities slowly adjusted *relative* producer prices, they still anchored the producers' price *level* by pegging most of the nominal prices of goods and services traded among state enterprises in the early years of their liberalization.

(In positing an optimal order of economic liberalization, I have argued [McKinnon 1991, Chap. 11] that a dualistic set of financial, fiscal, and price controls should apply differentially to the traditional and the liberalized sectors in the early years of the transition. This industrial and financial dualism corresponds loosely to China's distinction between its state and nonstate sectors. An idealized or "model" dualistic control mechanism is further elaborated in Table 12.)

However, once the cash-constrained nonstate sector becomes big enough to compete vigorously with the old state sector in product markets, the government can relax price controls in the state sector. Together, the TVEs and private industries in the nonstate sector broadly defined now rival in size the aggregate industrial output of the old state sector. In 1978, collective or private industry in China was officially tabulated to be 22 percent of total output; but,

mainly because of the growth of the TVEs, by 1991 this had risen to 53.7 percent [Perkins, 1992]. Because these new enterprises operating with hard budget constraints now compete vigorously with the old state sector, in the early 1990s price controls within the latter could be almost entirely eliminated without upsetting the producer price level--providing the amount of hard cash in circulation in the nonstate sector remains under control. (Even into the 1990s, however, the old SOEs still need to be financially constrained from bidding for scarce resources--like foreign exchange--insofar as they are also recipients of soft loans from the state banking system.)

Tax Reform and the Optimal Pace of Financial Liberalization: China and Eastern Europe Compared

To be soundly financed and for the state banking system to stay profitable, the reform government's high interest rate strategy for household deposits requires even higher average interest rates on loans. China did not always manage this. Occasionally, an inversion made (some) loan rates lower than the equivalent deposit rates--particularly during the 1988-89 period, when nominal deposit rates were indexed. Such an inversion adds to the banking system's and the government's "hidden" deficit--beyond simply the deficit associated with the nonrepayment of the bad loans to the SOEs.

Even without this inversion, this high-interest noninflationary finance implies that the Chinese central government's open and hidden debt, through the state banking system to the nonbank public, is building up fast. But measuring the size of this official debt is complicated, and cannot be undertaken here.

Moreover, as long as the government is leaning on the state banking system as a crutch to cover its own fiscal deficits, the scope for liberalizing--let alone privatizing--the banks is limited. At this stage, the government cannot

afford a parallel system of independent banks, with unrestricted deposit and lending privileges, to serve the TVEs or the private sector. They would compete away the deposit-taking capabilities of the state banking system. (This may be already happening. The state banks themselves may be hiving off some of their activities to less highly regulated and taxed finance and trust companies [Qian, 1993].) If the Chinese government threw away its financial crutch--by, say, permitting unrestricted wildcat banking in the mode of the former Soviet Union [McKinnon 1991, Ch. 11]--an inflationary explosion would ensue.

Like Eastern European governments, the Chinese central government failed to set up an effective internal revenue service for collecting revenue in a decentralized market economy. Unlike Eastern Europe, however, the Chinese resorted more effectively to various "second-best" schemes for revenue collection. After 1978, by retaining control over traditionally profitable industrial enterprises, the central government could continue collecting revenue--turnover taxes and residual profits--directly for itself. Then, by the mid-1980s, as revenue from state-owned enterprises fell, the central government began an elaborate system of tax contracting with local governments to remit revenue to the center [Wong, Heady and Woo, 1993].

Still, this left the Chinese central government with a serious revenue shortfall for financing infrastructure investments, subsidies to loss-making old-line industrial enterprises, higher agricultural procurement prices, and so on. The salaries of high-level civil servants and educators have declined sharply relative to those paid in the nonstate sector. This decline in the fiscal position of the central government is clearly neither sustainable nor in the best long run interests of Chinese economic development; among other problems, officials become more easily corrupted when their salaries are low.

The Chinese government cannot rely indefinitely on such heavy borrowing because households are no longer "undermonetized"--and the M2/GNP ratio won't rise to infinity. When the ratio of household liquid assets to income peaks out, or even before, there could be a financial crisis if state-sector borrowing continues. The great economic accomplishments of the last 13 years would then be at risk--and an Eastern European-style inflation cannot be ruled out.

The solution is obvious economically but difficult politically. The Chinese central government must quickly institute an internal revenue service capable of directly taxing all industries--central government, local government, and private--as well as the agricultural sector. Domestic and foreign trade should be covered uniformly so that the rate of business taxation can be kept moderate--as with a uniform value added tax. At a somewhat later stage, households could be brought systematically under a personal income tax, but that is only feasible as people get wealthier. Aspects of how to implement this new tax regime are analyzed elsewhere [McKinnon 1991 and 1993, Wong et al. 1993].

In the transition in Eastern Europe and the FSU, by contrast, the need for fiscal reform is more immediate than in China. The initial decreases in output (Table 2) and unfavorable inflationary expectations (Table 3) make it much more difficult for these governments to obtain noninflationary finance by borrowing from their banking systems in the Chinese mode. The growth in the real size of their financial systems is too small--and could even be negative. Thus, if further inflationary explosions are to be avoided, effective fiscal reforms must come much earlier in their transitions.

Russia's Economic Dilemma Before the "Big Bang", January 1992: Partial Price Liberalization and Supply Diversion

It was a major mistake for the Russian Federation, in January 1992, to

suddenly decontrol virtually all prices within the state sector, and to stop trying to enforce normal patterns of delivery within that sector. As we have seen, this big bang approach was very different from Chinese gradualism. On the other hand, some conditions in Russia in 1992 were very different from those prevailing in China in 1979. Moreover, the reform government in Moscow was acting in good faith and seemed to be following the advice of international agencies like the IMF and World Bank and most Western economists. So a careful review of some of the arguments that were presented, prior to that fateful January, in favor of the big bang approach seems worthwhile.

Two related arguments in favor of sudden liberalization in Russia can be adduced. The first was mainly macro, and, following the Polish precedent of January 1990, was directed toward eliminating a monetary overhang at previously controlled prices by a one-time inflation. The last section of this paper takes up this influential "monetary-overhang" argument.

The second argument was more micro in nature, and concerned with the sieve-like character of the previous system of price controls. In 1990-91, a substantial fringe of unregulated activities had developed in Russia's "nonstate" sector, where prices were free and hard money(ies) circulated. Unlike China, there was more small-scale trade--legal and illegal--and relatively little production in this nonstate sector, if only because Russia had made little progress in liberalizing agriculture. Black-market activities were rampant. This second influential argument emphasizes "supply diversion".

A recent paper, "The Transition to a Market Economy: Pitfalls of Partial Reform" [Murphy, Shleifer, and Vishny, August 1992], argues that partial reform, where prices are decontrolled in the nonstate sector but not in the state sector, is a mistake. (The authors had been to Russia and had written their paper before

January 1992.) If controlled prices in the state sector are set below those in the free market dominated by the nonstate sector, scarce inputs could be diverted from high-value to low-value uses--including diversion into foreign trade. Such massive supply diversion from partial price liberalization, they argued, provoked the fall in output in 1990-91 in the FSU in general, and Russia in particular.

These authors illustrate their important and influential argument with several examples, one of which is worth repeating. Suppose an important industrial input, say timber, can be used for the production of railway boxcars in the state sector or for the production of family homes in the nonstate sector. The demand for timber to be used for boxcars is relatively inelastic--reflecting a high producer surplus within the railway industry for providing general transportation. In contrast, the demand for timber in the housing industry is relatively elastic, with consumer surplus being relatively low. Like most raw materials in socialist economies, timber traditionally has been underpriced in terms of finished manufactures. Suppose such price controls are retained in the state sector: users of boxcars cannot bid beyond a set price, say P*, for timber.

In a partial liberalization, suppose now that a nonstate housing industry can bid for timber from forestry enterprises in the state sector at free-market prices. By bidding slightly above P*, the nonstate housing industry could expand very rapidly at the margin. Unrestricted entry by small construction firms could rapidly absorb this key raw material and cause a collapse of the output of vital railway cars in the transportation network. (The same output collapse of railway cars could also happen if the nonstate sector bid away timber products for export.) When output fell in Russia in 1990-91, there were price controls on what state firms could pay for various inputs in terms of quasi-blocked enterprise money, while nonstate firms in the "cash" economy sometimes had a much freer hand

in the bidding process--including bidding with more attractive household money.

This provocative paper does not refer to the different financial circumstances--including different monetary circuits--of state and nonstate enterprises. It focuses only on the anomalies of the two-part pricing system. In this narrower context, the authors identify two solutions to this problem of supply diversion:

(i) Keep the two-part pricing system in place but strengthen the old system of state orders for enforcing minimal deliveries of price-controlled inputs in critical industries within the old state sector; or

(ii) Abandon two-part pricing within the state sector, and thus eliminate both price controls and bidding restraints on state firms competing with nonstate firms for scarce inputs.

In assessing (i), the authors note that the Chinese government started off its liberalization with an extensive two-part pricing system in the traditional state sector. However, Christine Wong [1992] notes that relative prices within the state sector were also realigned to push them closer to those prevailing internationally.

"During the first period in 1979-84, in agriculture state procurement prices were raised substantially across the board.... In industry, the prices of 29 producers' goods were raised during 1979-81, including those for coal, pig iron, coking coal, cement, plate glass, and some steel products. Other prices were reduced: those for machinery, instruments, and tools. The prices of many consumer goods were also reduced from their initially very high levels, including wrist watches, televisions, tape recorders, radios, synthetic fabrics, etc.

At the same time more prices were freed to market determination through two devices. The first was to reduce the scope of planned allocation. In agriculture, the number of products was reduced from 46 to 22 in 1982, and further to 12 in 1984. In industry, the number of producers' goods under plan allocation was reduced from 256 in 1979 to 30 in 1984. By 1984, virtually all "minor" consumer prices had been freed.

The second device was to allow some of the goods in the key sectors that remained under state control to enter into market channels, a development that

gave rise to the "dual" price system that emerged in the mid-1980s....whereby the proportion of output under state plans would continue to be traded at plan prices, while extra-plan output would be traded at (higher) "extra-plan" prices ....to provide better (profit) incentives at the margin." [Wong, 1992, p.72]

However, for the Russian case, Murphy, Schleifer, and Vishny reject the Chinese solution of partial liberalization with dual pricing. They claim that the different political circumstances in China, where the communist party retains centralized power, could force state firms to deliver their assigned quotas at below market prices--so that private buyers could only buy surplus production at the higher prices. Because of the decline of the Communist Party in Russia, however, the authors claim that delivery quotas for state enterprises have already been relaxed--and it would now be impossible to enforce such delivery quotas even if the Russian government wanted to. Therefore, they concluded that the gradualist approach base on partial price reform--(i) above--should be scrapped in favor of full price liberalization--(ii) above.

"The most natural implication of the analysis in this paper is that price reform should take the form of a big bang, with all prices being freed at once. ... Fortunately, the Russian government moved to an almost complete price liberalization in 1992." [K.Murphy, A.Shleifer, and R.Vishny, Aug. 1992, p.906.]

Unfortunately, unrestrained bidding for scarce inputs by Russian state enterprises in 1992 led to an even bigger inflationary explosion and sharper fall in real output than under the partial price reforms of 1990-91.

"The Russian economic depression deepened dramatically in 1992 with GDP falling 19% and NMP (net material product) produced down 20%. Since reaching a peak in 1989, the level of NMP produced has fallen by nearly 32%, with GDP falling slighly less. The major change in 1992 compared to 1990-91 is that consumption had to bear the brunt of the decline in aggregate output--it fell by 15-16% compared to less than 3% drop in 1991. The level of net investment... in 1992 fell to less than one third (!) of its peak 1988 level.....

Russia made no headway in controlling inflation last year. The end-december level of consumer prices was up by a factor of 26.3 relative to December 1991 while the industrial wholesale price index was up a staggering 62.2 times for the same period. These figures imply average monthly inflation rates of 31.3% and 41.1% respectively. [PlanEcon Report, March 10, 1993. p. 1.]

What went wrong? Was there some major flaw in the three authors' persuasive

argument for a big bang price reform jointly encompassing both the state and non-state (household) sectors? Or, did Russian reformers again simply not go far enough--a line of thought to which many influential outsiders[8] still adhere?

Indeterminacy in the Producer Price Level with Unconstrained Bidding by State Enterprises

The big bang argument for total price decontrol is flawed if (some of) the important actors bidding for scarce resources have soft budget constraints. If Russia's state enterprises are not financially constrained, no meaningful equilibrium in producer prices exists. Until their budget constraints are hardened, unconstrained bidding by state enterprises will cause the producer (wholesale) price level to increase indefinitely--and thus also increase relative to retail prices facing (cash-constrained) households. After presenting some evidence on this point, I shall then discuss the underlying financial mechanisms.

Taking December 1991 as the base month just prior to the massive price increases of January 1992 and using data from the Russian Ministry of the economy, Mikhail Bernstam of Stanford University's Hoover Institution plotted Figure 2: the course of Russian wholesale and consumer prices and wages on a monthly basis from January through December 1992. The key point to notice is the explosive growth in wholesale prices relative to consumer prices or wages in the initial months after price decontrol. All the increases are astronomical, but, by October 1992, wholesale prices had risen almost 2.5 times as much as consumer prices. And from the fragmentary data, by the end of the year consumer prices had risen twice as much as wages--so that wholesale or producer prices had actually risen five times as much as wages!

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[8]See the commentary, "If He Goes" in The Economist, March 13, 1993 pp. 17-18 arguing for even more sweeping price decontrol in Russia.

However, in such a financially volatile context, data sources are hard to reconcile. Because of the more or less complete decontrol of prices (but not wages) in January 1992, rates of growth in monthly time series data in 1992 are particularly difficult to interpret. For example, in December 1991, the general retail price index stood at 282.6 (1990 being 100); and then jumped to 941.0 in January 1992: an increase of 230 percent in just one month. But this one shot outburst of extraordinary inflation was designed to work off the large cash overhang that had been rapidly building in 1991 when retail prices were still (partially) controlled. (Although difficult to measure, the overhang component of household cash holding might have been as high as 50 percent of total wage and salary income in 1991.) But nominal wages remained controlled and rose only about 31 percent in January 1992. So real wages fell very sharply in January 1992, a fall not recouped by subsequent substantial, but controlled, increases in nominal wages relative to retail prices.

Because the Russian government's power to tax the household sector directly is very limited, these imperfect wage controls are the principal means by which the Russian government could restrict the supply of new money--including savings deposits--in the household monetary circuit. And indeed household saving deposits as a share of retail sales turnover fell dramatically, from 60 percent in 1991 to about 25 percent in mid-1992 and virtually vanished by the end of the year. Similarly in this world of imperfect statistics, the (ruble) currency to GNP ratio was about 10 percent at the beginning of 1992 and had fallen to about 3 percent by the end of the year. This is one reflection of the 1992 "cash shortage" in Russia and other former Soviet republics.

(In great contrast to the financial deepening in China with M2/GNP over 90 percent by the end of 1992, the purchasing power of money (in rubles) held by the

nonbank public in Russia had become very small--probably of the order of 3 percent of GNP, with the household deposit base of the banking system wiped out.)

Another data source showing the extraordinary pattern of price changes in the Russian economy in early 1992 is in various parts of the PlanEcon Report that are collated and rearranged in Table 13. Focus initially on just the price movements in the right-hand column. From December 1991 through June 1992, ruble wages increased about 4 times, retail prices between 6 and 7 times, wholesale prices between 18 and 19 times, and the ruble price of dollars about 33 times!

To help interpret this incredible increase in the price of foreign exchange, PlanEcon Report [September 1992] estimated that the purchasing power parity (PPP) exchange rate (using CPI comparisons) was 6 rubles/dollar when the "commercial" rate was pegged at 55 rubles/dollar in June 1992. Subsequently, this commercial rate was further freed to be determined by "market" forces in the Moscow interbank curency exchange (opened in 1991) and rose to 143 rubles to the dollar in July 1992 and to 241 on September 22, 1992.

> "At the end of trading, (the ruble) had sunk to 241 against the dollar--a loss of 35.5 rubles on last week's level level of Rbs 205.5 to the dollar. The volume of dollars traded was also a record, at $68.8m--*a sign of the willingness of Russian enterprises to use Rbs15bn to buy the US currency as a hedge against inflation.*" [italics added, Financial Times, September 23, 1992. p. 4.]

What is going on here? As in the classical centrally planned socialist economy, Russian enterprises are still on a soft money circuit--deposits with, and credits from, the state banks. In contrast, households and the emerging "nonstate" commercial sector are on the relatively hard money or cash circuit. This softness of financial constraints on the old state enterprises has two related aspects.

First, central government enterprises have traditionally had access to low (nominal) interest-rate credits from the state banking system and from other

state enterprises. In the face of rapid price inflation, which resulted in almost complete debt forgiveness in real terms as in 1992, these bank credits become a massive subsidy. In addition, by simply not repaying their trade credits, state enterprises also borrowed heavily from each other. Although ostensibly commercial in nature, this credit is not subject to ordinary commercial restraints and became a prime cause of softness in enterprise budget constraints in 1992.

Second, enterprises had no hard deposit money or interest-bearing assets denominated in rubles which they could hold either for short-term liquidity or as a longer term store of value. Indeed, in the traditional Soviet monetary system, enterprises were (are) enjoined from holding household cash balances, and had to hold noninterest (or trivially low interest) deposits with the state bank in several categories of quasi-blocked accounts. Not only are these ruble accounts not liquid, but in the past they have been subject to arbitrary seizure and confiscation by the government as an "informal" method of tax collection. (Residual profits of state enterprises traditionally accrue to the central government anyway.) From the existing explosive inflation, low nominal rates of interest, and the threat of confiscation, enterprises say very negative real deposit rates on any ruble monetary assets they could not avoid accumulating.

In these circumstances, if state enterprises are given the option of bidding (with their soft money) for foreign exchange assets in virtually any form, they will grossly "overbid" [McKinnon 1991]. Although imported producer and consumer goods are in heavy demand, enterprises are even more desperate to find a nondepreciating liquid financial asset which they can legally hold through time. Apart from excess physical inventories of inputs and outputs, foreign bank accounts or other foreign exchange assets are very attractive inflation hedges at this unfortunate juncture in Russia's financial affairs. Thus, in a market for

foreign exchange dominated by state enterprises, the ruble price of dollars is bid up beyond any conceivable level warranted by purchasing power parity.

The Role of Price Controls on State-Sector Enterprises in the Transition

Before liberalization, price-wage controls in a typical socialist economy have a dual economic function.

(1) Government revenue depends implicitly on the structure of *relative prices*. The government "distorts" relative prices in order to generate surplus profits within the state-owned industrial sector [McKinnon, 1991a and 1991b]. In comparison to world markets, domestic prices of primary products, industrial materials, and money wages are deliberately kept low relative to the domestic prices of finished manufactures. As described above, the resulting surpluses in enterprise cash flows are then deposited in blocked accounts with the state bank: the government's operative tax revenue.

(2) Price controls are also necessary to peg the *absolute producer price level*, i.e., to provide a nominal anchor for prices charged in trade among state enterprises with soft budget constraints. Otherwise, if any open bidding was allowed, producer prices would be indeterminate--as with the 1992 Russian price explosion. (If excess money issue and price inflation existed at the consumer level, continual movement--or indexing--of wholesale prices to ever higher official pegs would become necessary.)

In an optimal order of liberalization for the economy as a whole, both (1) and (2) constrain the pace at which prices in the state sector can be safely decontrolled. When liberalization begins, the government's revenue position is undermined if competitive pressure undermines monopoly profits in the industrial sector: finished goods prices fall relative to material inputs and wages. This

fall in tax revenue could result in excessive hard money creation in the household sector and inflationary pressure--first manifest at the consumer level.

Consequently, without a satisfactory internal revenue service for collecting income and commodity taxes on a general basis, liberalizing socialist governments must retain wage controls as a second-best way of taxing personal income. These wage controls maintain the profit position of the state enterprises on the one hand, and prevent too much soft enterprise money from being converted into hard household cash--hand-to-hand currency and savings deposits--on the other. For example, to maintain the government's revenue position and a modicum of monetary control, Poland's otherwise big-bang price liberalization at the beginning of 1990 was accompanied by stringent wage controls. Initially, money wages in Poland rose more slowly than the final output prices which consumers had to pay. Similarly, in Russia's big-bang liberalization at the beginning of 1992, wage controls led to a sharp fall in real wages as inflation accelerated.

This draconian, albeit informal, system of personal income taxation may initially succeed in curbing inflation at the retail-household level. Hard cash in circulation may be effectively limited--as was true initially in Russia in 1992. But by themselves, wage controls aren't enough to prevent an inflationary explosion in prices prevailing in trade among state enterprises, including the price of foreign exchange. Whence the dramatically unbalanced inflation process observed in Russia in 1992.

Consequently, price and credit controls may have to be retained in the old state sector even after a proper system of general taxation is put in place and the revenue position of the central government appears to be balanced. As long as the money and credit position of the old state enterprises remains soft, direct price controls in this sector will remain necessary until a cash-

constrained nonstate sector becomes large enough to be an effective competitor.

Choosing the Right Model of Inflation in Order to Disinflate Efficiently: A Concluding Note

In designing an efficent program for ending price inflation in any economy, it is important to choose the right model of the inflationary process itself. Consider three possibilities.

1. **Open Inflation in Market Economies.** The traditional textbook analysis of open inflation starts with a unified monetary system and market determined prices. Excessive lending by the central bank to the government or its designees causes cash or "high-powered" money in circulation to rise sharply. With a lag, prices then begin moving upward and eventually catch up with the increased amount of nominal money outstanding. But the money supply is the proximate causal variable for the increase in prices--as in most Latin American inflations.

2. **Repressed Inflation with a Cash Overhang.** In the now standard analysis of repressed inflation with general price-wage controls, economists (see Barro and Grossman [1976] generally, or Lipton and Sachs [1990] for Poland in particular) envisaged a single well-defined monetary "overhang" interchangeably owned by households and enterprises in an essentially unified monetary system. If the economy is to begin functioning properly, however, the overhang must be eliminated by cancelling much of the outstanding nominal money in circulation--as in West Germany in 1948--or by open inflation. By removing price controls and devaluing the currency in the foreign exchanges in January 1990, the Polish government planned (fairly successfully) to inflate away the purchasing power of its monetary overhang. In principle, by limiting new sources of cash injections into the economy, inflation should come to a halt after a once-and-for-all

increase in the price level. (Because Poland's fiscal policy remains weak, however, the Poles may not fully succeed in reasserting monetary control.)

These two models--highly simplified--of either open or repressed inflation assume a unified monetary system where households and enterprises are on essentially the same monetary circuit, and both have (fairly) hard budget constraints. Was this a reasonable assumption for Poland on January 1, 1990? In the 1980s, Poland had a history of attempted financial liberalizations and banking reforms--with a lot of missteps--which tended to obliterate the sharp distinction between household cash (and savings accounts) and the deposit or credit money owned by firms. Both could traffic with cash and were subject to restraint in bidding for scarce resources by their cash positions--if the government limited new credits or other subsidies. Then, if the Polish government could get control over the cash base within this unified monetary system, that would be sufficient for bringing inflation under control.

3. **Producer Price Inflation in Enterprises with Soft Budget Constraints.** Russia's financial-monetary system--and that of other CIS republics--in 1991-93 would seem to be qualitatively different from Poland's at the beginning of 1990. Russia had essentially retained the old socialist distinction between enterprises, which were not cash constrained in their ability to bid for scarce resources, and cash-constrained households. Even so, Russia went ahead and suddenly decontrolled all producer prices with disastrous consequences. Although this Russian model of inflation isn't yet in any textbook, it soon will be.

How does Russia get the inflation genie back into the bottle? In the short run, successful macroeconomic stabilization requires a major (re)centralization of the government's control over money and credit--and a reassertion of the primacy of the state-controlled banking system with the elimination of

independent "wildcat" banks. Because of the special characteristics of socialist industry, price setting at the producer level--including the exchange rate--may also have to be recentralized as part of the stabilization package. So we have an unfortunate policy dilemma: to secure macroeconomic stabilization in the near term, important banking and commodity pricing policies may have to move counter to what most of us would like to see for the long-run liberalization of the Russian economy.

But this dilemma between short and long run is less acute for fiscal policy. A drastic improvement in the Russian government's ability to collect tax revenue is necessary for macro stabilization on the one hand, and for sustaining the longer term market-oriented and institutional reforms on the other.

Table 1

China's Main Economic Indicators
(percentage rate of growth)

	Real National Income	Real GNP	General Retail Price Index	Urban Cost of Living Index	Free Market Index	Money (M2)	Exports GNP	Foreign Reserves[1] (billion $)
1975	8.3		0.2	0.4				
1976	-0.3		0.3	0.3	4.0			
1977	7.8		2.0	2.7	-2.4			
1978	12.3		0.7	0.7	-6.6			
1979	7.0	7.6	2.0	1.9	-4.5	9.7	5.31%	0.84
1980	6.4	7.9	6.0	7.5	1.9	24.1	6.07%	-1.30
1981	4.9	4.4	2.4	2.5	5.8	19.7	7.70%	2.71
1982	8.3	8.7	1.9	2.0	3.3	13.1	7.97%	6.99
1983	9.8	10.3	1.5	2.0	4.2	19.2	7.55%	8.90
1984	13.4	14.6	2.8	2.7	-0.4	42.4	8.34%	8.22
1985	13.1	12.7	8.8	11.9	17.2	17.0	9.45%	2.64
1986	7.9	8.3	6.0	7.0	8.1	30.2	11.16%	2.07
1987	10.2	11.0	7.3	8.8	16.3	25.3	13.01%	2.92
1988	11.1	11.0	18.5	20.7	30.3	20.7	12.60%	3.37
1989	3.7	4.4	17.8	16.3	10.8	18.7	12.29%	5.55
1990	5.1	5.6	2.1	1.3	-5.7	28.9	16.88%	11.09
1991	7.9	7.3	2.9	5.1	-0.9	26.7	19.30%	21.71
Average 1979-91	**8.4**	**8.8**	**6.2**	**6.9**	**6.5**	**22.7**		
Prelim-inary 1992		12.8	5.4	8.6		31.0	20.00%	

[1]Foreign exchange reserves are those held by the central bank (The People's Bank of China). Large reserves held by the foreign trade bank (The Bank of China) are excluded.

Data: IMF, International Finance Statistics 1992 Yearbook, for M2 data. Other data from China Statistical Yearbook 1992 (Chinese edition).

Sources: 1) Christine Wong, Christopher Heady, and W. T. Woo Economic Reform and Fiscal Management in China, Asian Development Bank, Feb. 1993.
2) Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Table 2

Gross Domestic Product (GDP) Growth Rates, 1989-1992

	Percentage change in real GDP			
	1989	1990	1991	1992[1]
Bulgaria	-0.5	-10.6	-23.0	-3.0
Czechoslovakia	0.7	-0.4	-15.9	-5.0
Hungary	-0.2	-4.3	-10.2	-5.0
Poland	0.2	-11.6	-7.2	-1.0
Romania	-5.8	-7.4	-13.7	-10.0
Soviet Union	3.0	-2.3	-17.0	N.A.

[1]Preliminary Estimates.

Source: Anders Aslund, Post Communist Revolutions: How Big a Bang? CSIS, Washington, 1992.
International Monetary Fund, "Financial Sector Reforms and Exchange Rate Arrangements in Eastern Europe" Occasional Paper 102, Feb. 1993.

Table 3

Inflation, Unemployment, and Budget Balance, 1990, 1991, and 1992

	Inflation (% change)			Unemployment (% in December)		General Government Balance (% of GDP)		
	1990	1991	1992[1]	1990	1991	1990	1991	1992[1]
Bulgaria	26	460	49	1.6	10.5	-8.5	-3.7	-3.5
Czechoslovakia	11	59	10	1.0	6.6	0.1	-2.2	-4.4
Hungary	33	32	22	1.7	8.5	0.4	-3.3	-10.6
Poland	586	70	46	6.5	11.4	3.5	-5.6	-7.2
Romania	50	161	203	N.A.	4.3	-0.5	-2.6	-1.9
Soviet Union	6	152	N.A.	0	0	-8	-26	N.A.

[1]Preliminary.

Source: Anders Aslund, Post Communist Revolutions: How Big a Bang? CSIS, Washington, 1992.
International Monetary Fund, "Financial Sector Reforms and Exchange Rate Arrangements in Eastern Europe" Occasional Paper 102, Feb. 1993.

Table 4

China's Fiscal Situation in the Reform Period
(percent of GNP)

	Revenue		Expenditure		Budget Deficit		
	Chinese Definition	"Standard" Definition	Chinese Definition	Standard Definition	Chinese Definition	Government Borrowing Requirement Definition	Stock Definition
1978	31.24	34.77	30.96	34.49	-0.28	-0.28	-0.28
1979	27.66	31.69	31.94	36.86	4.28	5.16	5.16
1980	24.28	29.10	27.13	32.91	2.85	3.82	3.28
1981	22.83	27.28	23.36	29.35	0.53	2.06	1.17
1982	21.64	27.14	22.21	29.32	0.56	2.18	1.41
1983	21.50	27.66	22.25	29.78	0.75	2.11	1.64
1984	21.57	26.47	22.21	28.22	0.64	1.75	1.51
1985	21.81	26.84	21.56	27.64	0.25	0.80	0.50
1986	23.31	25.23	24.04	27.39	0.73	2.15	1.85
1987	20.96	22.79	21.67	25.00	0.70	2.20	1.75
1988	18.68	19.93	19.24	22.41	0.56	2.48	2.16
1989	18.43	20.41	19.01	22.75	0.58	2.35	2.09
1990	18.50	19.63	19.28	22.51	0.78	2.88	2.15
1991	18.13	18.52	19.30	21.88	1.17	3.36	N.A.

"Standard" definition for revenue means subtracting borrowing from Chinese definition,and adding in the subsidies that were counted as negative revenue. "Standard" definition for expenditure means adding to the Chinese definition subsidies that were considered negative subsidies.

Government Borrowing Requirement (GBR) definition deficit is "Standard" Expenditure minus "Standard" Revenue.

Stock definition of deficit is GBR definition minus principal repayments.

Source: Christine Wong, Christopher Heady, and W. T. Woo Economic Reform and Fiscal Management in China, Asian Development Bank, Feb. 1993.

Table 5

Consolidated Deficit of Chinese Goverment
and State Owned Enterprises, 1988-91
(percent of GNP)

	Open Deficit[1]	Hidden Deficit[2]	Consolidated Deficit (1) + (2)	A conservative re-estimate on assumption that hidden deficit is 70 percent of column (2) deficit
	(1)	(2)	(3)	(4)
1988	2.48	5.14	7.62	6.08
1989	2.35	5.22	7.57	6.01
1990	2.88	7.55	10.43	8.17
1991	3.36	6.76	10.12	8.09

[1]Public Sector Borrowing Requirement as in Table 4.

[2]Central Bank financing for the deficits of the state owned enterprises.

Source: Christine Wong, Christopher Heady, and W. T. Woo Economic Reform and Fiscal Management in China, Asian Development Bank, Feb. 1993.

Table 6

China: Household Bank Savings Deposits (billion yuan)
1978-1991

	Total Household Deposits	Increase Over Previous Year	Urban Household Deposits[1]	Increase Over Previous Year	Rural Household Deposits[2]	Increase Over Previous Year	Total Household Deposits/GNP
1978	21.06		15.49		5.57		5.87%
1979	28.10	33.43%	20.26	30.79%	7.84	40.75%	7.05%
1980	39.95	42.17%	28.25	39.44%	11.70	49.23%	8.94%
1981	52.37	31.09%	35.41	25.35%	16.96	44.96%	10.97%
1982	67.54	28.97%	44.73	26.32%	22.81	34.49%	13.01%
1983	89.25	32.14%	57.26	28.01%	31.99	40.25%	15.36%
1984	121.47	36.10%	77.66	35.63%	43.81	36.95%	17.45%
1985	162.26	33.56%	105.78	36.21%	56.48	28.92%	18.96%
1986	223.76	37.90%	147.15	39.11%	76.61	35.64%	23.08%
1987	307.33	37.35%	206.76	40.51%	100.57	31.28%	27.19%
1988	380.15	23.69%	265.92	28.61%	114.23	13.58%	27,12%
1989	514.69	35.39%	373.48	40.45%	141.21	23.62%	32.34%
1990	703.42	36.67%	519.26	39.03	184.16	30.42%	39.66%
1991	911.03	29.51%	679.09	30.78%	231.94	25.94%	45.88%

[1]Deposits held by households in the state banking system.

[2]Deposits held by households in rural credit cooperative only.

Sources: 1) Statistical Yearbook of China, 1992.

2) Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Table 7

China: Monetary Aggregates As Share of GNP

	Savings Household Deposits/GNP	Currency/GNP	M1/GNP	M2/GNP
1978	5.87%	5.91%		28.0%[P]
1979	7.05			
1980	8.94%			
1981	10.97%			
1982	13.01%			
1983	15.36%			
1984	17.45%			
1985	18.96%	11.5%	39.0%	60.8%
1986	23.08%	12.6%	43.6%	69.3%
1987	27.19%	12.9%	43.8%	73.7%
1988	27.12%	15.2%	42.5%	71.8%
1989	32.34%	14.7%	39.9%	74.7%
1990	39.77%	14.9%	43.0%	86.4%
1991	45.88%	16.0%	47.5%	97.0%

[P]preliminary estimate.

Source: Almanac of China's Finance and Banking, 1990.

Remark: (1) M1 = currency + enterprise and institution demand deposits.

(2) M2 = M1 + household savings deposits (demand and time) + enterprise and institution time deposits.

In China, household demand deposits are not checkable, but enterprise and institution demand deposits are checkable.

Table 8

China: Rural Credit Cooperative Activities (billion yuan)

	Total Deposits	Loans to Household	Loan to TVEs	Loans to Collective Agriculture	Total Loans / Total Deposits (percent)
1979	21.59	1.09	1.42	2.24	22.0%
1980	27.23	1.60	3.11	3.45	30.0%
1981	31.96	2.52	3.55	3.57	30.2%
1982	38.99	4.41	4.23	3.48	31.1%
1983	48.74	7.54	6.01	2.82	33.6%
1984	62.49	18.11	13.5	3.84	56.7%
1985	72.49	19.42	16.44	4.14	55.2%
1986	96.23	25.80	26.59	4.46	59.1%
1987	122.52	34.76	35.93	6.45	63.0%
1988	139.98	37.24	45.61	8.01	64.9%
1989	166.95	41.57	57.19	10.73	65.6%
1990	214.49	51.82	76.07	13.41	65.9%
1991	270.93	63.14	100.73	16.99	66.8%

Data: Statistical Yearbook of China, 1992.

Source: Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Table 9

China: Bank Lending to the Non-State Sector
As Proportion Total Outstanding Bank Loans

	Urban Collectives	Urban Individuals	TVEs	Agriculture	Total Non-State Loans
1985	4.95%	0.17%	5.63%	6.85%	17.60%
1986	5.11%	0.13%	6.82%	6.68%	18.94%
1987	5.47	0.16%	7.25%	7.28%	20.16%
1988	5.58%	0.17%	7.59%	7.19%	20.53%
1989	5.15%	0.11%	7.39%	7.12%	19.97%
1990	4.93%	0.09%	7.42%	7.17%	19.61%
1991	4.74%	0.08%	7.63%	7.39%	19.84%

Sources: 1) Almanac of China's Finance and Banking, 1990.

2) Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Table 10

China: Selected Interest Rates, 1980-1991
(percent per year)

		Nominal Interest Rates				Real Interest Rates	
	National Retail Price Index (% change)	Household 1-year Time Deposit	Household 3-year Time Deposit	Loan to Industry	Loan to Township -Village Ent'prise	Household 1-year Time Deposit	Household 3-year Time Deposit
1980	6.0	5.4	6.12	2.52	2.16	-0.60	0.12
1981	2.4	5.4	6.12	2.52	2.16	3.00	3.72
1982	1.9	5.76	6.84	3.6	4.32	3.86	4.94
1983	1.5	5.76	6.84	7.2	4.32	4.26	5.34
1984	2.8	5.76	6.84	7.2	7.92	2.96	4.04
1985	8.8	7.2	8.28	7.92	10.08	-1.60	-0.52
1986	6.0	7.7	8.28	7.92	10.08	1.70	2.28
1987	7.3	7.2	8.28	7.92	10.08	-0.10	-0.98
1988	18.5	8.64	*9.72	9.00	10.08	-9.86	*-8.78
1989	17.8	11.34	*13.14	11.34	11.34	-6.46	*-4.66
1990	2.1	8.64	10.08	9.36	9.36	6.54	7.98
1991	2.9	7.56	8.28	8.64	8.46	4.66	5.38

Sources: 1) Statistical Yearbook of China, 1992 and Almanac of China's Finance and Banking, 1990, 1992.

2) Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Remark: *Cost of living adjustment allowance not included. See Table 11.

Year-end figures.
Loan to industry is for circulation capital (one year).
Loan to Township-Village enterprises is for equipment.

Table 11

China: Deposit Interest Rates with Cost of Living Adjustment Allowance
1988:IV-1991:IV

	Household 3-year Time Deposit (nominal)	Annual Rate of Cost of Living Adjustment Allowance	Effective Household 3-year Time Deposit (nominal)
1988:IV	9.72%	7.28%	17.00%
1989:I	13.14%	12.71%	25.85%
1989:II	13.14%	12.59%	25.73%
1989:III	13.14%	13.64%	26.78%
1989:IV	13.14%	8.36%	21.50%
1990:1	13.14%	0.89%	14.03%
1990:2	13.14%	1.46%	14.60%
1990:3	13.14%	0%	13.14%
1990:4	13.14%	1.42%	14.56%
1990:5	13.14%	1.38%	14.52%
1990:6	13.14%	0%	13.14%
1990:III	10.08%	0%	10.08%
1990:IV	10.08%	0%	10.08%

Sources: 1) Almanac of China's Finance and Banking, 1990.

2) Yingyi Qian, "Lessons and Relevance of the Japanese Main Bank System for Financial Reform in China", Stanford, March 1993.

Table 12

ALTERNATIVE FINANCIAL ARRANGEMENTS FOR ENTERPRISES IN A MODEL TRANSITIONAL ECONOMY

	Traditional[1] Enterprises ("state" sector)	Liberalized Enterprises ("nonstate" sector)	
		Collective[2]	Private
Taxation	Expropriation of surpluses[5]	Uniform value-added tax	Uniform value-added tax
Deposit Money: Domestic Commodity Convertibly[3]	Restricted	Unrestricted interest-bearing	Unrestricted interest-bearing
Credit Eligibility	State Bank	Nonbank capital market	Nonbank capital market
Wages	Government determined	Collectively determined	Market determined
Residual Profits	Accrue to government	Dividends to collective -retained earnings for reinvestment	Dividends to owners[4] -retained earning for reinvestment or lending to other private enterprises
Foreign Exchange Convertibility	Restricted	Current account only (swap market)	Current account only (swap market)
Producer Prices	Pegged with intramarginal delivery quotas[6]	Market determined	Market determined

Notes:

[1]"Traditional" enterprises are those whose output and pricing decisions are still largely determined by a central government authority or planning bureau with centrally allocated inputs and credits from the state bank to cover (possible) negative cash flows. In China, traditional enterprises would be in the so-called "state" sector, while new entities outside these traditional controls would be in the "nonstate" sector.

[2]"Collective" can refer to any level of government ownership or sponsorship as with Chinese TVEs -- township and village enterprises. For example, the VAT administered by the central government would apply equally to liberalized enterprises owned or registered in different local jurisdictions.

[3]"Commodity convertibility" here means the freedom to spend for domestic goods and services or to buy and hold domestic coin and currency--but need not imply convertibility into foreign exchange.

[4]Dividends would be subject to the personal income tax when paid out to private owners, but retained earnings would not be taxed.

[5]Although residual profits revert to the state, they could include a "shadow" VAT levy in order to better understand the "true" profitability of traditional enterprises.

[6]After satisfying delivery commitments to other traditional enterprises, marginal output can be sold at free-market prices.

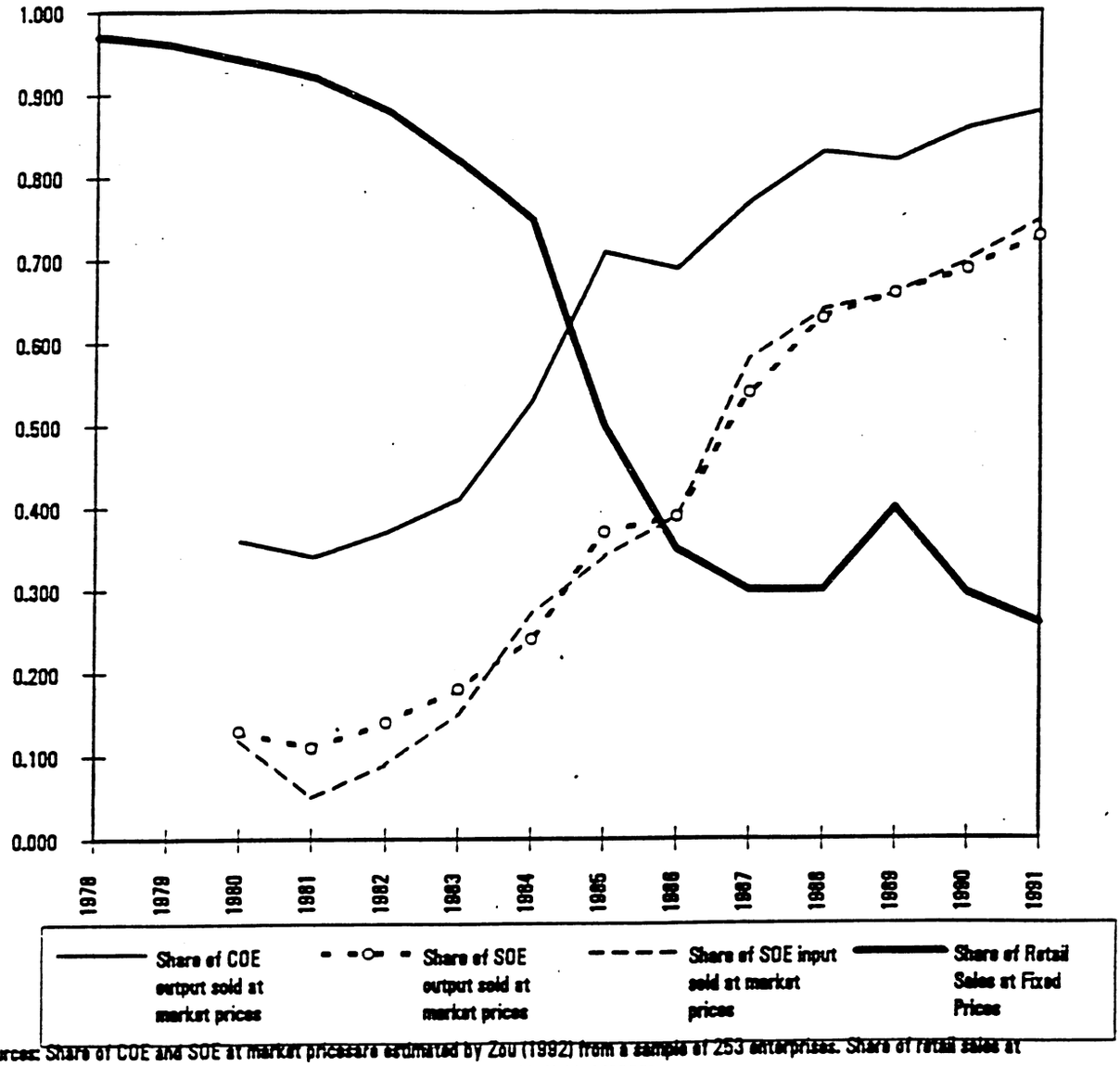
Table 13

Key Russian Inflation Indicators, 1985-June 1992
(Annual change in percent)

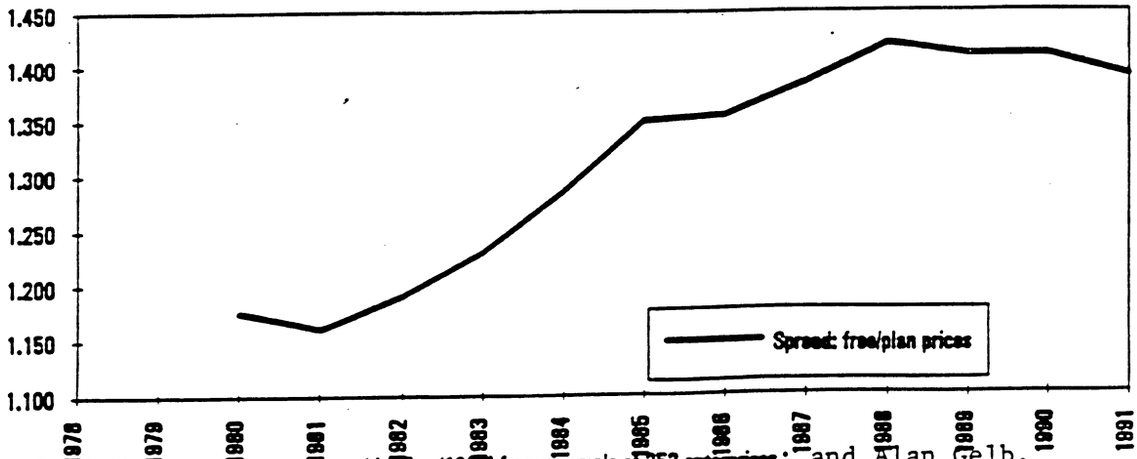
	1985	1986	1987	1988	1989	1990	1991	Jan-June 1992/ Jan-June 1991	June 1992/ Dec. 1991
Wholesale Industrial prices	--	--	--	--	1.2	3.9	138.1	1360	1850
Consolidated retail prices	.6	2.2	1.7	.3	2.5	5.6	95.0	730	620
Food (exclusing alcohol)	.1	.6	2.1	.4	.7	4.9	118.7		
Alcoholic beverages	6.2	24.7	15.4	.0	.0	1.9	26.6	780	600
Nonfood products	-.9	-.9	-1.1	.0	3.1	6.5	100.7		
Prices for paid services	--	--	--	--	--	--	70.6	480	510
Retail prices in:									
State and cooperative trade	.5	2.2	1.6	.2	2.4	5.2	89.5	790	660
Cooperative trade	1.2	3.4	2.4	.6	.5	14.1	111.7		
Collective Farms	5.2	1.1	3.7	2.5	7.4	132.1	132.1		
Nominal wages							71.6		397
Commercial Exchange Rate									3290

Source: Russian Goskomstat and Plan Econ Report, Sept. 3, 1992

Figure 1
Price and Market Reform
(China)



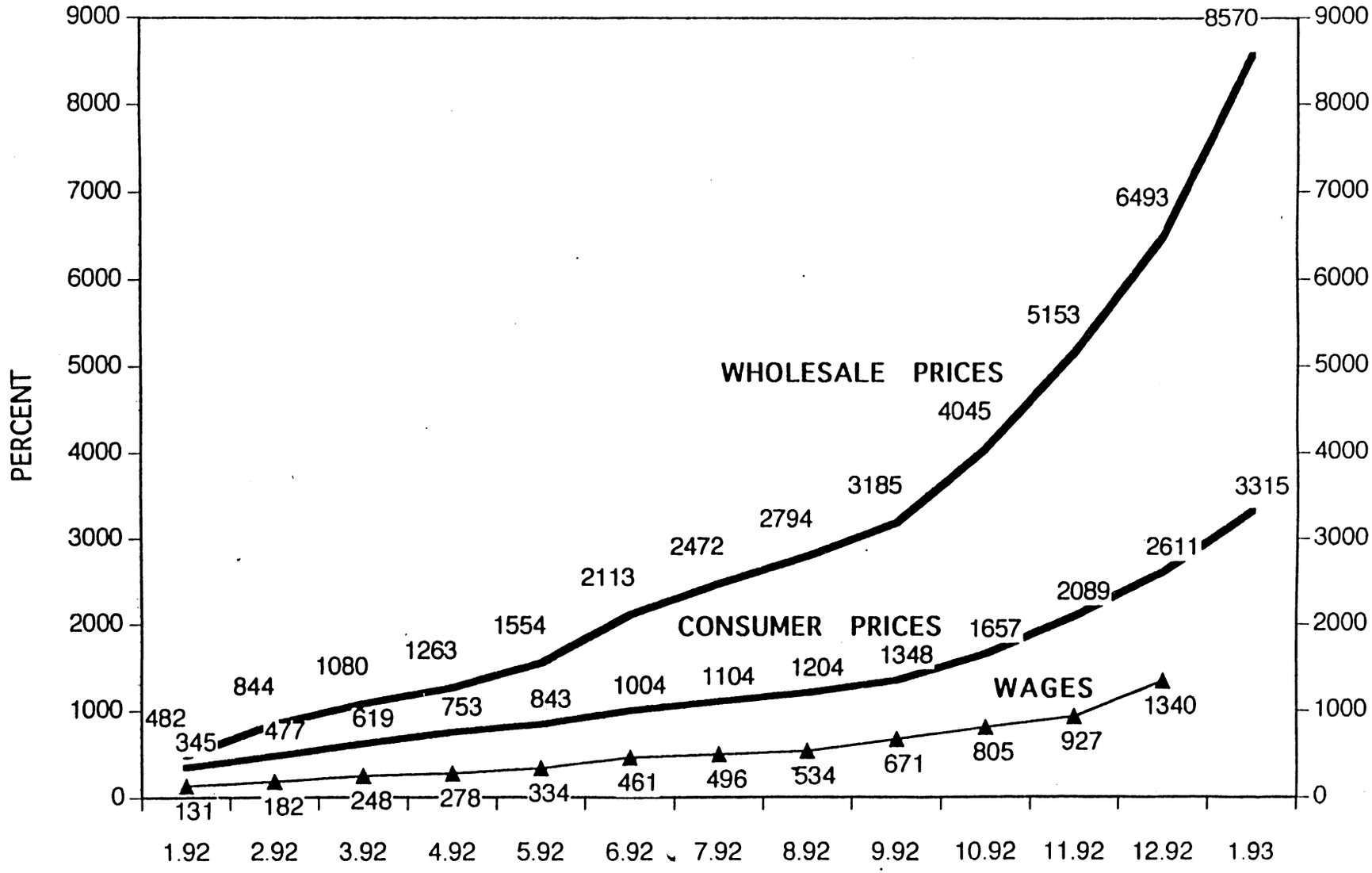
Sources: Share of COE and SOE at market prices are estimated by Zou (1992) from a sample of 253 enterprises. Share of retail sales at fixed prices from Schmidt-Hebbel (1992)



Source: Spread of free/plan prices are estimated by Zou (1992) from a sample of 253 enterprises; and Alan Gelb, Gary Jefferson, and Inderjit Singh, "Can Communist Economies Transform Incrementally? The Experience of China", World Bank, Feb. 1993.

Figure 2

WAGE AND WHOLESALE AND CONSUMER PRICE INDEXES, IN PERCENT (DECEMBER 1991 = 100%), RUSSIA, JANUARY 1992-JANUARY 1993



Collated by Mikhail Berntam, Stanford University.

Sources: Russian State Committee on Statistics data requested by the Office of Deputy Prime-Minister G.S. Khizha.

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