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Economic reform in Czechoslovakia: should we believe in Santa Klaus?

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1. Introduction

Among the countries of Eastern Europe, Czechoslovakia is set apart by its prosperity during the interwar period as a successful market economy on a par with many in Western Europe. Liberal at home, externally open, it established a tradition of macroeconomic prudence which, uniquely, survived the command economy. Will Czechoslovakia regain its preeminence in Eastern Europe?

Given its interwar prosperity, its living standards remain the best in Eastern Europe, but performance since 1960 has been dismal. After the Prague Spring, stamped out by Russian tanks in 1968, the command economy was reinforced. The velvet revolution of 1989 and the subsequent political reality must be viewed in this light. Democratic debate had to be reaffirmed, causing legislative delay; and tolerable living standards may handicap radical reform; unlike Poland, Czechoslovakia has something to lose.

I set out the principles that should guide reform, and mark Czechoslovakia's card, highlighting successes and areas where policy can be improved. Section 2 provides historical background. Section 3 discusses reform design, Section 4 corporate control and privatization; Section 5 the restructuring required, market incentives and market failures, and the consequent role for government. Section 6 discusses the macroeconomic framework. Section 7 summarizes and offers recommendations.

I am grateful to CEPR and the UK Knowhow Fund for financing my time in the CSFR. Special thanks to Stuart Laing and the UK Embassy staff. I thank the ministers and officials in Bratislava and Prague who gave so freely of their time. Joshua Charup, Karel Dyba and Jan Klacek provided invaluable assistance in securing data. I have been saved from error by Michael Burda, Stanley Fischer, Vittorio Grilli, Richard Portes, Paul Seabright and Charles Wyplosz, and I thank my discussants and the Economic Policy Panel for stimulating further thought. More than usually, I absolve all the above from the views expressed.

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Czechoslovakia

David Begg

Summary

Between the wars Czechoslovakia was a prosperous market economy. Important legacies remain, but 40 years of planning have caused severe distortions. Can Czechoslovakia again become the jewel in the crown of Eastern Europe? Reforms began later than in Hungary and Poland, but are now proceeding apace. Traditional sequencing of reforms is unwise: micro reforms deserve greater priority and themselves affect macro credibility. Monetary and fiscal policies are intended to be tight, but worries remain: wage indexation, a fuzzy exchange rate commitment and rising unemployment.

Enterprise reform divides into better internal and external incentives. Privatization will be impeded by restoration of property to former owners, and in any case is insufficient: problems of corporate control will remain; and inadequate attention is being given to incentives for state-owned enterprises. Better external incentives require more foreign competition (still limited); tougher domestic competition policy (still inadequate); attention to banks and credit (where bankruptcy is hard to enforce, and balance sheets should be restructured); and a temporary wage subsidy. Activities with negative value added at world prices should cease; other activities would be more efficiently supplied through imports. I discuss the principles governing the pace of intelligent restructuring and assess the prospects for its success in Czechoslovakia.

Table 1. Illiteracy (%) in the early 1930s

Czechoslovakia	4	Bulgaria	31	France	6
Hungary	9	Rumania	60	Italy	22
Poland	23	Yugoslavia	86	Spain	46

Source: Kaser and Radice (1985).

Table 2. Living standards, employment structure and openness, interwar period

	Net income/head (US $)			Male labour force (%):			Openness (%)	Tariffs (%)
	All Econ.	Ind.	Agric.	Agric.	Ind.	Services		
Czechoslovakia	176	450	200	35	35	30	39	31
Bulgaria	68	300	110	73	11	16	22	68
Rumania	70	290	80	73	9	18	24	42
Yugoslavia	81	200	100	77	11	12	21	32
Poland	104	400	100	61	19	20	18	54
Hungary	112	340	150	52	23	25	32	30
France	236	580	280				39	23
Germany	337	790	290				27	20
NW Europe				22	44	34		

Sources: Kaser and Radice (1985); Teichova (1988).
Notes: Data on per capita income and employment for 1937-38; openness is the average of imports & exports as % of GDP in 1929; tariff data for 1927.

2. The baseline for reform: a brief history of Czechoslovakia

Czechoslovakia was created in 1918. The Czechs had been the industrial heartland of the Austrian Empire; Slovakia, formerly Upper Hungary, was rural and poor.

2.1. The interwar years: the legacy of a free market economy

From the outset, Czechoslovakia had an educated workforce, industrial success underpinned by a well-developed legal and commercial framework and extensive international trade. Table 1 shows illiteracy was low even by Western European standards. Table 2 documents higher productivity, a more modern structure and greater openness than elsewhere in Eastern Europe (less from low tariffs than because industrial specialization had already occurred). Inward investment was welcome: by 1937 27% of the capital stock was foreign owned (chiefly by the UK, France and Austria; Teichova, 1988). A liberal private economy was matched by government prudence. Austere monetary policy prevented the high postwar inflation which broke out in neighbouring Germany, Hungary and Poland; prices fell 50% during

1920–38 in a sustained deflation (Mitchell, 1975). Sovereign foreign debt in 1932 was only $14 a head (c.f. Poland $27, Rumania $35 and Hungary $95). The interwar episode ended in 1938 at Munich when Czechoslovakia was abandoned to Hitler.

2.2. The planned economy: 1945–89

After 1945 there were significant changes in population. The Carpatho-Ukraine was ceded to the USSR, and the Sudeten Germans were forcibly repatriated (a major loss of entrepreneurial and human capital). The 1945 government, a broad coalition, aimed to create a Soviet-style economy. By 1947 big business was nationalized and 80% of industrial employment provided through the state; only firms with less than 500 employees escaped. By 1948 large estates had also been expropriated: the limit for private ownership of land was 50 hectares.

In 1948 the communists took power. Nationalization was extended to firms with over 20 employees, and to wholesale and foreign trade. In 1953 currency reform wiped out private savings. Agricultural land use was in state control, through cooperatives or state farms, but often left ownership itself in private hands.[1] Together, these measures extended state control beyond the level elsewhere in Eastern Europe,[2] establishing a command economy with temporary liberalization only during the events of 1966–68. In the 1950s, real growth was over 6% a year. Growth continued in the 1960s, slowed in the 1970s, and, properly measured, was probably negative in the 1980s. Some problems were structural: machinery exports fell after postwar reconstruction, and the world arms market collapsed in the 1980s. But many problems reflected the inefficiency of central planning.

Prices were hugely distorted. Energy usage per unit of output was three times that in Western Europe. In market economies, cows graze on plains, pigs on hills. A series of crazy subsidy decisions led to a landscape of plaindwelling pigs and hillside cattle.[3] New investment was targeted to underdeveloped Slovakia, force fed a diet of heavy industry in giant factories, many unlikely to survive market competition. By promoting industry, especially at the expense of services, such economies are too industrialized. Table 3 shows that in 1930 Czechoslovakia and France had similar structures. A market economy will

[1] Some personal ownership of housing remains, and many citizens can produce the original legal title to their land. As one Minister observed, 'The Third Reich, supposed to last a thousand years, was gone in ten. We knew Communism wouldn't be forever.'

[2] Milanovic (1989) estimates the share of industrial and commercial output in state control in the late 1980s as: Czechoslovakia 97%, GDR 96%, Poland 82%, Hungary 66%.

[3] I thank Richard Bartak, Czech Minister for Agriculture, for the example

Table 3. Employment by sector (%)

	Czechoslovakia		France		OECD		Poland	
	1930	1988	1930	1988	1930	1988	1930	1988
Agriculture	37	11	36	7	—	3	66	29
Industry	37	46	33	30	—	33	17	36
Services	26	43	31	63	—	64	17	35

Source: Mitchell (1975), World Bank (1990).

Table 4. Per capita dollar GNP as % of that in Austria

	1937	1960	1980
Czechoslovakia	90	91	70
Hungary	63	56	52
Poland	53	54	45

Source: Ehrlich (1987).
Note: Dr Jan Klacek of the Academy of Sciences, Prague estimates that by 1990 Czechoslovakia had fallen to 60% of Austria. All such comparisons depend on specific assumptions about the value of GNP and the relevant exchange rate.

Table 5. Distribution of household income (%) in the late 1980s

Households	Czechoslovakia	Hungary	Poland	Sweden	Finland	France	UK
Poorest 20%	11.4	10.9	9.7	8.0	6.3	6.8	5.8
Richest 20%	32.7	32.4	35.5	36.9	37.6	40.8	39.5

Source: World Bank, *World Development Report 1990*, Hrncir and Klacek (1991).
Note: In 1987 average hourly wages were 19.4 crowns/hour. Coal miners, the highest paid, got 31.1 cr/hr; lowest paid textile workers only 15.5 cr/hr (Burda, 1991).

mean more service employment: in Poland much will come from agriculture, in Czechoslovakia it must come primarily from industry. In 1938 Eastern Europe's most industrialized economy was also its most prosperous. Central planning promoted industry with opposite results. Table 4 shows that after 1960 Czechoslovakia fell rapidly behind Austria and was being overhauled by Poland and Hungary. Planning also led to even greater equality in Czechoslovakia than elsewhere (Table 5).

Table 6. External debt in 1989

	Czechoslovakia	Poland	Hungary
US $ bn.	5.8	36.5	19.5
$000 per head	0.4	0.9	1.8
Debt/export ratio	0.5	4.6	3.4

Source: UN,ECE (1990).

Table 7. Macroeconomic indicators for Czechoslovakia (annual averages)

	Annual growth of: (%)				
	CPI	M1	Real wage	Productivity	Budget deficit (% of GDP)
1980–84	3.6	5.8	0.9	1.5	0.4
1985-89	2.6	4.7			0.9

Source: Dyba and Svejnar (1991), World Bank (1990).
Notes: Inflation estimated by Plan Econ, about twice official estimates; hidden inflation is acknowledged by the authorities. World Bank (1990) gives budget deficit as % of Net Material Product. NMP excludes 'unproductive services' like education, health and personal transport. NMP is estimated as 85% of GDP. Data on labour productivity is for 1980–88 (World Bank, 1990).

Reforms must correct past mistakes, at a time when the economy is subject to other adverse shocks. First, the collapse of the CMEA hit Czechoslovakian trade particularly hard. Second, it is a major importer of energy from the USSR, which from 1991 must be bought at world prices: the increase in the import bill will be at least 4% of GDP (World Bank, 1990). Arms exports had also accumulated vast credits with Iraq which in July 1990 were exchanged for two years of free oil. The Gulf War was a disaster for Czechoslovakia. The double squeeze on the terms of trade, and the inflationary danger after energy price rises, are unhelpful during the fragile initial stage of reform.

However poor the supply-side performance, its demand policies have been uniquely prudent in Eastern Europe: Czechoslovakia is the only major country without large external debt (Table 6), and both fiscal and monetary policy have been tight (Table 7). Unlike Poland or Hungary, it begins without rampant inflation. In Jeff Frankel's vivid phrase, it never lost its monetary virginity (Mejstrik, 1991). The role of macro policy during reform is simply to continue tight policy and maintain credibility when severe adjustments are taking place. Even that may be no easy task.

2.3. The velvet revolution

In 1989 the communists were ousted. The Socialist Republic (CSSR) became the Federal Republic (CSFR). Elections in June 1990 confirmed the new guard in office, for two years. President Havel saw his role as national conciliator. In practice and in the public perception, the spearhead in forcing the pace of reform is Finance Minister Klaus. Much of 1990 was devoted to talking: long debates affirmed new democratic rights. The Parliamentary bottleneck was exacerbated by two factors. Legislative authority was lacking: Civic Forum and Public Against Violence were not parties but broad movements; their MPs felt free to oppose cabinet proposals. There was no guillotine on discussion. Attempts to force laws through aroused memories of communism; and the federal structure meant that federal laws had then to be ratified by the Czech and Slovak republics often responsible for implementing policy. The CSFR remains an uneasy union of these two republics. New elections in 1992 constrain the ability of those in office today to commit to tough policies.

2.4. How big is the monetary overhang?

By May 1990 a reform programme had been agreed. The rest of 1990 was devoted to passing enabling laws and securing international credit and external approval. In autumn 1990 food prices rose by 20%: subsidies for food and agriculture, 5% of GDP in 1989, were reduced but compensated by a lump-sum subsidy to households, achieving greater efficiency without any adverse income effect. The exchange rate was devalued from 15 to 17 crowns/$ in January 1990, from 17 to 24 in October (when the black market rate was 28) and from 24 to 28 crowns/$ at the end of December.

Tight macro policy and wage growth matching productivity (Table 7) suggest that forced savings were lower than in Poland or the USSR; Czechoslovakia was always less of a shortage economy. Moreover, household saving, usually about 3% of household income, was zero in 1990. Foreseeing inflation, households stocked up on durables. Such aggregate behaviour is impossible in a shortage economy. Delay in reform led also to a 'run for imports': anticipating devaluations, firms built up stocks via imports financed out of bank deposits, which fell by 25% during 1990 (Hrncir and Klacek, 1991). Since external debt was low, allowing demand to spill into imports was probably sensible, even if unplanned by the government. Forced saving, never that large, was substantially unwound in 1990.

3. The sequencing of reform: some broad issues

Complete reform cannot be undertaken in one step. Some sequencing is inevitable. Unwise sequencing may jeopardize the whole programme; and after one failure a second attempt is inevitably harder. The usual prescription is as follows. First, put macro on a sound footing: eliminate structural problems, end the budget deficit, establish fiscal credibility. Second, provide nominal anchors through a nominal exchange rate target backed up by tight credit, a temporary freeze on prices and wages and the end of indexation. Third, make efforts on the supply side: more competition, less protection, current account convertibility, a smaller public sector. Then liberalize prices and wages; later still, allow capital account convertibility.

Poland, Hungary and Yugoslavia had to arrest inflation; but, like China, Czechoslovakia did not face this problem. Command economies have far greater micro problems than the LDCs upon whose experience we base the conventional wisdom about sequencing. Macro orthodoxy alone is no solution. Abject supply-side failure is the central issue, and failure of supply-side reform jeopardizes the credibility of macro policy. Second, commitment to markets themselves must be established. Price liberalization must be undertaken but, since domestic monopoly is extensive, convertibility (at a realistic exchange rate) must come early to establish an appropriate relative price structure; and, being easily monitored, not least by external creditors, convertibility is expensive politically to reverse (Portes, 1991). Finally, the institutions of the mixed economy must themselves be established. Modern markets depend on contracts and hence on law. Yet this legal framework is absent. There are few laws of property, of corporate identity and hence of bankruptcy; nor is there experience in their implementation and enforcement.

Government commitment to break with the past is insufficient: implementation of policy – subsidy decisions, credit enforcement, regulation – is necessarily delegated a long way down the line, where there is a legacy of past state involvement with incumbent enterprises aptly called 'tutelage' (Hare, 1990). Even in the west, such problems are not easily solved: junior officials in banks and government departments often throw good money after bad rather than admit an initial error; and regulatory capture is an abiding problem. In reforming command economies, such problems are acute. Rudimentary or overcomplex tax systems, infant or absent financial markets and an untried safety net are all preconditions for the smooth operation of conventional macro policy.

Corporate control is another big problem. State-owned enterprises (SOEs) had been on a tight rein. Yet privatization takes time, and real

shareholder control even longer; government monitoring of SOEs is very imperfect; bank regulation of credit presupposes banks have the required incentives and skills; trade credit is a massive 'loophole of last resort'. Enterprises and banks themselves are run by 'agents without principals'. This phase can be disastrous.[4]

Enterprises also face incorrect market incentives: price distortions are severe. Profitability may be a poor guide to efficient restructuring. The financial structure of SOEs is also perverse. In a market economy, enterprise debts contain information about past and future performance. In command economies, where prices are meaningless and production targets arbitrary, debts contain little such information. Monetary austerity may be a random approach to restructuring.

Many markets remain to be developed. Those which seem to exist may function ineffectively. For example, individual apartments have no physical means to regulate heat use independently of the rest of the building, let alone meter separate usage. Freeing prices makes sense only if agents can respond to prices. Similarly, the threat of bankruptcy to discipline wages can work only if firms care about profits. Without corporate control, or in the endgame where mangers and workers collude to strip rents then assets from a doomed enterprise, orthodox macro policies may be counterproductive: by raising the prospect that enterprises are doomed, they increase incentives for wage rises and disinvestment.

The role of macro policy is not to get in the way of micro reform by allowing a raging inflation to develop, nor to induce sufficient austerity that the reforms collapse. I discuss the appropriate macro policy in Section 6. But low inflation and low unemployment will not be the litmus test of Czechoslovakia's success: it already had both! Its prospects will depend on supply-side reforms. Accordingly, Section 4 discusses corporate and government control, and Section 5 examines the appropriate incentives for product, labour and credit markets.

3.1. Efficiency, equity and foreign participation

Income differentials and inequality will increase. How much equality must be sacrificed to obtain adequate efficiency? There is no unique model of the market economy. The debate on corporatism (e.g. Bruno and Sachs, 1985; Calmfors and Driffill, 1988) suggests that performance is best when the economy is very decentralized, as in the US, or very

[4] See Hussain and Stern (1990) on China. Sachs (1991) argues 'market socialism' fails everywhere and always, as does Vaclav Klaus: 'The Third Way (market socialism) is the way to the living standards of the Third World.'

centralized, as in corporatist Sweden and Austria. The latter have a more equal income distribution, and are a more natural reference group for the CSFR, given its history and values. Thus it may be possible to avoid extreme inequality without sacrificing efficiency.

There is also an external dimension to the equity-efficiency tradeoff: the timing and extent of foreign investment. Rapid foreign participation alleviates problems of external finance and injects scarce business expertise. But, even in London, firms about to be privatized required careful prior massaging: debt writeoffs and commitment to relatively light regulation. Without these, perceived risk would slash revenue from asset sales.

Two reasons might make it preferable to limit initial foreign participation. The first is if the government has inside information about its own determination to stick out reforms (an adverse selection argument). The second is if the market perceives any significant moral hazard problem, for example if access to substantial foreign funds will then impair the commitment to reform. In either case, the government would view the market's required risk premium as unreasonably high. It would then be wrong to sell off assets too quickly to foreigners.[5]

4. Corporate control, precommitment and privatization

The aim is to privatize about half of the 4,500 SOEs and facilitate the creation of many new private businesses. Even so, a large state sector will remain, and must be controlled. Before examining the CSFR strategy to reestablish corporate control, I discuss the principles which should govern the pace of restructuring.

4.1. Privatization, precommitment and the pace of restructuring

A few key principles will take us a long way. Consider a country that can lend and borrow at the going world interest rate. In the textbook, optimal policy is simple: compute the optimal rate of capital accumulation when firms can borrow at world interest rates, and smooth consumption over time (through imports and foreign borrowing), such that the present value of consumption equals the present value of future output less any initial foreign debt commitments.

Nobody views the problems of Eastern Europe this way, except perhaps in Eastern Germany. Other countries face severe international

[5] In some circumstances, foreign involvement may help precommit the government to persist with reform; early foreign involvement is then doubly valuable.

borrowing constraints, not least because of moral hazard and adverse selection. The first inevitable aspect of reform design is the extent to which a country, in the absence of foreign borrowing opportunities, can smooth its own output and consumption over time. This provides an incentive to restructure slowly, avoiding the massive indigestion currently being experienced in Eastern Germany.

A tradeoff arises because slow restructuring itself carries dangers. With inadequate corporate control, workers in SOEs deplete the capital stock too quickly, living off past capital; and the government may be unable to precommit to slow closure of SOEs: demands for further subsidies prove irresistible. The old sector never shrinks and the new sector never gets going, the Soviet scenario. Irreversible privatization is a useful precommitment. It improves corporate control and dilutes the incentive to subsidize indefinitely. Can it allow the government to attain the path of slow restructuring it would find optimal if only it had the ideal precommitment?

In the Appendix, I show formally that the choice between big bang (rapid privatization) and slow restructuring depends upon the relative productivity of newly created firms and SOEs, and on the costs of adjustment. Slow restructuring is the ideal policy if productivity disparities are small but adjustment costs large. Yet the government may find it impossible to resist demands for subsidies in perpetuity. Much more rapid privatization is then desirable, even at the cost of more severe initial disruption.

Other policies may reduce the incentive to subsidize, allowing a more gradual transition. In general, subsidies create private demand, some of which falls on imports. If, as is evident, countries face an increasing marginal cost of foreign borrowing, the larger the initial foreign debt, the lower the temptation to yield to subsidy demands. Thus in Hungary, which emphasizes its determination to repay foreign loans, foreign debt may justify lower restructuring. In contrast, in Poland, which has obtained debt relief and is keen for more, external debt is no constraint on the temptation to subsidize. Rapid restructuring is then the best policy. Such considerations imply that the CSFR, without any substantial foreign debt, must restructure rapidly. In particular this requires mass privatization within a short (though not instant) timescale.

4.2. The Czechoslovakian strategy for establishing corporate control

The strategy rests on mass privatization and measures to allow thousands of private businesses to start from scratch; an appropriately rapid transition. A vast body of enabling legislation was needed to provide a suitable business framework. Progress was slow during the first nine

months of 1990, squandering the initial public goodwill towards reform. Since then legislation has been enacted at an impressive pace. The Law on Joint Stock Enterprises gave firms a legal identity. The government became the shareholder in SOEs, a necessary prelude to privatization and the basis for appointment of Boards of Directors and approval of their salaries, a control mechanism of which immediate advantage should be taken. The Law on Creation of Private Firms enabled the creation of private businesses. Until an equity market exists, there will be partnerships or sole traders.

Privatization will distinguish small and large enterprises. The former, small retail outlets and craft workshops, will be auctioned directly for cash; the latter will be privatized through a complex voucher scheme. The Law on Small Privatizations was passed in October 1990, and auctions began in Prague in late January 1991. 50,000 small businesses may be auctioned during 1991. The Law on Large Privatizations and the Law on Restitution were passed in February 1991, the Law on Bankruptcy will not be passed until the summer.

4.3. Small scale privatizations

Auctions, conducted by local committees, may be for outright purchase or a two-year lease. Bidding, initially confined to citizens, starts at a level valuing the assets at official prices. Any enterprise failing to fetch this price is sold with a lower opening price in a new auction to which foreigners are admitted. Table 8 gives details of the first auction in Prague. On average businesses fetched 10 times their reservation price, *prima facie* evidence of the distortion in official prices for land and physical capital, though the first auction was obviously designed to contain many of the best bargains. The auction also provided evidence on the problem of restitution. Four of the 20 businesses originally scheduled for auction had to be withdrawn because restitution claims had been lodged.

4.4. Restitution and how to minimize its damage

Poland and Hungary tried to avoid restitution; even there the issue has emerged. As in East Germany, the CSFR made an early commitment to restore property, even to heirs of original owners. I see no moral case for restitution. Previous owners did lose out, from nationalization without compensation or from 'forced gifts' to the state when unable to meet penal tax liabilities. But others lost out too: forty years of planning have left Czechoslovakia vastly poorer than Austria with whom it used to be on a par. Volunteering to create inequality arbitrarily by

Table 8. The first auction of small enterprises (January 1991)

No	Business	Annual turnover (000 crowns)	Property size (m^2)	Price (000 crowns) Opening	Final
1	Fruit and vegetables	1,458	140	11	580
2	Fruit and vegetables	550	96	5	340
3	Fruit and vegetables	2,572	166	35	620
4	Fruit and vegetables	1,090	96	29	460
5	Crafts/workshops	2,160	114	454	900
6	Crafts/workshops	8,000	829	892	1,650
7	Textiles	3,120	103	21	1,650
8	Textiles	18,180	249	100	2,500
9	Textiles	4,670	162	32	3,250
10	Textiles	2,930	62	24	1,710
11	Other	8,157	79	129	3,560
12	Other	5,071	359	47	170
13	Other	8,317	477	128	3,180
14	Other	1,800	86	32	500
15	Other	5,570	429	124	1,000
16	Other	1,000	62	25	1,710
			Total	2,104	22,020

Source: Ministry of Privatization of the Czech Republic.

restitution is unwise. Nevertheless, the commitment has been given. What will it mean?

Assets nationalized before 1948 will be ineligible for restitution. Section 2 showed that large enterprises and estates had already been nationalized by 1948; restitution can apply only to firms that then had less than 500 employees. But firms have grown, often with state assistance. Adjudicating claims faces the further problem of determining how much of improvement since 1948 should be attributed to the state. There will be six months to lodge claims after the passage of the Privatization Laws. Adjudication may take years. Whether a nightmare scenario arises depends on whether compensation is in kind or in paper. Paper compensation – money, bonds or dispersed ownership of privatized enterprises – need not be a problem; the threat that future control could revert to an original owner will impede privatization. The Restitution Law fudges the issue. Some compensation will be in paper but in other cases control of the enterprise will revert to its former owner. The decision, delegated to local committees, will depend on how close the enterprise is to its original condition. Why was the commitment to restitution not confined to paper compensation? Part of the answer may lie in Table 8. Compensation in paper is likely to reflect valuation at official asset prices which may greatly understate the value of the assets,

a relevant consideration when many MPs are, or represent, prospective claimants. A commitment that any paper compensation will be at realistic valuations, for example by indexing to a unit trust whose market value will eventually become clear, would be helpful.

4.5. Large privatizations

About 2,000 SOEs may be involved, depending on how many monopolies are first broken up. Poland and Hungary initially adopted UK-style privatization: careful *ex ante* valuation of individual firms then sold at close to market value; an impossibly slow process within the horizon of credible reform. Poland is now moving towards 'mass privatization', selling firms at well below their market value to minimize valuation difficulties and ensure demand. The CSFR, a late entrant to reform, by moving immediately to mass privatization has made up ground. With sound government finances, it had less need to raise revenue. Unlike Budapest, it had yet to establish an equity market. And it learned from mistakes in Poland.

Enterprises will submit, for approval by ministries and parliament, a privatization plan setting out corporate strategy, basic information available to bidders. Enterprises will then be privatized in batches. The Walrasian auctioneer will live in a Prague computer. Officials and their western advisers will make a cursory valuation of each enterprise, fixing an endowment of (equally valued) shares. Share quantities signal the implicit official valuation of enterprises. 40–80% of shares in an enterprise will be privatized in the first stage.

Newspapers will carry basic information on a firm's history and prospects. Each adult citizen may participate. The entry fee, yet to be set, will be between 500 and 2,000 crowns a person. In exchange, each citizen will get vouchers worth 1,000 points. To concentrate shareholding, the minimum bid for any enterprise will be 100 points, the maximum 1,000. Alternatively, bids can be for 'cocktails' or 'investment privatization funds'. The former are baskets of shares (e.g. Bohemian glass producers), a way of getting rid of duds in among the good enterprises, rather as wholesalers offer a bundle of diamonds on a take it or leave it basis. The latter are unit trusts which banks or anyone else may set up.

In deciding how many shares to create and supply, the government will try to match supply with demand. If they are equal *ex post,* contracts will bind. If not, bets are off. A bidder may find some bids confirmed, other unsuccessful bids returned as 'unused voucher points'. Excess supplies and demands will become public knowledge, and further rounds of bidding will occur. The government will adjust the supply

of shares to try to clear the market at the second attempt, and announce revisions to supply. However there is no guarantee bids will be as before: in beauty contests, the opinion of others is useful information. If necessary the law provides for 15 (!) rounds of bidding. Privatization Minister Dusan Triska has staked his reputation on getting the job done in three rounds. The process is cumbersome. The only object of multiple rounds is to provide more information *ex post* and thus change risks *ex ante*. It would be more appealing to limit the bidding to two rounds. The first would reveal inside information; in the second the governmennt could vary supply to match demand, letting the market not officials be the main determinant of valuation.

The scheme has been continuously revised. Originally, vouchers were to be illiquid for a period and foreigners excluded (except for joint ventures, see Section 4.6). Current plans envisage privatization of 10% of all SOEs by direct sale to anyone making an attractive offer. Immediate resale of vouchers, even to foreigners, may be allowed. I now evaluate how well privatization will meet its objectives: a rapid transfer of ownership to improve corporate control and prevent openended subsidies; exclusion of foreigners until uncertainty is reduced, and assets can be sold at a fair price; and prevention of dramatic inequality.

Some foreign participation will now occur, acceptable if it is not extensive. Preservation of equality of wealth is less likely. Cost and complexity will inhibit takeup – Minister Triska guesses that of 10 mn. eligible adults maybe 2–5 mn. will participate – and it will be asymmetric: the old, the rural and the uninformed (inevitably the poor) will lose out. For a given takeup, individuals will have different valuation skills and information, the best argument for allowing the auction to go at least to a second round. Finally, equal *ex ante* prospects will still randomly create rich and poor *ex post.*

Unit trusts are valuable. A sensible portfolio is a diversified portfolio. Spreading risks minimizes the random creation of rich and poor. Unit trusts also help solve a second problem, whether privatization will make any difference to corporate control. If ownership remains diffuse, shareholder power will be small. Nor can ownership easily be concentrated until a secondary equity market is established. Even then, uncertainty will make arms-length shareholders ineffective corporate watchdogs. Unit trust managers are more likely to have the relevant expertise, to learn by doing in the repeated games which follow, and to concentrate the exercise of shareholder power.

Much of the western literature on corporate control (e.g. Franks and Mayer, 1990; Summers and Shleifer, 1988) argues that the Anglo-American system of active stockmarkets and hostile takeovers inhibits the ability of managers to make long-term commitments to their

workforce; managers may not be around to honour implicit understandings. The German system of interlocking ownership, absence of hostile takeovers and access of creditor banks to insider boardroom information, may be better for long-run decision making. Privatization is an opportunity to influence the evolution of capital markets and corporate finance. It argues for getting the banks in early, as mangers of unit trusts taking long-term positions or by allocating to banks some shares withheld from initial privatizations. Sachs (1991) notes such financial engineering is now on the agenda in Poland.

Finally, there is the issue of subsidy precommitment. Privatization is an imperfect solution. Western car and steel industries are examples of ailing private producers that became recipients of extensive state support. Mrs Thatcher demonstrated that it is the willingness of the government to see closures and unemployment, not whether ownership is private or or public, which is more likely to change the perceptions of both the public and private sector.

4.6. Joint ventures

The Law on joint ventures provides a second method of ownership transfer for selected enterprises. Foreign owners can take up to 100% of the capital, with favourable fiscal incentives and assurred profit repatriation. Though over 600 occurred in 1990, most were small scale. They are suitable where assets can be valued easily and sold for a fair price, but will be confined to firms already prospering or with imminent prospects of success. The largest joint venture in Eastern Europe to date is the Volkswagen purchase of Skoda, an investment of DM 9 bn. over 5 years.[6] Breweries will also be highly sought after: Czech towns gave their names to Pilsner and Budweiser, and Czechs retain European production and distribution rights for the latter trade mark. The CSFR's success will not stand or fall by joint ventures, but they will be a useful contribution, and provide further evidence of the international value of its human capital.

4.7. Improving control of SOEs

Many SOEs will remain and must not be ignored. Their joint stock status should quickly be implemented. Unlike Poland or Yugoslavia,

[6] VW now controls Skoda, Lada and Trabant. VW Chairman Carl Hahn rates Skoda workers much the best, almost of West German standard. More surprisingly, VW are so impressed with the management that Czechs will run the enterprise. And VW have subsequently undertaken a second venture, to produce the Passat in Slovakia.

the CSFR has no strong tradition of workers' councils. The government should affirm its shareholder right to appoint the Boards of SOEs and hold them accountable for performance. Managers should have incentives (performance-linked bonuses) for success, and penalties (dismissal) for striking failure. In terms of the analysis of Section 4.1, these both increase corporate control and reduce incentives of enterprises to lobby for subsidies. Yet monitoring will be hard because of initial inexperience and undue regulatory capture arising from old relationships. The state monitoring agency should be divorced from the ministries for employment and industrial policy.

Control of SOEs must distinguish target setting and target enforcement. Early privatizations should focus on cases where there is little disparity between private and social valuation. In remaining SOEs market prices and profitability may thus be a bad guide to social efficiency. The right target for an enterprise may be a profit or a loss. Enforcement of targets must not be undermined: this means not merely control of subsidies but control of credit. Until banks are privatized, divorce of the balance sheet of the Finance Ministry and state banks is largely cosmetic. It is wise to internalize this extenality. One device would be to outlaw sustained borrowing by SOEs, whose deficits would then require explicit fiscal subsidy. This gives fiscal authorities the muscle to enforce their own policy; it begins the general problem of restructuring balance sheets of banks and enterprises (see Section 5). Monetary policy would then be more transparent.

Tighter control must also extend to the whole apparatus of government and the welfare state. Here divorce cannot be the solution: incentives must improve within Ministries themselves. The state must not become the employer of last resort. Every crown spent on featherbedding state employment is a crown better spent on retraining, improving mobility or breaking down entry barriers.

5. Competition, credit and restructuring policy

5.1. A clearer idea about restructuring

Commitment to the market does not absolve the government from the need for a view about the economy. Establishing the market economy is the priority, but market failures are still first-order effects. Market prices are not instantly at world levels; domestic monopoly is present; and the market economy is not yet assembled.

5.1.1. Value added at world prices and comparative advantage. In a small economy subject to distortions, valuing inputs and outputs at world

prices provides the simplest way to uncover underlying social costs and benefits, which indicate the direction of efficient restructuring. Some firms, apparently profitable, are sustained only by domestic monopoly or protection from foreign competition, and should close. Others may be losing money today but be socially profitable, and can flourish once transition is complete. World prices are a guide not only to which SOEs to support but to privatization, which should begin with cases where private and social valuation is close: the market can then enforce the desired outcome.

Although ideally we need data by enterprise, sectoral performance is a useful guide. Hare and Hughes (1991) provides data for the CSFR, Hungary and Poland in 1986–89 before devaluation and price liberalization. The authors estimate both value added at world prices and an index of comparative advantage (CA).[7] The more the index exceeds 1, the more the sector has a comparative advantage at world prices. Values between 0 and 1 indicate positive value added but unexploited comparative advantage; importing is more efficient. Negative values indicate *negative* value added: costs exceed output value, a social disaster. Table 9 shows the CSFR starts with fewer problems than Poland or Hungary. Table 10 shows more complete data for the CSFR. As in the folk wisdom, the strong sectors are metals and machinery, pottery and glass and plastics. Much of manufacturing is within striking distance of holding its own in world markets, and will improve as distortions are removed. Nontraded goods such as cement fare badly. Food processing looks terrible, and one would expect to find corroborating evidence of high protection. Although nominal tariffs may be a misleading indicator of effective protection, Table 11 tends to confirm this interpretation. It shows 12 high-tariff sectors (average tariffs for all imports are less than 10%). The protection of food processing is clear. If distortions do not arise from protection, another source is subsidies. Table 12 shows many of the culprits in Table 10. My last bit of evidence is firm size. 68% of SOE employment occurs in enterprises with over 1,000 employees (c.f. 35% in Poland; Charemza, 1991). Table 13 documents the growth of large firms and shows that by 1988 they were much more numerous than in more market-oriented Hungary. To achieve restructuring, trade winds must blow from abroad, producer subsidies must be curtailed and competition policy must combat domestic monopoly.

[7] Such calculations should be based on equilibrium exchange rates, a poor assumption for the late 1980s. We cannot simply rescale for subsequent exchange rate changes: price changes also induce a quantity response.

Table 9. The index of comparative advantage

% of manufacturing output	CA index	CSFR	Hungary	Poland
With negative value added	CA < 0	19	24	24
With comparative disadvantage	0 < CA < 1	59	69	65
With comparative advantage	CA > 1	22	7	11

Source: Hare and Hughes (1991).

Table 10. Index of comparative advantage by sector in Czechoslovakia

CA > 1	Nonferrous metals	1.4
	Plastics	1.1
	Machinery, pottery, china, glass, other manufactures	1.0
CA > 0	Paper, footwear	0.9
	Ferrous metals, wood, instruments	0.8
	Rubber, clothing	0.7
	Clay, nonferrous minerals, basic chemicals, fabricated metal	0.5
	Printing, cement	0.4
	Textiles	0.3
	Electrical equipment	0.2
	Other chemicals, furniture	0.1
	Other foodstuffs	0.0
CA < 0	Meat, fish, dairy	−0.6
	Oils and fats, tobacco	−0.8
	Fruit and vegetables	−3.0
	Beverages	−4.0
	Sugar and confectionary	−4.9
	Cereal products	−10.0
	Leather products	−31.7

Source: Hare and Hughes (1991).
Note: Since world agriculture is highly distorted, using world prices for food seems unappealing. Yet these still reflect the opportunity cost for a small open economy. The real issue is then CSFR admission to the CAP of the EC!

Table 11. Sectors with high nominal protection (tariff rates, %)

Synthetic products	62	Fruit and veg canning	45	Other food	30
Dairy products	54	Clay products	39	Motorcycles	30
Confectionary	54	Grain and liquor	35	Wood and cork	27
Spinning and weaving	51	Musical instruments	30	Sugar refining	26

Source: World Bank (1990) from data on the Czechoslovak Tariff, Brussels, 1989.

Table 12. Budgetary subsidies in 1988 (% of GDP)

Total budgetary subsidies			13.5
of which: foreign trade subsidies		2.6	
negative turnover tax		4.2	
of which: food	3.1		
consumer coal and gas	0.6		
other (printing, bricks, cement)	0.5		
subsidies to enterprises and agric. coops.		6.7	
of which: agric. and food processing	3.7		
industry and construction	0.6		
other (housing, transport, water)	2.4		

Source: Author's calculations based on data in World Bank (1990).

Table 13. The size of manufacturing enterprises, 1956–88

	Enterprise size (no. of workers):		<500	500–2,500	2,500+
CSFR	Number of enterprises	1956	763	721	73
		1988	91	586	213
CSFR	Number of workers	1956	193	826	467
	(thousands)	1988	26	787	1,024
CSFR	Percent of state	1988	1	43	56
Hungary	Industrial employment	1988	21	44	35

Source: Mejstrik (1991); Hungarian Central Statistical Office.

5.2. Competition from abroad

Foreign competition has been inhibited by convertibility restrictions, tariffs and export subsidies and a requirement to conduct foreign trade through a government monopoly. The latter should not die a lingering death; it should have been buried yesterday. In principle, current account convertibility for enterprises[8] began in January 1991, in practice rationing remains. A large request for foreign exchange must be ratified by the government; and importers of capital goods must usually get a credit of 2–5 years from foreign suppliers before foreign exchange is made available. These measures are unnecessary.

[8] Current account convertibility applies only to firms, who may not hold foreign currency assets. In contrast, individuals may obtain an extra 2,000 crowns a year in foreign exchange but can keep existing foreign currency assets, worth 7 bn. crowns in October 1990 compared with their 71 bn. crowns held in domestic currency (Hrncir and Klacek, 1991).

Average tariffs are low, but their structure is complex. Effective protection is high in a few arbitrary activities. The structure should be simplified. Since EC membership is a goal, moving towards EC practice makes sense. Reforming economies, like overworked executives, have no time to have clothes made to measure; buying 'off the peg' from a reputable store makes sense. A 20% import surcharge applies temporarily to consumer goods. Its purpose is macro not micro, to limit the current account deficit. Limiting luxury consumption makes sense until the reforms are more secure; continuing to protect inefficient producers is crazy. Taxing luxuries would be more efficient. Similarly, export subsidies help the wrong people and, unlike tariffs, hurt the budget. The commitment to foreign competition is more than lukewarm but the temperature needs to rise.

A modest and transparent degree of protection should remain, as in most market economies. The infant industry argument often alerts us to failures in the credit market. Otherwise, enterprises which will be eventually profitable should themselves borrow to get started. The best solution is to remedy credit failures. Without an evaluation of the credit market, we cannot fully judge the extent of the second-best argument for tariffs.

5.3. Credit, entry and exit

Even if tight monetary policy restricts new lending in total, its allocation also matters. Old relationships confer insider status on incumbent firms, yet much of the business expansion must come from new private firms. A second problem is how banks evaluate credit risk. Short-term profit may be a bad guide to long-run prospects. Even western banks may take a short-run view, but are more likely to get things right than domestic banks. The reform programme may hinge on decisions by banks. Having allowed VW to take over Skoda, there should be few qualms about importing western banks wholesale. Citibank has been licenced to compete across the entire range of banking services, and seven others, including large German banks, will shortly follow. A major foreign presence will force domestic banks to improve or go under. Care, however, is needed to level the laying field. Domestic banks inherit bad debts from enterprises. Cleaning up enterprise balance sheets is essential, but implies cleaning up the balance sheets of domestic banks. Completed, it will allow early privatization of banks. Because two-thirds of enterprise debt is owed to households, intermediated through savings banks, debt writeoffs will not be mutually cancelling between SOEs and state banks. New instruments, bonds or privatization shares, must be offered to households.

5.4. Competition and domestic monopoly

Domestic monopolies are prevalent. Some cases need a structural approach, breaking up large enterprises whether or not they are subsequently privatized. Other cases are genuine natural monopolies and regulation of conduct is needed. To date there are few plans to break up enterprises. One practical answer is market enlargement. Section 5.2 dealt with external enlargement, but the internal market should not be neglected. Regional monopolies are inefficient. Dairies are a good example, each region being served by a single large plant. Completing the internal market will diminish market power. Investment in infrastructure, communication and transport, it an effective adjunct to competition policy, and should not be impeded by nationalist divisions between the Czech and Slovak republics.

Regulation of conduct is also needed. The 1991 Competition Act adopts EC law on mergers, monopolies and restrictive practices, enforced by an Office of Economic Competition (whose subsequent silence has alas been deafening). Regulatory supervision should pay special attention to entry deterrence, and scrutiny should apply as much to banks and ministries as to firms themselves. As elsewhere, good design of enabling legislation is only the first stage. Effective functioning of the institutions of the mixed economy will take time. Domestic monopoly will remain a significant problem for several years.

5.5. Industrial and employment policy

What other market failures remain to justify government intervention, and what form should it take? Industrial policy has two dimensions, subsidies (or taxes) for private enterprises, and operating rules for SOEs. Both should reflect two considerations: discrepancies between private and social valuation; and politics, which must recognize the effect of intervention today on anticipations of intervention tomorrow. Placing a limit (e.g. three years) on adjustment subsidies combines the benefits of addressing market failure with the constraint of credibility. To prevent open-ended support, ambiguous cases should be rejected. In contrast, current discussions of industrial, regional and SOE policy are *ad hoc*, mutually inconsistent, and vulnerable to lobbying for special cases.

The rationale for employment policy should be no different, even if a different ministry is responsible. The largest divergence in private and social valuation is the cost of labour itself. The wage overstates the social cost of labour if labour is not immediately reemployed: employment subsidies may cost less than unemployment benefit. However, the same tradeoff arises as with industry. Subsidies may inhibit restructuring

(see the Appendix). Labour market failures, as in Western Europe, will surely be important. Supply-side policies help but take time. As an emergency measure, more formally as the second-best policy in the short run, I favour an unconditional and universal wage subsidy, declining quickly over a specified and short horizon.[9] It is better than allowing unemployment too great for the labour market to digest. Experience from Western Europe suggests unemployment persistance is important, and should not be lightly neglected.

What about supply-side policy? Can the labour market itself be improved? Rent controls inhibit labour mobility, and should be phased out. State support for job matching and retraining has wisely received considerable attention, drawing on western advice to streamline the jobcentres which will process a large throughput of workers as old jobs die and new ones are created (for a fuller discussion, see Burda, 1991). Retraining will also be important. An active employment policy is an important adjunct to reform. Even so, a substantial rise in open unemployment is invitable (and temporarily desirable).

6. Macroeconomic policy: stabilization and credibility

6.1. What ought to be done

6.1.1. Fiscal stance. It is widely agreed (e.g. Bruno, 1990; Dornbusch, 1990) that fiscal probity is necessary for success. Ease of monitoring is crucial to reputation building. Zero is easy to monitor, but that may be the only reason to target budget balance. Monetization looms when debt interest cumulates faster than it can easily be paid, a danger only if the real interest rate exceeds the real growth rate. For two years there will be a big recession; over a decade, real growth may be rapid: moderate borrowing need not undermine credibility, especially when initial debt is low. But future budget targets must be announced *ex ante*, be seen to decline over time, and be attained *ex post*. The CSFR needs a Medium Term Fiscal Strategy.

If budget surpluses are not required to underpin sound money, fiscal policy may be too tight: the initial recession may be too large (inefficient intertemporal smoothing); structural adjustment delayed (starting new firms in a recession is hard); and the reforms themselves may be jeopardized unnecessarily (high unemployment dissipates popular support). Whilst these concerns are real, they are unlikely to justify a substantial budget deficit in the short run. The appropriate fiscal

[9] Only unconditional subsidies remove incentives for lobbying and rent seeking.

target may well be a surplus, *but not for the purpose of enhancing monetary credibility*. In the national income accounts, a deficit by households or enterprises must be matched by a surplus of central government or a trade deficit. A high marginal cost of international borrowing limits the optimal trade deficit during restructuring. Since households want to smooth consumption as much as they can, and enterprises may make losses while adjustment costs are high, optimal policy may require a budget surplus to avoid excess demand.

Why might sensible fiscal targets not be attained, and how can intelligent provision be made in advance? First, enterprise subsidies. The Appendix examines privatization as a vehicle to enforce a ceiling on subsidies. Privatization should be rapid but not chaotic. It takes time, and has increasing marginal costs (if too rapid, opportunities are lost to break up domestic monopolies). Lossmaking SOEs cannot be sold, and wholesale closure is not the best policy (Section 5). Some subsidies must remain. The government should specify a plausible, declining, path for total subsidies and endeavour to meet them after the fact. Here, the conditionality of international borrowing, specifically its link to meeting fiscal targets, is helpful. Second, the initial recession should not be underestimated. Optimistic forecasts for fiscal revenue and welfare spending threaten attainment of announced budget targets. It is better to plan for the worst and welcome any bonus: announced targets should be attained.

6.1.2. Nominal anchors and exchange rate policy. Monetary policy can be enforced through either monetary targets or the exchange rate. The latter is a better nominal anchor during disinflation. It is more visible, easier to monitor and easier to interpret. Rapid changes in inflation and in financial markets make forecasting money demand notoriously difficult; without knowing demand, it is hard to set targets for supply. Moreover, Fischer (1986) has shown that exchange rate targets may achieve disinflation at lower output cost than monetary targets, if both are equally credible. The former involves less real overshooting.

Two issues remain: what form should the exchange rate anchor take, and do we need multiple anchors? Complete disinflation may be neither necessary nor desirable. If moderate inflation continues, the dilemma is clear. A low exchange rate, that can then be held a long time, provides insufficient initial foreign competition. Maintenance of a high exchange rate is equally incredible if inflation persists: the pressure to devalue will be enormous. Simply promising 'to hold the exchange rate as long as possible' is a commitment without content.

Stabilization is usually a big initial effort, then sustained effort at a less intense level. This suggests a corresponding exchange rate policy:

(i) an initial exchange rate at which the economy is broadly competitive, (ii) a minimum period (say a year) for which the exchange rate will be held, and (iii) a commitment today as to how the exchange rate regime will change at the end of the period, in particular precluding devaluation to accommodate all inflation in the meantime. This policy is suitably tough at the outset, reduces destabilizing speculation around the future regime change by ruling out a substantial devaluation and promises steady discipline thereafter.

Nevertheless, it is hard to see how the government can precommit to such a policy. It has only a few instruments at its disposal. For example, by choosing the maturity of foreign debt, it can make early devaluation expensive. Generally, however, such policies are pretty weak reeds on which to lean. Some inflation will occur, and at some future date it will become optimal to devalue. Talking expectations down is not an option; they have to be beaten down with the sticks of unemployment and enterprise closure. Note that this raises the payoff to preventing inflation rising too much initially.

The nominal exchange rate is the best indicator of monetary tightness but a very imperfect nominal anchor. What about other anchors? Two other policies can fulfil this role. First, compatible targets for money and credit growth can be announced. These confirm resolve and may signal unforeseen developments, but are also a hostage to fortune: since money demand will evolve unpredictably, monetary targeting is hazardous. Unexpectedly strong money demand leaves the government with a dilemma: let the monetary squeeze be unintentionally tight or accommodate unexpected demand, risking credibility by overshooting announced targets. A second anchor, perhaps more attractive, is temporary wage and price controls: while credibility is earned, the nominal spiral should not proceed unimpeded. Another standard prescription is ending wage indexation, which can convert once-off price rises into ongoing inflation. I remain dubious of this argument. Theoretical proofs of the danger of indexation suppose complete, immediate credibility. The largest recessions may arise when policy is tough but not expected to be so. Indexation may help: it is an option on success. If success on inflation control is uncertain, workers no longer have to press for wage rises in case inflation occurs.[10]

[10] Indexation might solve the inability to precommit in the simple Barro-Gordon model, by removing the temptation for surprise inflation. Difficulties arise when indexation impedes required real wage changes. In marked contrast with Poland, real wages in the CSFR had already been squeezed before the reforms began.

Table 14. CPI Inflation 1989–90, (%, year on year)

Quarter:	1	2	3	4
1989	1.1	1.4	1.5	1.5
1990	3.4	3.9	10.1	18.4

Source: Hrncir and Klacek (1991).

Table 15. Macro developments in 1990

Percent annual growth in					
Employment	Nominal earnings	CPI	Net investment	M3	Budget surplus (% of GDP)
−1.2	2.0	18.4	−12.2	4.4	0.4

Source: Ministry for the Economy.

6.2. Stabilization policy: achievements of 1990

Table 14 shows recent inflation in detail. Sharp acceleration in 1990Q3 reflected rises in administered prices of food and fuel. Real output fell 3.5% as exports to the CMEA collapsed, and by year end foreign exchange reserves of $0.9 bn. were equivalent to only three weeks' imports. Open unemployment was 1% and net foreign debt remained constant at $7.9 bn. Table 15 summarizes other changes. Real wages and investment both fell sharply.

6.2.1. Monetary policy. Early in 1990 the government set a target between −1 and +2% for broad money growth. During the year, enterprise energy charges and retail petrol prices doubled, beginning the move to world prices; by December inflation was 18%. Given this, it is remarkable that 1990 growth of M3 and aggregate credit were held to 4%. It seemed the first attempt to attain tough targets had been met. Interest rates rose sharply in late 1990, from 3–13% on bank deposits, and to 24% on bank credit to firms. Monetary policy distinguished between once-off price rises, allowed to wipe out any remaining monetary overhang, and continuing inflation: deposit interest rates will only compensate for the latter. As in Poland, there has been a huge rise in spreads in the banking system. When firms simultaneously have bank loans and bank deposits, the squeeze on their liquidity is considerable. In consequence, trade credit or interenterprise debt has exploded as 'loophole of last resort' (Table 16). Official statistics refer to gross credit, which can be mutually cancelled. That it is not reflects the inefficiency

Table 16. Interenterprise debt (% of GDP)

1982	1988	1989	1991 (Jan)
2.3	3.6	1.0	8.5

Source: Hrncir and Klacek (1991), World Bank (1990).

of the clearing system. Early in 1991 the Commercial Bank made an initial effort at clearing; gross trade credit fell 20% as a result.

More important is role of trade credit in forcing a net increase in credit from banks, even when money and credit growth are apparently restricted. When firm A fails to pay B, the latter tells its bank that it can no longer meet payments on existing loans. The bank can extend new credit to acknowledge this reality, ignore the nonperforming loan, or seek closure of the firm. This third option is impossible until a bankruptcy law is passed. Nor is a law sufficient, as the experience of Poland during 1990 attests: although such a law existed, scarcely a single firm was forced into bankruptcy. The first option, new credit, is precluded in the aggregate by credit targets. So in practice extension of net trade credit to firms arises on the asset side of bank balance sheets: nonperforming loans increase. Even western banks face temptations not to recognize bad debts; the easy life may continue awhile longer if loans are deemed performing. Until this channel is blocked, monetary policy is not tight simply because banks meet ceilings on the expansion of the liability side of their balance sheets. Even if credit loopholes can be closed, enterprise debt is an anomolous carryover from the past. High interest rates and a liquidity squeeze are a scattergun approach to restructuring. It would be better to write off a substantial portion of enterprise debt, and compensate state banks accordingly.

6.2.2. Fiscal Policy. Table 7 showed that during 1985-89 the budget deficit was under 1% of GDP. In 1989 it increased to 5% as the communist government sought to cling to power. The new government sought to regain control, setting a 1990 target surplus of 5.4 bn. crowns (just under 1% of GDP). The recession of 1990 was worse than expected, reducing tax revenue, yet a surplus of 2.4 bn. crowns was achieved, going a long way to establish the commitment to prudent fiscal policy.

6.3. The stabilization plan from January 1991

6.3.1. Wages and prices. In January 1991 current account convertibility was introduced for enterprises and price liberalization applied to goods

and services comprising 85% of GDP. Exemptions covered basic necessities (food and heating) and charges for infrastructure and public utilities. Early in 1991 a tripartite agreement, covering firms with over 25 employees, was concluded between unions, government and enterprises. The average monthly wage was 3,300 crowns, only 5% above the level of 1989. Real wages fell a lot during 1989-90. It was agreed wages should increase 5% in spring 1991, a small offset for inflation in 1990.

The agreement set a minimum wage of 2,000 crowns/month, fully indexed to the prior month's inflation. Table 5 showed that in 1987 the lowest paid earned 80% of average wages: a minimum wage of 60% of average wages seems to allow larger wage differentials. But this is misleading: only minimum wages will be fully indexed. Since inflation is substantial, differentials will be compressed. All other wages are subject to an indexation rule, with penalties for excessive rises (excluding the 5% offset for inflation in 1990). Nominal wages were otherwise frozen during January–March 1991, and inflation then assessed. If less than 25%, the wage freeze would continue until prices had risen 25%. Once the threshold is triggered, indexation begins, wages rising to keep the fall in real wages to 12%. Later adjustments would limit the total fall in real wages during 1991 to a maximum of 10%. The indexation agreement was indicative; it would not be automatically enforced. Enterprises in trouble might persuade workers to accept lower real wages. Such market pressure matters. The CPI rose 25% in January, another 7% in February. Though the monthly increase was down to 2% in April, the indexation threshold had clearly been reached. Application of the agreement would then have meant nominal wage increase of over 20%, just when inflation was coming under control. Section 5 showed much of the CSFR is close to survival at world prices. Ever lower real wages are unnecessary for success. Yet by March 1991 the government was sufficiently concerned about inflation to press for suspension of the indexation agreement. As yet, this has not led to an outbreak of strikes.

The third aspect of the agreement was a ceiling on wage bonuses and profit sharing, less than 25% of enterprise labour costs. Direct wages were subject to a tax-based incomes policy. Increases in excess of the indexation agreement incur a penal 750% tax on the excess wage bill of the enterprise. Lack of corporate control may render enterprises immune to the punishment. If managers believe either that credit constraints will not bind or that the enterprise is anyway doomed, they are likely to collude with workers to grab what they can while they can. A similar policy was in force in Poland during 1990, yet over 1,000 large enterprises paid excess wages and incurred the ludicrous tax penalty (Sachs, 1991).

6.3.2. Unemployment, social security and the labour market. The fiscal cost of unemployment depends not only on job losses and the efficiency of job matching, but also on incentives to remain unemployed. For Western Europe, Burda (1988) finds that duration of benefit eligibility matters more than the benefit level. The CSFR has opted for a duration of one year, and an average replacement rate of 60% of former earnings. Given low *ex ante* wage differentials, benefits will be near the minimum wage, a poor incentive structure. How large a fiscal burden will unemployment become? Hrncir and Klacek (1991) estimate that if unemployment rises to 10%, additional payments of benefit plus taxes forgone will add 7% to fiscal spending.

6.3.3. Assumptions underlying macro policy. The plan made four assumptions for 1991: real output will fall no more than 5%; open unemployment below 5%; after an initial 25% price jump, inflation will be controlled; and the current account deficit can be held to $2.5 bn. Forecasts of inflation and unemployment seem implausible. Prices increased 33% in the first two months of 1991 (with a further round of subsidy withdrawal and administered price increase scheduled for May). Output fell 5.5% in the first two months.

6.3.4. Monetary Policy. Monetary policy will rely on the multiple anchors of a fixed exchange rate, ceilings for credit growth and positive real interest rates after the initial price jump. The 1991 target for broad money growth has been set at 5.5% (the increase in Jan–Feb was held below 2%). Not merely will this not accommodate the initial price jump, it is unlikely to match continuing inflation. By any standards it looks a severe monetary squeeze on top of that in 1990.

The squeeze can succeed only if the bankruptcy law is quickly enacted; if banks can monitor enterprise solvency, stamp out the trade credit explosion and have incentives to initiate enterprise closure; which in turn requires both a solution to principal-agent problems within banks and restructuring the balance sheets of banks; and if fiscal policy resists pleas for subsidies which tougher credit enforcement will generate. In each case, intentions are good, the task difficult.

Three devaluations had aimed to take the exchange rate to a realistic level. How much credibility can be attached to the exchange rate strategy? The Polish experience suggests that the commitment to 'hold the exchange rate as long as we can' encourages a deep initial devaluation (to allow the exchange rate to be held for longer), leaving firms initially sheltered from foreign competition. The same may occur in the CSFR. In both cases, by the start of the reform programme the exchange rate had been devalued to precisely the prior black market

Table 17. The tax structure in 1990 (% of government revenue)

Profits tax	Payroll tax	Turnover tax	Trade taxes	Other
28	26	34	4	8

Source: Federal Statistics Office, Prague.

rate, a rate likely to be overdepreciated for two reasons: an underperforming distorted economy and a wish by rationed citizens to get their money out at any price. As in Poland, it is now domestic inflation that will apply external competitive pressure to restructure. Given this mechanism, it is less important that the initial exchange rate level was correct than that future accommodation is believed to be restricted.

6.3.5. Fiscal Policy. Fiscal policy envisages subsidy cuts, deep inroads in defence spending and reduced investment. The last of these, especially in infrastructure, is unwise. The fiscal risks concern the liability for unemployment benefit and severance pay; and the revenue from profits tax (which may go either way: poor corporate control risks high wages and a low base for profits tax, inadequate competition risks large price increases and a higher tax base; the latter effect was larger in Poland in 1990). Medium-run success will also depend on tax reform. Table 17 shows the current structure of taxation. Most revenue is raised through profits tax, payroll tax, turnover tax and import duties. The tax on profits has been cut from 55 to 45%, too low given revenue uncertainties. The payroll tax can be viewed as an income tax plus a tax on employment. The latter gives inappropriate incentives to workers as the minimum wage and unemployment benefit become uncomfortably close to market wages. Proposals to replace the complex turnover tax and the payroll tax by an income tax and a broadly based VAT by 1993 are therefore welcome. Meeting these deadlines will be a considerable achievement. For what it is worth, the experience of tax reform in LDCs is that instituting a broadly based VAT is not a major problem; in general enforcement of income tax is harder.[11] Until such tax reform is accomplished, the basis of fiscal revenue will remain precarious.

7. Summary and conclusions

I began with three questions: how to design reform of a command economy; how well is the CSFR implementing reform; and what are

[11] I am grateful to Professor Nicholas Stern of LSE for this distillation of his expertise on public finance in LDCs.

its prospects of success? I now restate my central themes and the conclusions to which they lead.

7.1. Reforming a command economy

After decades of diktat, radical changes are needed. Market prices will increasingly provide the right signals, but are an imperfect guide to efficient restructuring in the early years of reform. Deeper deficiencies are the absence of corporate control, and the lack of both market institutions and a tradition of private reliance rather than automatic state provision.

These problems have corollaries for reform design. First, a stabilization programme is needed to prevent price adjustment becoming ongoing inflation. Second, until markets function effectively, the usual channels of tight macro policy may not operate. Micro reforms underpin the success of macro policy. The CSFR can afford external deficits to support reform. The larger such deficits, the less the need for a budget surplus to offset domestic absorption. Fiscal probity depends not on budget balance but on plausible and declining deficit targets, subsequently attained. Multiple anchors can reinforce the message that deficits are financed by borrowing not by monetization.

Establishing corporate control must be centre stage. That is why Poland and the CSFR are having to invent methods of mass privatization. Credit monitoring and allocation must also be put on a sound footing. A bankruptcy law is only the first step, licensing foreign banks only the second. Balance sheets must be restructured and SOEs more closely monitored.

Price liberalization should not outpace development of the markets in which prices are meant to guide allocation. One reinforces the other. High prices may be the incentive to establish a market; where no response is possible, liberalization is costly window dressing. Importing foreign relative prices is a giant leap. Convertibility should be real not token; other policies can offset side effects. External tariffs should be simplified not abolished: tariffs raise useful revenue.

Breaking up monopolies is hard (less so than imagined), but regional barriers should end quickly to complete the internal market. New entry must be easy, and regulation transparent. Old relations between incumbents and suppliers of goods and credit must not get in the way. Many market failures are transitional, diminishing as other reforms succeed. Intervention should be temporary and removed over a known period, reducing conflict between efficiency and credibility. The CSFR began with low inflation and unemployment. These are not the criteria for success. Far reaching supply-side reform, and big improvements in

full-capacity output, are the prize. They should be the judge and jury as well.

7.2. Evaluating the reform programme in Czechoslovakia

7.2.1. Stabilization and inflation. Fiscal credibility is well established but policy may now be too austere. More investment in supply-side reform would be wise. Monetary policy looks tight. Until trade credit is arrested, net credit, properly measured, is less tight than it seems. Existing balance sheets make monetary policy arbitrary, but full debt writeoffs may place too little discipline on firms. Here the best way is the third way, partial relief. Such relief must also apply to banks. The exchange rate is too low to import competitive pressure to restructure rapidly: continuing inflation will apply that pressure if the exchange rate indeed is held. A credible commitment to the long-term path of the exchange rate is probably impossible. Disinflation will be achieved not by talking expectations down but by unemployment and closures. Unless indexation is repudiated, there will soon be a surge in wages.

7.2.2. Incentives within firms. Extension of private ownership is impeded by restitution, which should be as predictable as possible. Small privatizations and business creation are under way; both require fair access to credit. Large privatizations should begin in sectors where prices are near social valuations. The privatization plan is cumbersome, but the principle of vouchers is good. Unit trusts will help concentrate shareholder control through informed intermediaries; giving shares to banks is also desirable. These steps are no magic solution. Corporate control will remain imperfect, but the CSFR has put the correct emphasis on mass privatization. Performance of remaining SOEs should be monitored by an agency independent of sponsoring ministries. Success should bring rewards for managers, and failure penalties.

7.2.3. Market incentives and failures. The appropriate unifying principle of intervention is not yet centre stage; until it is, proposals will be piecemeal, inconsistent and vulnerable to lobbying. That principle is divergence between private and social costs. Current account convertibility is welcome, hidden rationing should cease. A current account deficit is appropriate, can be financed, and may be smaller than anticipated. To tackle domestic monopoly, laws are not enough. Setting up new firms is legally simple, but access to credit and markets must not be denied. More can be done to break down market segmentation, a

task rendered harder by the political need to devolve power to the Czech and Slovak republics. 1992 is a useful model of how economic progress can be reconciled with political autonomy. Breaking up large enterprises should not go by default. Even economies with centuries of market history are not immune to these complaints. Those rash enough to proffer advice have a duty to mix encouragement with realism. Major progress has been made, but market failures will remain, especially in the short run. Industrial and employment policy can be justified, provided there is a commitment to reduce intervention within the few years in which the worst of the distortions will now be removed.

The CSFR is launched on a programme many of whose central pillars are appropriate. Reform programmes are precarious in their early stages. Getting the pillars right is good: filling in the cracks is even better. When the architects are under strain, the underlying principles I have stressed may provide a useful diagnosis of where scarce plasterers should be set to work.

7.3. The jewel in the crown?

Prague was Mozart's favourite city. The bicentenary of his death is an apt year in which to mark Czechoslovakia's rebirth as an advanced nation of Europe, a prize within its grasp. Unlike its Eastern European neighbours, it inherits low inflation and sovereign debt; considerable industrial skills and human capital; and fewer distortions from the patterns comparative advantage will now enforce.

Against these immense advantages, two concerns are often expressed. The first is that the CSFR, like the former GDR, was subject to much greater state control than say Poland or Hungary, where important areas of private enterprise always remained. Although the statistical evidence of Section 2 confirms this diagnosis, it may be wrong to infer that the CSFR will find transition to the market unduly difficult. I have already cited Volkswagen's conviction that, both in the Czech lands and Slovakia, workers and managers display considerable initiative and business expertise. Similarly, Motokov (the largest foreign trading company) has reacted imaginatively to the collapse of Comecon, using the foreign expertise of its management to penetrate new markets: export earnings were 25% higher in 1991Q1 than the corresponding quarter in 1990 (*Financial Times*, June, 1991). These examples caution against accepting the conventional wisdom too readily. Second, Slovak separatism remains a force not necessarily spent. It continues to preoccupy political calculation in Prague. Since the initial recession will be more acute in Slovakia, reform must steer a sure course between commitment

to restructuring and adequate social support. In this respect, reform in the CSFR is more precarious than in some of its more homogeneous neighbours.

These doubts aside, for what economic milestones should we watch as the future unfolds? By the end of 1991 we may know whether inflation control is succeeding. The achievement of reducing the monthly rate of price increase from 25% in January 1991 to 2% by April is now threatened by further rises in prices (as subsidies are withdrawn) and, more seriously, by increasing labour market pressure (where real wages have fallen substantially). If wage increases are now moderate, prospects for success on inflation control will be good. More worrying would be a general collapse of wage restraint. Not merely would this risk protracted inflation, it leaves the government a nasty choice: begin the slide into accommodating policies, or maintain austerity and accept much sharper rises in unemployment which themselves strain social cohesion and undermine support.

By Christmas 1991, we may know the answer to three other questions: the budget, the current account and the initial recession. The significance of the first two is not problems of deficit finance; they are suitable shock absorbers for a country whose long-run solvency is sound. Their signal will be more subtle, evidence of the implicit extent of the restructuring being achieved. If this looks adequate, further borrowing will be possible. Unemployment will have risen sharply. In 1991 some of these pressures will simply reflect demand austerity, but increasingly this will be inseparable from the question of commitment to closures and restructuring, on which ultimate success will turn. The key issue is whether the government can spend its existing credibility correctly. What is needed is not a scorched earth policy but careful husbandry: the weeds must be clearly uprooted, but fragile saplings must get water. Indiscriminate watering will be a clear sign that political pressures are undermining good intentions.

During 1992 the picture will clear still further. The first wave of large privatizations, scheduled for February, must survive both its administrative complexity and the sense of inequity which transparent wealth redistribution may then provoke. If reform is still on track, the fall in output should be bottoming out, though unemployment will still be increasing. And if adjudicating restitution has not become a mess, foreign investors should by then be capable of spotting a winner when they see it. The history of reform attempts suggests even successful programmes are usually more protracted and more difficult than this. If Czechoslovakia comes even close to the timetable set out above, I'll be spending Christmas 1992 in Prague and believe in Santa Klaus forever.

Discussion

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It is quite encouraging for an economic researcher from Czechoslovakia to find that his country, once a Cinderella that noone cared about, is attracting growing attention in the international community. David Begg's paper displays a vast array of analytical investigations dealing with various aspects of Czechoslovak economic policy-making. In this respect it can be taken as one of the most earnest attempts at academic courtesy for the Czechoslovak economy to date. For the following evaluation of the paper, let me point out three basic questions which serve as guidelines.

Is the mentioned interest in the Czechoslovak economy justified? Was David Begg's scope of enquiry and method appropriate? Are there alternatives to or missing links in his evaluation?

If we compare Czechoslovakia, quite a laggard in entering the market environment, with any of the other post-command economies (excluding, however, the rather exceptional case of East Germany), we cannot say that the country is lagging visibly behind. On the contrary, it still has one of the lowest levels of foreign debt per capita, the local currency (Koruna) shows the highest stability on its way to convertibility, the country has attracted the highest foreign investment in Eastern Europe, the pattern of domestic household savings is surprisingly steady and the monthly inflation rate is close to zero after three months of fluctuations due to price liberalization. In these aspects Begg's contribution, well documented with statistics, is sufficiently persuasive. The analysis of Czechoslovak macroeconomic performance and its economic policy is judged as sufficiently sound in outline.

I would suggest that a more critical approach should have been taken to monetary policy, which is apparently much less restrictive than has been described, or than might be required for maintaining both the anti-inflationary environment and pro-privatizational (anti-bureaucratic) creativity. The weak monetary policy had to be substituted by over-restrictive fiscal and anti-import exchange rate policies. This should have been changed as the recession was deepening. These are not merely the macro problems of nominal anchors, inter-enterprise credits, soft bank loans or cash-flow defaults of state firms, as discussed in the paper, but are more the result of the inability of all three Czechoslovak governments to cope with a weak Central Bank, the Central Bank to cope with weak state commercial banks and the commercial banks to cope with still powerful state enterprises. This brings us to a lack of microeconomic analysis in the paper, which evidently

requires more time, deeper specialization and greater access to scarce local data.

Among other topics less adequately covered are Czechoslovak agriculture, foreign trade and the build-up of market institutions. The neglected local agriculture, with its unsolved problems of re-privatization and surpluses, may become a time bomb generating political instability and a crawling economic demise. The reasons why trade within Eastern and Central Europe collapsed so abruptly – showing little prospects of quick recuperation – are generally covered very inadequately in recent papers on transitional economies. Finally, insufficient attention is paid to the build up of market institutions in post-command economies, which is also not considered by many analysts to be a worthy object of economic policy. This overly liberal and macroeconomic approach to economic policy may, in the face of a present sluggish state of the evolution of markets, become the rock on which Czechoslovak economic reform founders.

Putting aside minor errors and omissions, one must appreciate this analytical study. Begg presents a competent introductory analysis of a mass of problems encountered during a unique social experiment, an attempt to switch from the most extremely centralized economy to a liberal one. The paper is not only of interest for an outside observer, but presents relevant questions even to a rather obvious insider. The analysis is well balanced in historical, emprical and logical judgements which never stray beyond their descriptive framework.

Nevertheless, in one respect the paper could be more specific and definitely avoid strict objectivity – it is the point to which every informed reader was curiously looking forward throughout the paper: should we believe in Santa Klaus? This normative question evidently transcends the problems of economic analysis. But in the case of Czechoslovakia, where there are so few clear-cut economic (and political) leaders, it becomes imperative not to leave it open.

John Flemming
The European Bank for Reconstruction and Development

This paper is comprehensive and most of it gives me no difficulties. I particularly liked the discussion of corporate governance and control, and the role of banks as part owners of privatized enterprises possibly through mutual funds. I also hope that his devices for mitigating the consequences of restitution prove effective.

David Begg clearly has reservations, not only about the market in corporate control, but also on political and economic risk. He adduces arguments to the effect that it would in some circumstances be wrong

to sell assets quickly to foreigners – but adds a footnote to the effect that in other circumstances to do so could be doubly valuable!

I agree that outstanding inter-enterprise credits present a problem, but it is one fed by recent changes of terms by banks. As budgets are hardened and a few firms fail, others will realize that the credit they have extended is not secure and will attempt to call it in. Unless the banks stand ready to step in, and the terms quoted suggest otherwise, the risk of a credit implosion precipitating recession or worse would seem significant.

For this reason, I strongly agree that enterprise debt should be adjusted to what each can bear before privatization or commercialization, and that consequent adjustments be made to creditors' balance sheets.

These points are made in a discussion of monetary policy. I share David's fairly relaxed attitude to multiple anchors but must stress that the 'compatible targets' to which he refers are only *ex ante* compatible and that their subsidiarity and liability to amendment must be stressed heavily. For a small open economy like that of Czechoslovakia, I am sure David is right to give primacy to the exchange rate. I also agree that a promise to hold the exchange rate as long as one can is not worth much.

David is a little coy about the rule to be announced, and followed, to ensure that future exchange rate accommodation is believed to be restricted. Partial accommodation ensures that competitiveness is lost as long as inflation exceeds that of the reference currency. Admittedly it would be recouped if the formula were extended into a period in which domestic inflation fell below that abroad. The prospect of this may, however, be too remote for a partial accommodation formula to be credibly sustainable. It might be better to commit to a modest *unconditional* crawl of, say, 5% per annum which would imply losing competitiveness when the inflation differential exceeds that level and recouping it when it is smaller. The speed of crawl could be reduced towards zero as convergence occurred.

Like David, I would answer the question 'where is the market failure' by pointing not to the capital market – less than perfect though it is – but to the labour market. How high does he think unemployment will go in Czechoslovakia? He quotes the official assumption of 5% for 1991, but clearly expects more – how much more? In a purely macro context, it may be important to teach people lessons, and 10% unemployment for one year may be as effective as 5% for two years. From a micro-economic point of view, we are concerned not with nominal wages but with relative wages and the reallocation of labour and capital. In this context, I suspect that the social product of unemployment falls off

rapidly above about 5–10% (as it may also from an anti-inflation viewpoint). There should be ample applicants for vacancies, and having to feed a reserve army of unemployed reduces resources available to expand viable sectors.

Part of the problem is due to the relatively high levels of benefits in a situation where real wages in several sectors will be under downward pressure. This increases the scope for reducing budgeting outlays by wage subsidies. I entirely agree that any such device should be temporary and unconditional in the sense that it is not negotiated case by case. It need not, however, be uniform as David Begg proposes. Much depends on how he would propose to finance the subsidy. I would like the tax base to be enterprise value added. If the subsidy were to be a uniform sum per man-hour an enterprise's net payment would be proportional to the excess of its value-added per man-hour over the national average. I have myself proposed such a tax as a revenue-neutral redistribution of the quasi-rents associated with radical changes in relative prices. As David argues, it should be phased out over a fixed period.

Such a measure need not slow the reallocation of resources if it increases output along the transition path. It certainly serves notice on enterprises that are net recipients to raise productivity and if, as I would hope, employees know the net position of their employer, they too would have an incentive to leave temporarily subsidized employment for that currently being taxed.

General discussion

A number of panel members pondered about the prospects for a successful implementation of the reforms in Czechoslovakia. Petr Aven was worried that the government was not properly insulated from pressure groups; he predicted that the production sector would soon put pressure on the government that will be difficult to withstand. Richard Portes suggested that outright adoption of EC laws and practices regarding competition would help a great deal in protecting the government. Aven agreed but warned against excessive reliance on the legal framework; in his opinion, managers of SOEs are prone to collude and help one another to circumvent particular legislation so that the hysteresis in the production system should not be underestimated. Martin Hellwig expressed concerns that too much attention was given to the restructuring of industry at the expense of the government services. He argued that infrastructure for transportation and telecommunication were somewhat neglected even though proper infrastructure is a necessary condition for a successful restructuring of industry.

The appropriate structure of taxes was also debated. Aven warned that using prohibitive taxes to control wages was likely to prove ineffective; in the USSR, companies subject to such taxes quickly went on strike forcing the government to back down, he suggested that sufficient resources should be guaranteed for the government during the transition to avoid the risk of monetization. Michael Burda warned that taxes rates might indeed have to be raised in the near future because tax revenues fell substantially after the recent price increases. Aven spoke in favour of a turnover tax which however crude, is an effective instrument to raise revenue. Maurice Obstfeld disagreed and suggested that the tax structure should favour savings and investments, as soon as feasible. A consumption tax might thus be preferable.

The extent of the crown's devaluation was the subject of a heated debate. Portes argued that the appropriate benchmark to set the exchange is equilibrium in the capital market; he also granted that devaluation beyond such 'equilibrium' rate is necessary to have some room for manoeuvre in a very uncertain environment. Yet, he thought that the devaluation of the crown was excessive. Kolodko agreed but noticed that the Czech government had not missed the mark as badly as the Polish government. The main drawback from an excessive devaluation arises from a lack of import competition and associated incentive to restructure. Indeed, it seems, according to Portes, that relative prices in Czechoslovakia show no convincing sign yet of convergence towards international prices. Burda, while acknowledging this, suggested that the elimination of negative value added at world prices was not an absolute priority; there are some negative externalities associated with unemployment and restructuring should be paced accordingly.

Appendix. Privatization, precommitment and the pace of restructuring

Here I develop three ideas. First, some existing SOEs are simply inappropriate. They will never be productive enough to survive market competition, and are socially inefficient in the long run. Second, inadequate corporate control has social costs. Workers appropriate all the rents. Not only do they consume all the revenue of an enterprise, they deplete the capital stock 'too quickly', living off past capital. Third, privatization may act as a government precommitment not to subsidize SOEs. All three factors affect the efficient path of restructuring. I now set out the simplest model in which these issues can be formally analysed.

There is a new, efficient, competitive private sector an an old inefficient state-owned sector. Let Y be output of the new sector, Q

output of the old sector. If N is new-sector employment and I old-sector employment

$$Y = aN + (1-a)(N_{-1} + Z) - cZ \qquad 1 > a + c \tag{A1}$$

$$Q = bI + (1-a)(I_{-1} - Z) \qquad b < a < 1 \tag{A2}$$

In each case, output depends on current and lagged employment. The latter can be seen as embodying capital from the past: it allows sufficient dynamics to make the problem interesting. This endowment is also affected by any privatization Z transferring assets between sectors at the start of the current period. The new sector is the more productive in the steady state ($b < a$), providing one motive to restructure. For simplicity, I assume that capital is equally productive in both sectors (the second coefficient $(1-a)$ is the same in both equations). However, there is a real output cost in privatization, the third term in (A1). This simple specification has many interpretations. One is dislocation costs, analogous to the installation cost of capital in investment theory; a second is that too rapid privatization foregoes opportunities to break up structural monopolies. Nevertheless, I assume privatization helps the new sector ($a + c < 1$).

Population is 1 and labour supply L is $N + I$ and obeys

$$w - s = L/(1-L) \qquad L < 1 \tag{A3}$$

where w is the post-tax wage, s the level of social security. As w tends to s, there is no incentive to work; as the incentive increases, so does labour supply.

New-sector competitive firms maximize the present value (pV) of profits, taking as given the gross wage $w(1+t)$ where t is the tax rate on the wage bill. With constant returns, new sector production occurs only if $w(1+t) = a + h(1-a)$ where h is the discount factor. Given constant returns, the PV of future profits is 0 in the absence of privatization. The PV remains 0 if firms buy state assets at a competitive price, and is the PV of these assets if they are given away free.

The old sector has no corporate control: workers appropriate all the revenue; $w(1+t)$ in this sector is simply the average product. Wages differ in the two sectors, and workers move to the higher-wage sector. It may need subsidies to maintain employment in the old sector. The government chooses the tax rate t, welfare benefits s, government purchases G, privatization Z and subsidies. Total subsidies, if adopted, are $(I(a + h(1-a) - b) - cI_{-1})$, equating wage rates in the two sectors. A small open economy optimally borrows to smooth consumption completely subject to its long-run production possibilities. This is not an accurate view of Eastern Europe; implicitly foreign borrowing

constraints are significant. The problem is better captured by assuming a closed economy.

Suppose capitalists alone have access to domestic capital markets, and completely smooth their own consumption; everyone else, on average richer in the future, consumes all their current disposable income. The government deficit must equal the surplus of other sectors. Households, having no surplus, have no effect on the budget. The *PV* of the central government deficit equals the *PV* of enterprise profits less the *PV* of capitalist consumption. Since the latter two are equated by capitalists, the government budget is necessarily in balance, whether privatized assets are solid or given away.

The government minimizes the *PV* of welfare costs *W*. For simplicity I set the discount rate and real interest rate to 0. Each period, *W* depends on the deviation of output from its maximum (when all labour is employed in the steady state in the better sector) and on both unemployment and inequality, which are disliked *per se* and jeopardize support for the reform programme. Per period costs *W* are

$$\begin{aligned} W &= V(Y+Q)+u(1-L)(w-s)+(1/2)u(1-L)^2 \quad V'<0 \quad V''>0 \\ &= V(Y+Q)+uL+(1/2)u(1-L)^2 \quad u>0 \qquad \text{(A.4)} \end{aligned}$$

attaching a constant weight u to the level of unemployment $(1-L)$ weighted by the income inequality $(w-s)$, and a weight $u/2$ to the square of unemployment. Given (A3), the middle term reduces to uL.

I regard the government as choosing a path for (I, N, Z). The values of policy variables may then be inferred from the constraints. Although the complete intertemporal problem may be solved within this framework, the essential insights are most easily displayed in a two-period model.

A1. The precommitment solution

Since privatization has an output cost, and no corresponding benefit, optimal policy always chooses not to privatize. I set up the model in this way to highlight the role of privatization as a costly precommitment strategy. If it has other productivity benefits, the ensuing analysis then has to be superimposed on what would then be the optimal pace of privatization.

The first-order conditions for employment in period 2 are

$$W_{N_2} = uL_2 + aV'_2 = 0 < uL_2 + bV'_2 = W_{I_2} \qquad \text{(A5)}$$

Thus $I_2 = 0$, and N_2 solves $W_{N_2} = 0$, where $L_2 = N_2$. The old sector is

still producing some output from past capital.[12] If $V(.)$ is given by $(1/2)(Q+Y-1)^2$, (A.5) implies

$$V_2' = -(u/a) \qquad N_2(u+a^2)N_2 = a(1-(1-a)(N_1+I_1)) \tag{A6}$$

For later, I note that this implies V_2' is an increasing function of N_1.

In period 1, privatization is as always zero, and the first-order conditions for employment are

$$W_{N_1} = uL_1 + aV_1' + (1-a)V_2' = 0 < uL_1 + bV_1' + (1-a)V_2' = W_{I_1} \tag{A7}$$

so $I_1 = 0$, and $L_1 = N_1$. (A.7) may then be used to deduce the entire path of restructuring. In particular, since privatization is never employed, the old sector is simply allowed to die out gradually.

A2. Restructuring without precommitments

Suppose first privatization is impossible. Imagine a government which has embarked on slow restructuring as above. What is its response to a delegation from the old sector pleading for surprise subsidies to maintain employment I at its level of the previous period? Along the precommitment path, the government is trading off intertemporal output smoothing against the costs of unemployment and inequality; in particular, higher employment and labour supply require greater inequality as an incentive to work. The cost of inequality $(1-L)(w-s)$ in the absence of surprises reduces to L. Workers in the new private sector have already supplied their labour on the basis on *expected* rates of tax and welfare benefits; however, *unexpected* fiscal changes have no effect on their labour supply. The government thus faces a temptation to create unexpected old sector employment via unanticipated subsidies, financed by unexpected labour taxes. Output is higher and the welfare cost of inequality falls. Unemployment is lower, and the income distribution better. The government cannot resist the temptation for unanticipated subsidies. Suppose it creates new employment up to the point at which $I = (I_{-1})$: insiders lobby only for preservation of their own jobs. Thus for *any* endowment I_0, further restructuring is *always* frustrated! I now examine whether privatization can replicate the precommitment profile of restructuring.

[12] This arises only because of the simplifying assumption that production inputs are additively separable. A more plausible multiplicative specification would then provide a motive for some continuing employment in the old sector. This adds nothing to the basic insight and merely complicates the arithmetic.

A3. Time-consistent restructuring

In each period the government chooses privatization, then negotiates with the old sector knowing it can't resist subsidies and will set $I = (I_{-1} - Z)$. Thus $Q = (1 - a + b)(I_{-1} - Z)$. In period 2 the first-order conditions for N_2 and Z_2 are

$$W_{N_2} = uL_2 + aV_2' = 0 \tag{A7}$$

$$W_{Z_2} = -uL_2 - V_2'(b + c) = V_2'(a - b - c) \tag{A8}$$

If $(a < b + c)$, privatization is not optimal (its cost c is too high); it cannot break the government out of the low-level equilibrium of Section A2. More interesting is the case in which $(a > b + c)$: the time-consistent policy privatizes any remaining SOEs in period 2.[13] Thus

$$L_2 = N_2 \qquad Y_2 = aN_2 + (1 - a)(N_1 + I_1) - cI_1 \qquad Q_2 = 0 \tag{A9}$$

and (A.7) then determines N_2 in terms of (N_1, I_1). In period 1,

$$W_{N_1} = uL_1 + aV_1' + (1 - a)V_2' = 0 \tag{A10}$$

$$\begin{aligned} W_{Z_1} &= -uL_1 - V_1'(b + c) - V_2'(1 - a - c) \\ &= V_1'(a - b - c) + V_2'c < 0 \end{aligned} \tag{A11}$$

Hence the optimal policy is immediate privatization of *all* state assets (only because for simplicity I have assumed a *constant* marginal cost of privatization). Thus privatization is effective as a device to precommit government subsidies. The time-consistent solution is forced to privatize and restructure more rapidly than the optimal policy if only full precommitment were possible. This incurs output costs, but it does at least allow restructuring to get under way. Comparing (A7) and (A10) we can be more explicit. These differ only in that the output cost of privatization in (A10) in itself tends to reduce V_1'. Since V_2' depends positively on N_1, (A6 applies in both cases), the time-consistent solution has larger N_1 and lower Y_1 than the full precommitment solution. The inability fully to commit thus leads to inefficiently rapid restructuring and a more severe initial recession.

This example contains some vital lessons. If the new sector is sufficiently more productive than the old, and adjustment costs are sufficiently low, big bang is the optimal solution. Since this can be achieved by privatization, there is then no time-inconsistency issue. More interesting is the case discussed above. The optimal policy, if it

[13] Of course if the output cost of privatization is cZ^2, some small level of privatization will then always be optimal.

were attainable, is to proceed slowly to achieve the efficient tradeoff between intertemporal smoothing and inequality; this requires that it is worth saving some of the old capacity, either becauuse its capital value is larger in that industry or because there are increasing marginal costs of rapid privatization. The absence of the ability to precommit to resist subsidy demands then forces the government into a second-best choice: privatize (which entails costs relative to the precommitment optimum) or abandon reform. The extension of these insights to more general models is discussed in Section 4 of the text.

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