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RENT GRABBING AND RUSSIA'S ECONOMIC COLLAPSE

By

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Abstract

Focussing on transition dynamics, we contrast early expectations for a welfare promoting market economy in Russia and their adverse realizations. A model is set up to show how initial conditions and reform policies can stimulate undesirable rent grabbing behavior. In the path dependant processes of the model, a "dishonesty multiplier" may result, leading to a sustained adverse outcome. Conventional policies to overcome this outcome are found to be ineffective. Instead, restoring a beneficial path requires policies that redirect incentives in a more acceptable direction.

Contents

1. Introduction

In 1991, when the then Soviet Union initiated steps for the fundamental transformation of its centrally planned economy into a market - oriented one, there was widespread optimism that the transformation process would be beneficial. Responding to the request made at the G-7 Houston Summit, four key international institutions put together a blueprint at the end of 1990, which became the foundation stone for the West's advice and assistance to Russia.[i] It was envisaged that the superior efficiency of the market economy would quickly be manifested, and that the gains would be widely enjoyed provided that its basic features were introduced early. In the eight years that have elapsed, however, the outcome, as measured by the gross domestic product and other indicators (see Table 1), does not bear out the early optimism. The bulk of the population is distressed, while the government fails to provide basic public goods and to lead the reform. Polls, the media, and researchers report that the population at large has become disenchanted with the process of market reform.

There are competing explanations for the catastrophic outcomes, ranging from the "lack of implementation will" on the part of the authorities to the "inappropriateness of the reform strategy" that was pursued. Proponents of the former view generally embrace the so-called "big bang" approach of rapid implementation of the reforms, in part to thwart the formation of opposing coalitions. Opponents agree with the necessity of market reforms, but recommend a different sequencing with more emphasis on "gradual" reforms so as to take account of the time consuming nature of institution building. [ii]

Each of the alternative views can be supported by reasonable arguments. Yet, in our view neither explanation is adequate. They fail to take account of how incentives can shift and interact in a socially counterproductive manner as major institutional structures are changed. In particular, unproductive redistribution of income, i.e., so-called "rent seeking" or even more evocatively, "rent grabbing", has created a situation where the simple application of policies based on either of the two explanations could make matters worse. For example, market-defining reforms could have been implemented more rigorously in Russia, but if the reformers did so, especially after the process has failed, it might merely provide greater scope for the further spread of corruption. Similarly, a slowing down in the pace of reform, or even recourse to selective interventions to make up for the perceived excessive effects of past reforms, may not now promote a successful outcome but simply stimulate further rent seeking. A successful future reform strategy must therefore contend with rent seeking as a central phenomenon.

This paper focuses on the question of why the capability of the Russian economy to sustain its inhabitants has shown a progressive deterioration despite widespread liberalization and privatization, and claims that substantial international support was provided.[iii] Particular attention is paid to the transition dynamics from one structural state to a desired one. These are treated as path dependant, where history has its own unique momentum, and where the responses of agents along the unfolding path determine its evolution. [iv] Conventional remedies may not be enough to reverse the direction of the path if there has been some undesirable evolution in incentives - the motive forces of the system. Instead, it will be necessary to redirect incentives in a socially productive direction. Although the analysis is developed by reference to the Russian case, the principles that underlie it are quite general.

The paper proceeds as follows: Section 2 provides a brief overview of the reforms and major outcomes in Russia. Section 3 develops a path dependent model of rent seeking to help explain the outcomes. Drawing on this model, Section 4 identifies some of the deeper underlying causes of the Russian economic and fiscal crisis. The issue of how to reverse direction is taken up in Section 5. Some conclusions are presented in Section 6.

2. Initial reforms and outcomes: A brief overview

From the outset of the reform process, at the beginning of 1992, there did not appear to be any major disagreement about the ultimate goal of establishing a market economy. There was some discussion as to whether the economy should be organized on social capitalist lines as in Northern Europe or on market capitalist lines as in the United States, with the latter conception prevailing. Nonetheless, irrespective of the capitalist mode, the basic requirements of a market economy are common and involve the following five inter-related aspects of particular reference to Russia: (a) liberalization of prices and transactions; (b) the pursuit of self-interest and large scale privatization; (c) a stable price level so as to preserve the signaling aspect of the price mechanism; (d) a reduced role of government; and (e) a restructured legal and financial system.

Early expectations

What strategy would best achieve these objectives? Presidential guidelines that were adopted by the Supreme Soviet in October 1990 proposed moving to a market economy in four stages spread over a period of one and a half to two years.[v] The first stage would be devoted to stabilizing the economy and beginning the commercialization and privatization of state enterprises. The second stage would emphasize the gradual liberalization of prices, introduction of a social safety net and the maintenance of tight financial policies. Additional structural policies would be undertaken at the third stage, involving such items as restructuring the labor compensation system and the housing market, while easing financing constraints as markets stabilized. In the final stage, having achieved full internal convertibility of the ruble, its external convertibility would be provided. Such a gradualist, conservative, strategy has its adherents. In arguing for an evolutionary approach the hope is that the emerging market defining institutions would be more viable and sustainable as they would respond to local needs and reflect a local flavor.[vi]

The view that prevailed, however, favored the rapid creation of market defining institutions, preferably reflecting “best practices” in successful market economies. The HS report expressed concern that state intervention, even though slated to decrease, in areas such as control of production under state orders, surveillance of prices to prevent excessive profits, and control of state inputs would delay realization of the benefits of a market economy. The report goes on to note that a major risk of the gradualist approach would be its undesirable macroeconomic consequences. Rising inflation would be suppressed, shortages would be generated, and this would hamper the further liberalization and restructuring of the economy. The result would be a failure to deliver on the promises of reform, discrediting the objective of a market economy. A radical scenario was therefore proposed. This would be based on “…a strong macroeconomic stabilization program, designed to reduce the budget deficit rapidly to or below the level of 2 to 3 percent of GDP, accompanied by immediate decontrol of most prices and the start of privatization of small-scale enterprises.”(HS, op.cit., p.18).

Rapid and fundamental reforms were initiated in the early years in several different areas. Central Planning, which had begun to fray at the edges as a consequence of the earlier policies of *Perestroika* and *Glasnost*, was switched off in favor of cash management as the enabling mechanism, and fiscal and monetary policies as its principal instruments. The fiscal restructuring that was undertaken involved the monetization and reduction of systemically pervasive subsidies on production and consumption; replacement of a multitude of largely individually negotiated taxes by a few “best practice” taxes such as the value-added tax (VAT) based on objective, parametric schedules; overhaul of the tax administration, replacing the traditional Soviet organization on sector lines by a modern orientation based on functions such as assessment and collection; widespread adoption of self-assessment in place of administered assessments; new collection procedures placing less reliance on traditional automatic bank deductions, in part to promote proper banking functions; and a shift to indirect control over tax payers, for example, through the tax returns submitted and monitoring of related “paper trails” rather than the physical control of each establishment. Financial sector restructuring involved the establishment of an independent central bank and the creation of banks and other financial institutions that would operate on commercial lines in a competitive environment. The external sector was also reconstituted. Monolithic trading organizations became relics of the past and replaced by freely transacting importers, freer exporting, and a managed, unified, exchange rate. Finally, the productive sector was restructured through rapid, large-scale privatization. This was intended to jump-start the private economy and also to generate revenue and to save on fiscal costs.

As the preceding, selective, review indicates, a common theme of the reform has been the abandonment of heavy-handed, Soviet style, controls with less direct, market-friendly, methods. It was expected that with the rapid adoption of a market orientation and compatible fiscal, monetary, and exchange rate practices, a beneficial circle would result. By providing greater expression to the pursuit of private self-interest in an appropriate enabling environment, efficiency gains would be promoted, in a manner reminiscent of Adam Smith. Liberalization of the domestic and external sectors, together with an appropriate tax system, would bring out into the open the sizable underground economy that had developed in Soviet times. Self-interest would provide the catalyst to promote mutually beneficial outcomes. This, of course, presumes that the overwhelming majority of participants would act in accordance with the new rules of the game. For example, tax payers would pay the taxes they owed and tax collectors would collect them; bankers would extend loans on the basis of objective criteria and borrowers do their best to avoid default; managers would use their new found autonomy to act like their textbook western counterparts, minimizing costs and maximizing profits on behalf of their shareholders, and not engage in asset stripping and other self-serving transactions; and bureaucrats would perform their duties in accordance with their mandates and not resort to corrupt practices. If all had gone according to expectations, a thriving private sector would have emerged, and a greatly circumscribed government would have had adequate resources to provide needed public goods, including that of managing the transition.

Outcomes

The experience belies these expectations. As is indicated in Table 1, measured GDP underwent a severe decline in the first year of the reform (1992), which then persisted and continued to fall, reaching about one-half of pre-reform levels by 1998. The decline in real consumption of 20 percent over this period was less, indicating that households preferred to reduce their savings rate. But real investment outlays collapsed to about one-fifth of traditional levels. The demands for capital replacement in response to the new relative prices and freshly accessible technologies should have led to substantial additional investment. This did not occur. However, the investment collapse helped keep the current account of the balance of payments in surplus. Thus Russia has been lending its excess saving to the rest of the world rather than using it to finance its transformation. Several studies point to a high, sustained, rate of capital outflow, including through the acquisition of locally held US $ balances (dollarization), ever since the initiation of the reforms. Estimates suggest that capital outflows have exceeded the combined current account surplus of the balance of payments and official and portfolio capital inflows, thereby contributing to Russia's debt repayment crisis.[vii]

The decline in real income levels has not been equally shared. There are indications that the distribution of income has become highly skewed, with the top decile of the population enjoying a sharp increase in real incomes. This implies that the remaining 90 percent of the population were subject to an even bigger decline in real incomes. In fact, only three years into the reform, the poverty head-count ratio (1993-95 average) amounted to 44 percent of the population, using World Bank definitions. While it is probably not true that there was no poverty in soviet times, this level is astonishing. Equally astonishing for an industrial country is the decline in life expectancy. Between 1990 and 1995, life expectancy for males dropped from 63.8 years to 58.7, whereas for females, it went down from 74.3 to 71.7. There has also been a sharp drop in fertility rates and the population is dwindling. Such statistics are suggestive of the toll that the economic collapse is exacting on the population.

Turning to the fiscal situation, the share of general government revenue in GDP fell from 39.3 percent in 1992 to 31.7 percent in 1998, with much of the reduction taking place in the first two years into the reform, (Table2).[viii] The fiscal situation suffered from deterioration in the bases of taxation. Firms experienced a severe decline in reported profits that partly reflected the very low levels of capacity utilization because of the collapse in aggregate demand, and partly their diversion through rent seeking. Expenditures for general government have experienced an even bigger reduction from 57.7 percent of GDP in 1992 to around 40 percent of GDP by 1998, again with the bulk of the adjustment occurring in the first two years. As officially estimated GDP had by 1998 shrunk to about 56 percent of its pre-reform level in 1989, the absolute decline in government spending is even greater. This has eroded the ability of the government to provide basic public goods and to lead the reform. Nonetheless, the fiscal deficit ratio has remained stubbornly high at around 8 percent of GDP. Aside from the first year, when foreign financing loomed high, the deficit has been largely financed by domestic credit creation and, in the later years, by domestic debt instruments.

From the onset of the reform, government expenditures were subject to new pressures such as higher debt service costs as a result of the market pricing of debt and the need to provide a safety net. At the same time, decentralization has modified the traditional pyramidal organization in favor of increasingly independent regional governments, with some inevitable siphoning away of resources from the center. Techniques of budgeting and cash management in a market context are poorly developed, causing difficulties in the efficient prioritization of expenditures. There is an excessive reliance on so-called sequestration procedures under which expenditures are not incurred until the revenue has been collected. This is frequently the source of disruptive cutbacks in expenditure programs and widespread arrears. Major delays characterize the payments of salaries to state employees and of pensions to the retired, further demoralizing functionaries whose salaries already reflected a severe real income loss.

Periodic adaptations of the tax system to relieve the public finances only made the situation worse. While some of the intended reforms may have been well intentioned, their actual implementation was influenced by the motivations of poorly paid functionaries in an environment that provided them with ample scope for malfeasance. The potential taxpaying population exhibited much lower levels of tax compliance than their counterparts in the West, and the experience with self-assessment has not been satisfactory. Furthermore, the substantial revenues envisaged from privatization never materialized. The frequency of change in the tax department heads is one indication of the considerable difficulty the tax administration has in coping.

Both research studies and the media report a massive increase in rent seeking and tax evasion. Most firms experience liquidity shortages that impair their ability to pay remunerative salaries to their staff, especially managers, and to provide an adequate return to owners. This is likely to stimulate rent seeking as would the drastic erosion in real earnings of state employees. Judging from the estimates of the size of illegal capital outflow, it appears that much of the proceeds of rent seeking are drained out of the domestic economy, with obvious adverse consequences.

3. Public rent-seeking and path dependency

The extent of rent seeking in the Russian economy is striking.[ix] We proceed next to develop an analytical framework of public rent grabbing and its adverse consequences for production and growth. Public rent grabbing involves attempts by employees of the state and managers of firms (defined to include both private and state enterprises) to redistribute in their favor that part of the incomes generated by firms which belongs to the state. Depending on the enforcement powers and general credibility of the state, it is possible that only a part of what the firm owes to the state will in fact accrue to the state. Managers and bureaucrats will share the remainder of the amount owed by the firm in accordance with their respective bargaining powers. The model solves at each point in time for the proportions of managerial and bureaucratic efforts that are devoted to rent seeking and to productive activities. Dynamic sequences are triggered that either lead to a good equilibrium, characterized by limited rent seeking and a rational, market-based, allocation of resources, or to a bad equilibrium. The last involves a progressive increase in rent seeking, which causes productive resources to be misallocated. This reduces output directly, takes away resources from the budget, and depresses savings while stimulating capital outflow, all serving to lower the rate of economic growth.[x]

We begin by assuming that output above subsistence levels is generated through the application of capital K, managerial effort M, and labor power L, according to a Cobb-Douglas production function $Y_t = A^* K_t^{\beta} L_t^{\xi} M_t^{\gamma}$ where A* is a constant. Subscript t denotes time period. When $Y_t = 0$, production is at a subsistence level that prevails in the absence of managerial effort or modern capital equipment. The use of labor power is assumed to be constant throughout (L_t =1 by an appropriate choice of units), and labor is paid its marginal product. With > as labor's share of value-added, gross profits that go to capital, entrepreneurs and managers are $(1 - \xi)Y_t \equiv y_t$.[xi] Thus we can write

$$y_t = AK_t^{\beta} M_t^{\gamma}. \qquad \text{Here } A = (1-\xi)A^* \tag{1}$$

The real wage of workers is proportional to production, which can be represented as

$$\omega_t = \frac{\xi}{1-\xi} y_t \tag{2}$$

There are *m* managers, each capable of one unit of effort. Their total effort *m* is allocated between productive activities and rent seeking, where the fraction (1-λ) is the share devoted to productive activities and λ to rent seeking. Thus

$$M_t = [(1-\lambda_t)m_t] \tag{3}$$

Let the fiscal revenues owing to the state, or "taxes" for short, be a proportion τ of y_t. Retained profits from productive activities are then given by

$$\pi_t = (1-\tau)y_t \tag{4}$$

The credibility of the state - a leaking bucket

Gains from rent seeking are affected by the credibility of the state apparatus i.e. by the extent to which laws are enforced, politicians are dedicated to promoting the public good, and bureaucrats are honest. Letting p_t measure the expected fraction of taxes that leaks out to rent seekers, the degree of credibility of the state may be denoted by $1 - p_t \leq 1$.

The incidence of rent seeking is λ_t in the private sector and θ_t in the public sector, where the symbols refer to the fraction of each group that is engaged in rent seeking behavior. How much leakage there is from the state is influenced by the extent of the established network between rent seekers for a given set of laws, regulations, and organization of the enforcement mechanism. This is represented here by the measure of last period's matches between rent seeking managers and corrupt officials.

$$p_t = \lambda_{t-1}\theta_{t-1} \tag{5}$$

Private sector managers try to appropriate rents by facilitating tax evasion. They can bribe dishonest tax collectors by giving them a share 1-ϕ of the rents at issue, where ϕ is the bargaining power of managers. Hence, ϕp_t can be interpreted as the expected retained value of every ruble owing to the state that a firm tries to evade. As a result, firms pay less than what they owe, the government receives less than what the firms' pay, with the difference going to corrupt bureaucrats.

Rent grabbing by managers

Each potential rent grabbing manager considers p_t and the average level of other managers' rent seeking λ_t as given. The expected marginal gain to a rent seeking manager is $p_t\phi\tau y_t / m\lambda_t$. Thus any interior solution $0 \prec \lambda_t \prec 1$ has to satisfy the arbitrage condition that equalizes for all managers the marginal gains from productive work and from rent seeking.

$$\frac{\partial \pi}{\partial M_t} \equiv (1-\tau)\gamma \frac{y_t}{(1-\lambda_t)m} = \frac{1}{m\lambda_t} p_t\phi\tau y_t \tag{6}$$

From this arbitrage condition the solution for λ_t follows as

$$\lambda_t = \frac{p_t\phi\tau}{\gamma(1-\tau) + p_t\phi\tau} \tag{7}$$

The level of rent seeking λ_t amongst managers thus depends on the credibility of the state. A fully credible state with proper policies and an efficient and honest bureaucracy i.e.

$p_t = 0$ would discourage rent seeking. A less credible system, however, invites public rent seeking, which increases with the leakage of the bureaucratic and political system. Furthermore, higher tax rates lower the marginal gains from productive management, while increasing the gains from unproductive rent seeking. Managerial rent seeking is also higher, the stronger is their bargaining power N relative to bureaucrats.

Rent grabbing by bureaucrats

Let the bureaucracy be manned by *b* bureaucrats, of whom a fraction θ_t is corrupt. Suppose each bureaucrat compares the costs and benefits of acting in a corrupt manner and chooses the action that maximizes the expected earnings. An important element in this calculation is the wage received relative to bribes.

Denote by *B* the bribes that a corrupt bureaucrat can obtain, and by ω_t^g his wages. The expected net gain from taking bribes is then $v_t \equiv (1-q)(B+\omega_t^g)$. Here *q* is the probability of being detected by an honest supervisor. If detected, the bribe is confiscated, and the individual is fired, thereby losing wages. On the other hand, the gain from acting honestly is simply ω_t^g. The arbitrage condition for bureaucrats is then

$$(1-q)(B_t + \omega_t^g) = \omega_t^g . \qquad (8)$$

The bribes, or illegal incomes, that corrupt bureaucrats can collect, given their bargaining power $(1-\phi)$ are given by

$$B_t = \frac{\tau(1-\phi)\, p_t y_t}{b\theta_t} \qquad (9)$$

Using (9) in (8), the solution θ_t is

$$\theta_t = \frac{(1-q)\tau(1-\phi)\, p_t y_t}{b\omega_t^g q} \qquad (10)$$

According to this equation, bureaucratic corruption increases when the credibility of the state falls, which is indicated by a rise in p_t. It increases with the tax rate and the level of gross profits. It also increases with increasingly ineffective supervision by more senior bureaucrats indicated by a lower *q*, and if real wages decline.

We endogenize the determination of public sector pay by assuming a simple budget rule - the sequestration rule - whereby expenditures are not increased until revenue is in hand. Suppose next that the taxes collected to cover the public sector wage bill are proportional to $\tau(1-p_t)y_t(1-s_g)$, where s_g is the public savings rate. Hence,

$$\omega_t^g = \frac{\tau(1-p_t)y_t(1-s_g)}{b} \tag{11}$$

This equation demonstrates how wages to civil servants can be affected by the leakage of the tax system. The higher is the leakage p_t, the lower wages, which from (10) will tempt bureaucrats to act more corruptly.

Using (11) to insert for ω_t^g in (10), and taking account of the fact that θ_t cannot exceed 1, the equilibrium level of corruption for each value of p_t can now be expressed as

$$\theta_t = \min\left(1, \frac{p_t}{1-p_t}\frac{(1-\phi)(1-q)}{q(1-s_g)}\right) \tag{12}$$

As a consequence of the budget rule, the stimulus of a higher tax rate to bureaucratic corruption is offset by the use of enhanced revenues to increase wages. Thus the only sure way of reducing corruption is by increasing *q*, which measures the effectiveness of oversight and control exercised by more senior officials.

Savings, investments and growth

Assume for simplicity that only government, firms, and their managers save, but not workers. Government savings can be expressed as $s_g(1-p_t)\tau y_t$. Regarding private savings out of legally acquired incomes, there is an issue as to whether they are kept at home or exported. A factor to be considered is the conflict between the behavior of managers and the interest of savers, as the return on savings is lowered the higher is p_t from managerial rent seeking. Capital outflow is, therefore, more likely the lower the credibility of the state. Thus the domestically retained component of the legally acquired savings of firms can be represented as $s(p_t)(1-\tau)y_t$, where the savings rate $s(p_t)$ is declining in p_t. As for illegally obtained rents, this is likely to take the form of capital outflow for purposes of concealment. For simplicity, we assume that all savings out of illegal rents are exported. We shall also make the plausible assumption that the flow of foreign savings into the economy $d(p_t)y_t$ is a declining function of p_t.[xii] Thus the amount of savings forthcoming to finance domestic capital accumulation is

$$S_t = s_g(1-p_t)\tau y_t + s(p_t)(1-\tau)y_t + d(p_t)y_t \equiv f(p_t)y_t \tag{13}$$

Here $f'(p_t) \prec 0$. The higher p_t the lower the credibility of the state, and the smaller the flow of overall savings to finance domestic investment.

To avoid unduly complicating the model, we assume that investment is constrained by savings, which equals the sum of capital accumulation and depreciation

$$S_t = \Delta K_t + \delta K_t \tag{14}$$

On taking percentage changes of equation (1), and noting that the gross profit term y_t (given that $A*$ is assumed constant) is interchangeable with the production term Y_t we obtain the approximation

$$\frac{\Delta Y_t}{Y_{t-1}} = \beta\frac{\Delta K_t}{K_{t-1}} + \gamma\frac{\Delta M_t}{M_{t-1}} \tag{15}$$

Output grows when the combined effect of capital accumulation and varying managerial effort devoted to production is positive.

We have from (7) that $(1-\lambda_t) = \dfrac{\gamma(1-\tau)}{\gamma(1-\tau)+p_t\phi\tau}$, implying that

$$\frac{\Delta M_t}{M_{t-1}} = \frac{1-\lambda_t}{1-\lambda_{t-1}} - 1 = \frac{\phi\tau(p_{t-1}-p_t)}{\gamma(1-\tau)+p_t\phi\tau} \tag{16}$$

Inserting (13), (14) and (16) into (15), we obtain the growth equation

$$\frac{\Delta Y_t}{Y_{t-1}} = \beta\{f(p_t)\sigma_t - \delta\} + \gamma\{\frac{\phi\tau(p_{t-1}-p_t)}{\gamma(1-\tau)+p_t\phi\tau}\} \tag{17}$$

where $\sigma_t = \dfrac{Y_t}{K_{t-1}}$ is the output-capital ratio.

The overall solution for the rate of growth of output thus reduces to a function of the leakage term p_t, which describes the credibility of the state. The lower is the credibility of the state the lower is the rate of output growth.

Divergent paths and multiple equilibria

To derive the time paths of the evolution of production and income, we consider first the determination of p_t in equation (5). On using (7) and (12) to substitute for the rent seeking terms in equation (5) we obtain

$$\frac{p_t}{p_{t-1}} = H(p_{t-1}) \tag{18}$$

where $$H(p) \equiv \left[\frac{\phi\tau}{\gamma+(\phi p-\gamma)\tau}\right]\left[\frac{p(1-\phi)(1-q)}{(1-p)q(1-s_g)}\right] \tag{19}$$

Observe from (19) that $H(0)=0$, $H'(p) \succ 0$, and that *H(p)* goes to infinity as *p* approaches 1. Thus there must be an interior value of $\tilde{p}$ that gives us $H(\tilde{p})=1$. It might be noted that the leakage term $\tilde{p}$ is higher, the higher the tax rate τ, and the lower q.

When $p_t = \tilde{p}$ the level of corruption and rent seeking is constant in the steady state. From (17) it follows that if $f(\tilde{p})\sigma_0 \succ \delta$ production will grow till the output-capital ratio reaches $\tilde{\sigma}$ defined by $f(\tilde{p})\tilde{\sigma} = \delta.$ In the steady state the output-capital ratio is a function of $\tilde{p}$. Hence, the dynamics of the system reduces to that of p_t. With $p_t = \tilde{p}$ and $\sigma_t = \tilde{\sigma}$ we are in a steady state with constant production.

This steady state equilibrium is unstable. Small disturbances would either lead to a vicious circle of increasing fraud or a virtuous circle of improving efficiency. Since $H'(p)$ is positive, a small deviation from $\tilde{p}$ would lead to p_t moving further away from $\tilde{p}$. Two possibilities are relevant, which are illustrated in the phase diagram presented in Figure 1. Point A refers to the initial and unstable steady state equilibrium, where its location depends on $\tilde{p}$.

(i) The vicious circle

Consider first a small increase in *p* above $\tilde{p}$. This may have been triggered by raising the tax rate, or lowering public sector wages, or reducing the effectiveness of oversight and control *q*. If the initial value p_0 is higher than $\tilde{p}$, the value of *p* grows over time. This will generate a vicious circle with increasing rent seeking and corruption. As seen from (7) and (12), λ_t and θ_t grow with p_t. A "dishonesty multiplier" is set off, where rule bending and economic crimes by the private sector stimulates corruption in the bureaucracy, which in turn induces further rent seeking in the private sector. Along this path, an increasing proportion of resources will be devoted to rent seeking. Production declines as is readily seen from (17), where $p_t \succ p_{t-1}$ implies that $\Delta y_t \prec 0$. With falling production, real wages to workers are reduced according to (2), and to civil servants, according to (11). The pay of civil servants will decline both because of the fall in revenue induced by y_t going down and because of the leakage from the tax system as p_t goes up. An increasing p_t over time widens the initial gap between $\tilde{p}$ and p_0, indicating growing rent grabbing and declining production. The process continues until all bureaucrats have become corrupt, at which time $\theta_t = 1$ and the bulk of managerial efforts are devoted to rent grabbing. As a consequence of the latter, we have from (5), $p_t = \lambda_t$. Substituting for the value of p_t in (7), provides the long-run solution for managerial rent grabbing: $\lambda_t = 1 - \frac{\gamma(1-\tau)}{\phi\tau}$.

Production will approach the subsistence level as capital depreciation is higher than capital accumulation. The "bad" equilibrium is shown as point B in Figure 1.

(ii) The virtuous circle

Next, consider a situation where the initial level of leakage p_0 is brought below $\tilde{p}$, for example, through a reduction in the official tax rate, or a decline in bureaucratic corruption brought about by better wages or more effective oversight *q*. From (7) and (12), λ_t and θ_t go down as p_t declines. This generates an "honesty multiplier" which brings about cumulative reductions in rent seeking and increases in production according to (13). Real wages of both private sector workers and civil servants now grow according to (2) and (11), and this development contributes further to a decline in p_t. Thus over time, the initial disturbance of $p_0 \prec \tilde{p}$ is reinforced. This process of decreasing rent seeking and increasing production continues until all managerial efforts are allocated to productive activities, and all bureaucrats refrain from corrupt practices, at which time $p_t = \theta_t = \lambda_t = 0$. Production continues to grow as long as $f(0)\sigma_t \succ \delta$, eventually reaching a steady state. The good equilibrium is shown as point C in the diagram.

4. The Russian economic and fiscal crisis – an interpretation

The above model captures some crude relationships between economic performance and bureaucratic and managerial behavior that may shed light on the sustained economic collapse in Russia after the reforms. It should, nonetheless, be emphasized that the model abstracts from several factors, both of a macroeconomic and structural nature, that may have also played a role in the decline.[xiii] In the hypothesis of this paper such factors may have been more influential in determining the initial setting and, in some cases, the triggers for the sustained behavioral responses captured by the model. Referring to the diagram, one can imagine Russia being placed at an intermediate position such as A in the initial stages of the reform. Corruption and rent seeking activities had become fairly widespread under the Soviet system, which was to some extent kept under control by stringent state policing and a variety of institutional checks and balances. The selected reform strategy, and the manner of its implementation, determines whether this situation is improved or further worsened over time.

Initial conditions and triggers

Output declined sharply in the initial period following the reform - 15 percent in 1992 and a further 20 percent over the next two years. Both supply-side factors, unleashed by rapid external sector and domestic liberalization and removal of state mandated supply linkages, and demand factors appear to have been involved. By itself, the output contraction need not have stimulated rent seeking behavior. Indeed, an underpinning of the strategy pursued was that rapid liberalization and introduction of market forces in a context of stabilization would restrain rent seeking, while the positive incentives created would eventually stimulate a recovery. But the way in which demand was reduced, partly involving a sharp cut in the real incomes of employees, provided a trigger.

Two elements concerning the reduction in real wages should be noted. First, in order to combat the initial extremely high rates of inflation, an incomes policy was adopted to restrain real wages. However, high inflation was not the result of excessive wage growth, which generally lagged the rate of inflation in the initial years (see Table 1). The second source of erosion arose from the way in which the boundary line between the state and the private economy was redefined. In pre-reform times, actual real income exceeded the formal wage payment owing to the vast array of free or heavily subsidized goods. These were financed through the Soviet practice of keeping wages low and constant - an implicit tax on wages - that increased the size of the enterprise surplus transferred to the state. However, the reform required that many goods and services formerly supplied by the state be shifted to private vendors. Insofar as these are now sold at market prices, or the subsidy on them otherwise reduced, the employee is effectively subjected to a new tax that shifts to the state budget the lost purchasing power of its employees.[xiv] The systemic loss in purchasing power of wage earners had several consequences.[xv] In addition to the curtailment of demand noted above, it stimulated recourse to subsistence production, reflected in a massive increase in own production of food on gardens and small available parcels of land, especially in the urban areas. The deprivation that was increasingly being experienced contributed to health and other social problems.

A second trigger was provided by an increase in the perceived level of taxation of enterprises. This may sound paradoxical given the Soviet practice of transferring all enterprise surpluses back to the state (100 percent taxation) and its replacement by the reform with lower parametric taxes. However, the firm did receive automatically all its financial requirements from the state. When central planning was switched off, the annual exercise of re-supplying firms with their working capital and other financial requirements directly from the budget was also turned off. Their financial needs were supposed to be met by the banking sector and, indeed, in 1992 there was a massive increase in the rate of domestic credit expansion in Russia. However, conditions of economic depression rendered many firms poor risks, while financial liberalization led banks to prefer lending to government, or to other favored clients rather than to the ordinary firm, and even less so to the smaller start-up enterprises.[xvi] In addition to a perceived loss of financing and lack of ability or training to cope with it, firms found themselves subject to higher debt service charges on their existing debt. It is not surprising that firms responded to the deteriorating cash flow by greater recourse to arrears and barter trade.

As for the ability to control the bureaucracy, the reorganization of the state apparatus to suit a market economy was disruptive. The drastic and complex institutional changes that were introduced over a short period of time made heavy demands on organizational skills that had yet to be acquired. The planning apparatus was not mobilized to program these changes. The progressive abandonment of traditional control mechanisms, but without their effective replacement by market oriented oversight procedures, rendered the state increasingly impotent.

Several examples of the loss of control can be provided in different areas. One prominent example concerns the privatization process and widespread asset stripping by managers/owners of firms.[xvii] Another example relates to the value-added tax (VAT). In part owing to the special circumstances of the break up of the Soviet Union, the tax was introduced with major design deficiencies such as mixing up destination and origin principles and applying the tax to cash payments rather than invoices. The lack of proper accounting practices, a non compliant tax paying population suffering from acute cash flow problems, and a tax administration that has difficulty in coping, especially as it underwent a drastic restructuring and change in its operating procedures, further facilitated widespread evasion. [xviii] Similar problems were encountered with several other taxes. The result was that neither officials nor private agents behaved in compliance with market norms.[xix] With the state losing control, the store was heavily looted by a relatively small number of rent grabbers, whose skills had been honed in

Soviet times. This rapidly led to a highly skewed distribution of income and wealth. The credibility of the state, already eroded during Soviet days, was further downgraded.

Subsequent reactions – the model applied

The preceding account suggests that there were enough factors to push the economy off its initial unstable equilibrium and to start it on a downward spiral. As more and more resources are diverted to rent seeking, the model predicts a continuation of the downward spiral. Even though on the face of it some progress was made in reducing the fiscal deficit in the initial years, the reforms should have led to a major improvement in the fiscal situation. The effect of the shift in purchasing power from employees to the state should have contributed sizable resources, as should the change in the mode of providing working capital. That this did not occur is an indication of the extent of public rent grabbing.[xx] An unfortunate consequence was the growing inability to pay adequate salaries to bureaucrats and otherwise supplement their benefits. Rent seeking is further stimulated as real wages fall in a context of growing corruption networks. While not explicitly incorporated in the model, perceptions of growing inequality of income and wealth are likely to have aggravated rent seeking.

It was noted in Section 2, that the official response to the revenue shortages was to overcome it through a variety of ad hoc interventions, including the application of multiple taxes on the same bases. But this increases the burden of taxation on those least able to escape it, stimulating rent seeking by them. Their declining contribution to productive work takes the economy further down the vicious circle.

Despite some successes in liberalizing prices, in privatizing much of the economy early, and in the eventual stabilization of the inflation rate, the state became progressively more ineffective. This was associated with the lack of resolution of major political events, and frequent changes in regulations, laws, and often even of the implementing officials. Referring to the model, as the measure of state credibility, $1-p$, continues to fall, the economy continues along the downward path. Persistent and growing uncertainty, of course, stimulates capital outflows and makes it less attractive for foreign capital to enter, and further depresses the growth rate.

The statistics presented in Table 1 are consistent with the prediction of the model that an increase in rent seeking and the accompanying decline in the credibility of the state, reduces production, savings and domestic capital accumulation. The slump in output has already been noted. Of greater concern for restarting growth is that gross fixed capital formation, comprising both private and public sources, has continued to decline, amounting by 1998 to less than one-fifth of 1990 levels. The contrast with the Eastern European economies such as the Czech Republic, Hungary and Poland is marked.[xxi] Excepting the Czech Republic, they all experienced an initial significant decline in capital accumulation and in the production of output, but have since shown sustained increases. Two factors appear to be principally responsible for the recovery in investment and production. First, the credibility of the state was better maintained: more effective control on the private sector was exercised, which, inter alia, was manifested in less tax evasion and capital outflow. Second, and related to the preceding, the rate of capital accumulation, both from domestic and foreign sources, provided some offset to the adverse effects on economic growth of increasing managerial rent seeking. A further and important difference in the saving-investment behavior between these countries and Russia is that they have all been experiencing large current account deficits on their balance of payments, unlike Russia's surplus. This is another indication of the growing confidence of non-resident investors in placing their savings in these countries, and of residents in financing their investments through borrowings abroad.

5. Reversing a catastrophic path

Persistent, wide spread, rent seeking creates a dynamic that is very difficult to reverse. We first rule out remedies that are likely to fail. These range from attempts at reversing the initial triggers, restoring the **status quo ante** or even more desperate measures, to the application of a variety of conventional market economy policies.

Inadequate policies

One set of policies might contemplate reversing the initiating triggers. Referring to the diagram, the economy may over time have evolved a considerable distance to the South from a starting point such as A. The higher is the leakage term p_t compared to the initial $\tilde{p}$, the bigger the offsetting increases needed in the wages of bureaucrats ω_t^g, or in the oversight and control parameter q, while the required reductions in the tax rate τ would need to be greater. In general, it would be very difficult to increase q for the whole government over a short interval of time, especially with rent seeking deeply entrenched. Populist measures such as lowering the tax burden on businesses and raising wages are unlikely to succeed for the same reasons. Nor would measures that attempt, retroactively, to induce a fairer distribution of the largely looted privatized assets. Furthermore, any improvements in incentives would be short-lived as the resulting higher fiscal deficit is bound to destabilize the economy. Indeed, the increases in the rate of inflation could stimulate new rent seeking insofar as it leads to a higher tax burden on businesses and lower real wages for bureaucrats.

Some politicians may yearn for past better times, and work toward restoring the **status quo ante**. However, attempting to go back would be an admission of defeat, since it was the limitations of the central planning approach, illustrated by the lower levels of output associated with a point such as A in the diagram, that led to the reforms being initiated. Furthermore, the unleashing of market forces that has since occurred, and the dismantling of the central planning framework, makes a return very difficult to orchestrate. Even if it were possible to return to the past, it would only be to a new and worse position of unstable equilibrium, that lies well to the south of A in the diagram.

An even more desperate solution would be to take the irreversibility of market reforms as given, and to focus on heightened control q as the means to success. Unfortunately, the increase in rent seeking since the reforms, the degree of liberalization so far, and the general loss in the credibility of the state suggest that a much bigger police state would have to be operated than was the case in Soviet times. Could a market economy survive under such conditions? How would finance for an enlarged police state under market economy conditions be obtained? More coercive means would probably be needed to substantially increase revenue, but this could destroy the market economy.

Several conventional market economy policies are also unlikely to succeed under conditions of pervasive rent seeking, especially if one of their side effects is to worsen rent seeking. A few examples may be given. The first concerns taxation. Based on the recognition that government wages are too low, it might be recommended that taxes be raised so as to generate the needed revenue. But the tax ratio is already high.[xxii] Attempting to raise it further would simply add to the burden on the existing tax base, and encourage further rent seeking.

This could occur even if, as is frequently recommended, tax rates were reduced, exemptions withdrawn, and taxes are better enforced. As long as the effective tax rate is raised on those who are already suffering, the outcome may be greater rent seeking. The neat trick would be to induce back into the legal economy the hidden tax base, but this will require measures to reduce rent seeking that are examined subsequently.

Another example concerns that of restraining capital outflow so as provide more resources for the domestic economy. A frequent recommendation is to increase interest rates, but this may not be effective. Much of the capital outflow is fueled by the proceeds of illegal rent grabbing in search of safe foreign havens. Either they would not be responsive to higher domestic interest rates, or domestic interest rates will have to be much higher so as to offset potential costs associated with the risks of detection and confiscation. In principle, a high enough interest rate could compensate for the costs of “white washing” the illegal outflow, so that it comes back, possibly as flight capital. But higher interest rates will in the meantime hit enterprises harder and induce them to engage in even more rent seeking. Debt service payments of the budget would also be higher and this might further jeopardize wage payments, providing added stimulus for bureaucratic rent seeking. Nor is the alternative of restraining capital outflows through direct controls satisfactory. Such controls are likely to provide greater opportunities for rent seeking, given the underlying supportive culture. The neat trick here would be to reorient incentives so as to reduce the proceeds of rent seeking, which in turn will reduce the amount available for capital outflow.

A third example is the frequent recommendation to liberalize even more. The argument here is that liberalization has been incomplete and this denies full scope to the cleansing properties of market forces. Freer entry and greater competition would curb rent seeking. But aside from the difficulty of applying such forces to the performance of bureaucrats, there is the problem of how to ensure beneficial results for the private economy. This is because liberalization over the short run is a double-edged weapon. It might simply provide greater opportunities, depending on the underlying conditions, for evasion and illegal capital outflows. As with the preceding example of restraining capital outflows, market regulation may be contemplated, but this too provides opportunities for rent seeking. Ultimately, making a success of greater liberalization requires that agents behave in accordance with market rules, including observing hard budget constraints and engaging in arms length transactions. How should they be induced to do so? The neat trick here would be to induce market participants to recognize the beneficial externality from all behaving in accordance with the new rules.

Finally, it might also be noted that stabilization efforts themselves could aggravate rent seeking. For example, attempting to restrain inflation by tightening the money supply could lead to greater rent seeking as firms respond to the shortage of finance. The stabilization achievements of the short-run could thus be eroded over a longer-run by the structural costs of more pervasive rent seeking. For stabilization to be successful rent seeking has to be contained.

A remedial approach

The situation described above is reminiscent of the fly caught in a spider web -- the more it struggles to escape the deeper it gets entangled. When rent seeking has become so pervasive that conventional policies lose their effectiveness, a different approach will have to be adopted. Rent seeking has to be centrally addressed. Interestingly, there appears to be widespread recognition in the Russian media that until rent seeking is more effectively restrained, it may not be possible to transform the economy in the desired direction.

But how to stimulate and coordinate a general reduction in rent seeking behavior? Even if each of the participants to rent seeking recognizes that their individual acts of corruption erodes the social product, it could still be optimal for each of them to separately engage in rent seeking. In the terminology of game theory, defecting from desirable cooperative behavior is a dominant strategy, with the resulting coordination failures likely to become more pronounced as we progress along the downward path. As is well known, a countervailing force or externality is needed to overcome this failure. At issue is how to redirect incentives in a socially more productive direction. Frequently uttered slogans that rent seeking will not be tolerated – a favorite one being that any bribe taking by bureaucrats should be reported – acquire a purely rhetorical character. Officials may simply be inspired by such slogans to demand payment of higher bribes.

It is easy to compile a list from the model of what needs to be done. Thus reducing the effective rate of taxation τ, raising the average wages of bureaucrats ω, and increasing the effectiveness of control q over bureaucrats will help raise the credibility of the state – involving a reduction in the leakage term *p*. However, as was noted above, this shopping list is not easy to implement and if not properly done could make matters worse. A more subtle strategy is needed to move incentives in the desired direction.

One approach that has met with some success elsewhere is to focus on the reform of the tax administration as the leading edge of the strategy for both restoring the credibility of the state and to provide badly needed resources to government.[xxiii] The general wage level for bureaucrats cannot be raised because of the fiscal constraints, but it might be possible to pay tax administrators better, preferably through a self-financing performance incentive scheme. As revenue collections rise, other wages could eventually be raised. A tax administration that begins to act more effectively goes part of the way to restoring respect for the state. It also sets in motion an "honesty multiplier", which is likely to be strengthened if this is followed by reductions in the tax burden and its fairer distribution. When taxes are better enforced, the gap between true and reported tax liabilities is reduced. It then becomes less attractive for managers to offer bigger bribes to tempt bureaucrats who are increasingly better paid. A progressive shrinkage in the reporting gap will reflect the operation of the multiplier. An important aspect is that insofar as more honest reporting is induced, this has the broader effect of restraining other forms of rent grabbing such as intra-firm siphoning away of profits.

How then is the tax administration to be induced to operate more effectively? Even if the means were to be found to enforce tax laws, involving threats and sanctions of various kinds, their effects are not likely to be sustained in a pervasive rent seeking environment as long as the basic incentives for rent seeking remain.[xxiv] The fiscal officer needs to be better motivated through adequate remuneration, decent conditions of service, and an organizational structure that encourages dedicated work. Providing a performance related bonus to tax collectors can be helpful. However, as has been demonstrated such bonuses are useless, unless they are combined with measures to reduce corruption at higher levels.[xxv]

The organization and operational procedures of the tax administration could be simplified so as to facilitate command and control. Organizational blueprints based on best practice in, say, Germany or the United States, provide useful pointers regarding future directions. However, simply transplanting such blueprints is to assume that the local conditions and problems that shaped them in their countries of origin apply equally to the reforming country, and that qualified manpower is available. A more effective approach to administration would be an intermediate step of moving to a tax- by-tax system of control, where each major tax grouping is fully controlled by a department constituted for that purpose. By reference to the theory of organization and hierarchy, this framework makes it more transparent who is responsible and therefore accountable. This should make it easier to increase tax collections than would a poorly understood framework based on the full-fledged functional specializations of a modern tax system. In due course, the limitations of the intermediate system would manifest itself, and an upgrade to systems in the West would become feasible.

On the heels of the reform of the tax administration, some simplification and rationalization of the tax system is desirable, as is widely acknowledged both in Russia and among foreign advisors. This can be undertaken in several different ways. There is a virtue in adopting simple solutions that can be effectively implemented. For example, a manufacturer's sales tax, or even a final retail sales tax, would have been easier to implement than the demanding VAT. An easier to administer tax system makes it more difficult to exploit for rent seeking purposes. In progressive stages thereafter the tax burden could be systematically reduced and spread more fairly. It is probable that the credibility of the state in the eyes of the majority will rise if those best able to pay taxes – the richer inhabitants - were to be seen to be doing so.

Redirecting incentives for managers to act in a socially more productive fashion is more difficult. While measures to improve the profitability of enterprises, and thereby increase the remuneration of managers are helpful, a countervailing incentive to the manager/ entrepreneur cannot be applied in a manner symmetric to the bonus given fiscal officers to collect taxes. Some recourse may be had to deterrent penalties, but it is the diligence of the fiscal officer in uncovering acts of tax evasion that is the telling factor in the end. Nonetheless, businesses could be better regulated. Treating all businesses fairly, enforcing information requirements and controlling compliance with laws and regulations can go a long way in restraining rent seeking and establishing desirable market-oriented norms.[xxvi]

6. Conclusion - A failure of the will or of the collective imagination?

The paper has highlighted the potentially serious implications for economic performance of public rent seeking. These effects are likely to be amplified by private rent seeking, which in turn would be stimulated by rampant public rent seeking.

Together, they would imply an increasingly lawless society that could end up in a low level equilibrium trap characterized by a high incidence of corruption, subsistence production, and no productive investment. This somber possibility points to the crucial importance both of ensuring that the transition gets off to a good start and that it is subsequently well managed. Clearly, effective management of an evolutionary path is needed, which is probably best undertaken by a state that is credible. Simply relying on spontaneous regeneration risks the loss of state influence.[xxvii] Failure to manage the transition effectively can set in motion a path dependant process, just as in Russia, that exhibits classic prisoner's dilemma characteristics. Neither seeking to reverse direction by making up for past policy omissions nor the application of conventional policies would be effective. Different policies of the sort outlined in this paper are then required to overcome perversely operating incentives and to ensure that agents are adequately motivated and coordinated so as to promote a beneficial path.

Finally, we cannot but help reflect on the different experience of China after the failure of the "Great Leap Forward" experiment. Over the past two decades China has pursued an evolutionary path, learning along the way. On the whole, it has been able to control rent seeking that was stimulated by new business practices and other structural reforms. Many in the West have characterized China's pragmatic approach as culture specific and not transplantable. While this may be true for the exact blueprint, just as with the market solutions that have evolved in individual Western countries, the principles guiding the Chinese strategy are more widely applicable. Above all it involves retaining the ability of the state both to influence its external environment and its internal organization, while undergoing the transformations suited to a market economy. Stated alternatively, the issue is not one of "big bang" versus "gradualism" but that of the capacity of the state to manage the transition. Should this capacity be limited, it would be advisable for the state to proceed more cautiously so as to secure the interests of the majority of the population.

Table 1. **Russian Federation - Some Key Indicators**
(Index, percent change, and billions of US $)

Year	Real GDP	Investment	Consumption	Inflation	Wages	Real wages	Current Acct. (BOP)
				% Change	% Change	% Change	Billions of US $
1989	100.0			2.5			…
1990	97.0	100.0	100.0	5.3	13.0	+7.3	…
1991	92.2	84.5	93.9	100.3	94.9	-7.2	4.1
1992	78.8	49.4	89.0	1528.7	1065.7	-28.4	-1.2
1993	71.9	36.7	88.1	875	798.2	-7.9	2.6
1994	62.8	27.1	85.4	309	260.2	-11.9	8.7
1995	60.2	25.1	83.1	197.4	131.4	-22.2	5.7
1996	58.1	20.9	81.3	47.8	64.3	+11.2	2.5
1997	58.6	19.9	82.7	14.7	21.6	+6.0	-0.6
1998	55.9	18.5	80.6	27.8	23.9	-3.1	2.3

Source: ECE, IMF

Table 2. **Russia Federation: Summary Operations of the General Government**
(In percent of GDP)

	1992	**1994**	**1996**	**1997**	**1998**
REVENUE	39.3	34.6	33.0	35.5	31.7
(federal govern.)	(16.6)	(11.8)	(12.5)	(12.0)	(10.7)
EXPENDITURE	57.7	45.0	41.9	43.2	39.7
BALANCE	-18.4	-10.4	-8.9	-7.7	-8.0
(federal govern.)	(-10.4)	(-11.4)	(-8.4)	(-5.8)	(-5.9)
FINANCING	18.4	10.4	8.9	7.7	8.0
FOREIGN	10.9	0	0.7	1.6	2.1
BANK	5.2	8.9	7.3	1.7	2.1
NON-BANK	2.3	1.5	0.9	4.4	3.8

Source: IMF

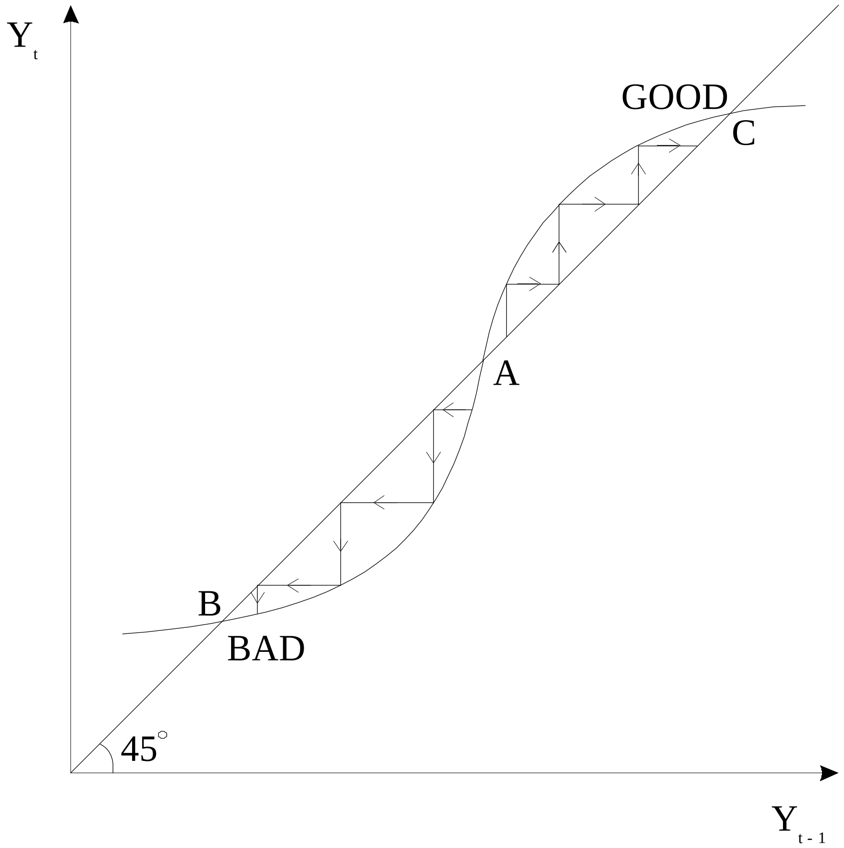

Figure 1. Multiple Equilibria and Transition Dynamics for Output

[i] The report will be referred to here as the Houston Summit Report (1991) or HS, for short. It was prepared by the IMF, the World Bank, the OECD, and the EBRD, in close consultation with the Commission of the European Communities. The views expressed in the report are consistent with the so-called Washington consensus. See Williamson (1993), and Stiglitz (1999).

[ii] Proponents of the big bang frequently cite Winston Churchill's expressive dictum "you cannot leap over an abyss in two jumps". Gradualists could respond with Mao's famous " groping for stones to cross the river". Presumably, if these are not available one might "build a bridge over the abyss". These and additional metaphors are nicely summarized in Stiglitz (1999).

[iii] Much of the international financial assistance provided has been of a "balance sheet" variety, involving debt restructuring and support to international reserves, rather than the direct financing of increased absorption. This is reflected in the sizable annual trade and current account surpluses of Russia since the start of the reform.

[iv] For discussions and applications of the concept of path dependency see Arthur (1989), and Murphy, Shleifer, and Vishny (1993).

[v] The account here is drawn from HS (op.cit.,) p.12

[vi] See Afanasyev (1994), Chand and Lorie (1992), Cornia (1998), Elster and Moene (1989), Ellman (1994), Ickes and Slemrod (1992), Kolodko (1999), Kornai (1994), Mckinnon (1992), Mehlum (1998), Murrell (1992), Rodrik (1999), Stiglitz (1994, 1999), and Yavlinsky and Braguinsky (1994).

[vii] Additional foreign exchange to finance the capital outflow could have been obtained through the under-invoicing of exports, the over-invoicing of imports, and diversion of official capital inflows. Abalkin and Whalley (1999) in a comprehensive review point to estimates of cumulative capital outflow in the period 1992-95 ranging from a low of US$ 50 billion estimated by the IMF to US$ 220 billion estimated by Russian sources. They incline to the higher estimates noting that foreign currency in the form of cash and deposits is more than two-thirds of Rubles in circulation (cash and deposits). They note that in 1997 alone, Russian residents may have accumulated up to 80 percent of their savings in the form of foreign currency to the detriment of domestic investment.

[viii] See especially the periodic ECE's *Economic Survey of Europe*, EBRD's *Transition Report* and the IMF's *WEO* (1998) for reviews of fiscal developments. Podporina (1997) and Timofeeva (1997) provide insightful accounts of key factors underlying the deteriorating fiscal performance. They point in particular to the complexity of the laws, the lack of expertise, pressures from the shortage of enterprise liquidity, and perceptions of unfairness as contributing to the rise in arrears and rent seeking behavior.

[ix] Several authors claim that this is the root cause of the failure of the reforms (see, especially Frye and Shliefer (1997) and Åslund (1999)). Stiglitz (1999), however, views this as an outcome of a deeper underlying failure arising from the reform strategy that was pursued. We come back to this issue subsequently.

[x] The path dependant approach of the paper is in spirit close to Murphy, Shleifer, and Vishny (1993). However, we do not draw the sharp distinction they do between private rent seeking as attacking the productive sector and public rent seeking as destructive of innovation and growth. In our model, public rent seeking is itself destructive of production.

[xi] γ represents the proportion of gross profits that are paid to managers/entrepreneurs.

[xii] See Wei (1997) who provides empirical evidence of how foreign direct investment is negatively related to perceptions of increasing corruption in the country.

[xiii] The jury is still out with regard to the explanations for the sustained decline. See Blanchard (1997) and Gomulka (1998) for good accounts.

[xiv] If pre-reform wages constituted a fraction, 1/*a*, of the total benefits enjoyed, a fully offsetting adjustment in wages would involve a multiple increase in measured real wages of *a* times base wages. But the data presented in the ECE's latest report (1999, no.2) and reproduced here in Table 1, shows wages did not even keep pace with consumer price inflation. In 1992 real wages had declined by one-fourth, with the fall amounting to nearly one-half by 1998 from pre-reform levels. Such large declines are likely to more than offset any corrections made for downward bias in the wage structure because of the structural changes. In contrast, the East European countries appear to have avoided such a sustained decline. Thus for both Hungary and the Czech Republic, the wage-price behavior cumulated over the period 1990-98 showed real wages more or less unchanged, with the same true for Poland over the period 1989-98.
[xv] See Soulakshin (1999) for these implications of excessively low real wages.
[xvi] See especially Mckinnon (1992).
[xvii] Stiglitz (1999) provides an incisive account of how the commercialization and privatization strategies that were adopted stimulated egregious rent seeking behavior instead.
[xviii] See Baer, Summers, and Sunley (1996).
[xix] See Stiglitz (op.cit.,) for a comprehensive analysis of the problems encountered in converting social capital that was geared to the previous regime to the new regime in a context of excessively rapid liberalization and privatization.
[xx] The focus here is on the redistribution of potential tax revenue. Such effects would, of course, be compounded by similar developments on the fiscal expenditure side involving the diversion of resources from legitimate ends.
[xxi] See Kolodko (1999) and Gomulka (1998) for a discussion of the contrasting experience of Poland.
[xxii] Illarionov (1999) is particularly critical of this recommendation. He points out, with some justice, that the tax ratio in Russia is higher than in the United States, and that it would not be appropriate to raise it any further. His argument is valid concerning the official tax base. But the Russian State needs more revenue not higher taxes, and this will only be possible if the hidden tax base is brought out into the open.
[xxiii] See Chand and Moene (1999) and Mookherjee (1997).
[xxiv] Experience elsewhere has shown that even when drastic action is taken, as long as fiscal officers earn less than what is required to preserve a minimal standard of living, sooner or later they will resort to rent seeking. See the examples in Chand and Moene (1999).
[xxv] A theoretical rationale for such a scheme is presented in Chand and Moene, op.cit., together with a supporting case study.
[xxvi] Murphy, Shleifer, and Vishny (1993), Shleifer (1997), and Åslund (1999) have warned about the consequences of increased regulation. Their argument is that less government is needed to combat rent seeking. However, others, see especially Intriligator (1997) and the distinguished panel of economists who cosigned a declaration he proposed, argue for more government to provide the needed direction. Stiglitz (op. cit.,) notes that the concern with excessive state intervention and the advice that it be quickly dismantled is more applicable to economies such as the Latin American ones historically, where well-defined market frameworks are in place. If the latter does not prevail, he finds it, to say the least, odd to castigate the state as the "grabbing hand" when it is the state that is attempting to initiate the reform. Nevertheless, the issue remains as to how the state should attempt to create the required market framework. All would presumably agree that it should not do so in a manner that provides private individuals with free license to grab. A partial resolution between the opposed views is to argue that more, better, and effective government that is manifestly in control is needed to promote the reform and to control rent seeking, but less levers should be provided to bureaucrats to engage in autonomous rent seeking.

[xxvi] Hayek (1988) in a famous work entitled "The Fatal Conceit" castigates the errors of socialism in disregarding human nature. As a proponent of evolutionary economics he would presumably be equally scathing of the fatal conceit in advocating spontaneous regeneration that disregards human nature. It is fitting to quote from Solzhenitsyn, who has very clearly identified the limitations of the strategy pursued. "The major mistake of reformers is that they followed the habitual revolutionary road – "to destroy the foundations …" But even a fool can see that what is required is an evolutionary approach, a smooth and slow transition. The great mass of our people are disheartened…They are left with a poor choice: either drag out an impoverished or submissive existence, or look for other ways: take up illegal activity, or deceive the state, or one another. We all know that prices were freed to suit the monopolists…about scandalous instances of privatization for a song…we know that the state robbed 70 million depositors…It taught them a cruel lesson: never trust the state and never do any honest work. We have often heard and still hear: "Why are you worried? The market will put everything in its place!" (But) the market will not put the state system in place. The market will not create the moral foundations of society." (Solzhenitsyn (1994), as quoted in Jeffries (p.145, 1996)).

References

Åslund, A. (1999) " Why has Russia's Economic Transformation Been so Arduous?" presented at the Annual Bank Conference on Development Economics, Washington, D.C

Abalkin, A. and Whalley, J. (eds.) (1999) "The Problem of Capital Flight From Russia", *The World Economy*, Vol. 22, no. 3 pp. 421-444.

Afanasyey, Y. (1994) "Russian Reform is Dead", *Foreign Affairs*, Vol.73, no.2.

Arthur, W.B (1994) *Increasing Returns and Path Dependence in the Economy*, University of Michigan Press, Ann Arbor.

Blanchard, O. *The Economics of Post-Communist Transition*, Oxford University Press, England.

Chand, S.K. and Lorie, H. (1992) "Fiscal policy", chapter 1 in Tanzi, V. ed., *Fiscal Policies in Economies in Transition*, IMF, Washington DC.

Chand, S.K and Moene, K.O. (1999) "Controlling Fiscal Corruption", *World Development*, Vol. 27, no. 7, pp.1129-1140.

Cornia, G. A. (1998) "Neglected Issues: An Overview", *MOCT-MOST*, Vol.8, pp.1-5.

ECE, *Economic Survey of Europe*, various periodic issues, UN, New York and Geneva.

EBRD, *Transition Report*, various periodic issues, London.

Elster, J. and Moene, K.O (1989) "Introduction" in *Alternatives to Capitalism*, Cambridge University Press, pp. 1-38.

Ellman, M. (1994) "Transformation, Depression, and Economics: Some Lessons", *Journal of Comparative Economics*, vol.19, pp.1-21.

Frye, T. and Shleifer, A.(1997) "The Invisible Hand and the Grabbing Hand", *American Economic Review*, Vol. 87 no.2, pp. 354-358.

Gomulka, S. (1998) "Output: Causes of the Decline in Central and Eastern Europe" chapter 2 in Boone, P., et.al, eds. *Emerging from Communism* The MIT Press.

Hayek, F.A.(1988) *The Fatal Conceit: The Errors of Socialism* The University of Chicago Press, Chicago.

HS, The Houston Summit Report (1991) (abbreviated as HS): Prepared by the IMF, World Bank, OECD, and EBRD, (1991) *The Economy of the USSR*, Washington D.C.

Ickes, B.W. and Slemrod, J. (1992) "Tax Implementation Issues in the Transition from a Planned Economy", *Public Finances/Finances Publiques*, vol. 47, pp. 384-399.

Illarionov, A.,(1999)"The Fiscal and Quasi-Fiscal Roots of the August Financial Crisis in Russia" unpublished paper, Moscow.

IMF, *WEO*, various periodic issues, Washington, D.C.

Intriligator, M. D. (1997) “Round Table on Russia”, *Economics of Transition*, Vol. 5, no.1, pp.225-227.
Jeffries, I., (1996) *A Guide to the Economies in Transition*, Routledge, London.
Kolodko, G. W. (1999) “Ten Years of Postsocialist Transition: the Lessons for Policy Reforms”, unpublished, Washington D.C.
Kornai, J.(1994) “Transformational Recession: The Main Causes”, *Journal of Comparative Economics*, vol. 19, pp. 39-63.
Mckinnon, R. (1992) “Taxation, Money and Credit in a Liberalizing Socialist Economy”, *Economics of Planning*, vol. 25, no. 1
Mehlum, H. (1998) “Why Gradualism?”, *Journal of International Trade and Economic Development*, vol.7, no. 3, pp.279-297.
Mookherjee, D. (1998) “Incentive Reforms in Developing Country Bureaucracies: Lessons from Tax Administration” *Annual World Bank Conference on Development Economics 1997*, pp. 103-138, Washington D.C.
Murphy, K. M., Shleifer, A. and Vishny, R.W. (1993) “Why is Rent Seeking So Costly to Growth”, *AEA Papers and Proceedings*, May 1993, pp. 409-414.
Murrell, P. (1992) “Evolutionary and Radical Approaches to Economic Reform”, *Economics of Planning*, vol. 25. 79-95.
Podporina, I. “On the Draft Federal Budget for 1997”, *Problems of Economic Transition*, vol.39, no.11, pp. 6-21.
Rodrik, D. (1999). “Institutions for High-Quality Growth: What They Are and How to Acquire Them”, processed.
Shleifer, A. (1997) “Agenda for Russian Reforms”, *Economics of Transition*, vol.5, no. 1, pp.227-231.
Solzhenitsyn, A. (1994) as quoted (pp.145-146) in Jeffries, I. (1996) *A Guide to the Economies in Transition*, Routledge, London.
Soulakshin, S. (1999) Letter to *FT*, May 29.
Stiglitz, J. E. (1994) *Whither Socialism?* Cambridge, MA. MIT Press.
Stiglitz, J. E (1999) “Whither Reform? Ten Years of the Transition”, presented at the Annual Bank Conference on Development Economics, Washington, D.C.
Timofeeva, O. (1997) “Taxes as an Instrument of State Regulation”, *Problems of Economic Transition*, vol. 39, no. 11, pp. 42-56.
Yavlinsky, G. and Braguinsky, S. (1994) “The Inefficiency of Laissez-Faire in Russia: Hysteresis Effects and the Need for Policy-Led Transformation”, *Journal of Comparative Economics*, vol. 19, no.1, pp. 86-114.
Wei, Shang-Jin (1997) “Why is Corruption so Much More Taxing than Tax? Arbitrariness Kills” *NBER Working Paper* No. W6355, November.
Williamson, J. (1993) “Democracy and the “Washington Consensus” *World Development* 21(8): 1329-1336.