

Political Economy of the Soviet Elite and Its
Post-Communist Transformation

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Political economy of the Soviet elite and its post-communist transformation^{*}

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Abstract

A characteristic feature of Russian post-communist transformation is a high rate of elite continuity that invites an explanation of the demise of the Soviet Union as the result of a rational choice made by its ruling elite. This paper proposes a political-economic model where predatory ruling elite uses costly coercion to raise revenue from the working population, while resistance of the population constrains the elite's "power to tax." Soviet command economy facilitated lump-sum taxation. This system maximized the elite's net revenue at the expense of the stability of equilibrium against exogenous shocks. An extension of the core model considers internal dynamics of the elite. The Soviet nomenklatura system was an instrument of "loyalty borrowing" that allowed the elite to raise additional revenue by exchanging promises of promotion for voluntary services of the aspirants to the elite positions. The implicit contract underlying this exchange was not self-enforcing and resulted in unlimited elite expansion. The models are used to interpret major policy turns made by the Soviet elite and to explain its final choice to abandon collectivist organization. The post-communist transformation involved a significant reduction in the level of coercion. This change was welfare-improving, although the output of the economy and consumption of the population decreased. At the same time, net revenue of the elite increased due to a reduction in coercion costs and military spending. This explains Russia's smooth political transition against the backdrop of economic disaster.

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Introduction

Radical social transformations are often represented as experimentation designed and implemented by selfless and benevolent revolutionaries or reformists in accordance with their ideological preferences. This pattern of interpretation is often applied to Russia's post-communist transformation, as well as to the earlier transformation in the opposite direction – towards socialism. Hence, the titles of numerous books and papers referring to “Russia's capitalist experiment” in a close semblance to the “Soviet experiment.” Two interrelated features of this approach limit its explanatory power. First, transformation is considered out of historical context, as a process, stimulated exclusively by exogenous factors. Second, the main problem of post-communist transformation is supposed to be engineering a socially optimal transition path from the current set of institutional arrangements to a predetermined destination. No room is left here for individual rationality and special interests, represented in the government prior to and during the transition.

In this paper, the agents of the Soviet economy and polity are assumed to be rational and self-interested. Whatever changes they opted for, they did so not for love of enlightened policies but to maximize their own objective functions, subject to constraints imposed by norms, beliefs, and knowledge they had accumulated in the past. The focus of this study is on the initiators of the transformation and the motivating factors of their decisions in historical retrospective. In this context, one class of individuals calls for our special attention. A small percentage of the population, the *elite*, owns and/or manages a large part of a society's physical and human capital. Therefore, it directs the allocation of economic and political resources, and effectively controls the whole economy (Temin and Brezis 1999). Consequently, the degree of elite continuity is a matter of the utmost importance in assessing the nature of major social transformations. A radical change can occur only if an incumbent elite is replaced by an alternative group aspiring to the elite position (Pareto [1966]). Therefore, positive analysis of transformation process should start with the question: Who governs? If we discover that the old rulers still stay in command, then, understanding the political economy of *ancienne regime* becomes crucial for explaining the choice in favor of a major transformation and understanding its actual nature and direction.

Although studies of the contemporary Russian elite are still scarce, data published thus far let us conclude that the Soviet elite “survived” the end of the USSR remarkably well. The Soviet ruling elite is typically defined (following Voslenskii [1984]) as the holders of positions in economic management, government, and public organizations, which were filled through the *nomenklatura* system of appointment control run by the Communist party committees. According to a number of

studies, the presence of former nomenklatura appointees ranged in 1994 from 82% among regional administrative elites¹ to 61% among businessmen. A majority of them retained old positions or occupied similar ones; many moved across institutional boundaries (White and Kryshtanovskaya 1998). Turnover in the upper tiers of government has been very high indeed, creating an impression of a high rate of elite change. However, the numbers cited above may still need an upward correction. In the mid and late 1990s, former Soviet elite further retrenched in the new institutional framework, making the proportion of recent newcomers to the contemporary Russian elite very low (Kukolev 1997; McCarthy, et al. 2000).² Therefore, it is reasonable to posit that the Soviet elite remains largely in place.

Nor has the transformation made the Russian elite worse-off in terms of income in comparison to the late Soviet period. Although accurate estimation of “shadow” portions of both Soviet and post-Soviet incomes is problematic, Russia has arguably made a far leap towards the right edge of the world inequality scale – the Gini index rose from about 0.3 to 0.5 in a decade – and there is no sign that the process has stopped, much less has reverted (Commander, et al. 1999; Aghion and Commander 1999). These numbers cannot automatically be translated into the conclusion of a significant growth in the absolute level of wealth of the post-Soviet elite, but, clearly, economic transformation did not result in a redistribution in favor of lower-income groups of the population.

Russia’s recent institutional development is largely consistent with observed elite continuity, more a reshaping of Soviet-type elements than genuine change. Discretionary and corrupt political protection substitutes for legal enforcement of property rights. Enterprises retain strong links with the governments, regional and federal. Close links between the “oligarchs,” who control large enterprises, and the government officials, set a basis for continuing massive state involvement in the economy (McCarthy, et al. 2000). At the regional level, these links are reinforced by political-economic exchange of “shares-for-taxes” kind, protection of businesses from inter-regional

1 Technically, a majority of those came from the positions in civil administration. However, reading current regional bosses’ bios, we see that most of them transferred from the increasingly uncomfortable Party chairs to politically neutral positions shortly before the end of the USSR.

2 The largest bias may be for the business elite. A massive influx of young communists in the initial stages of their careers, and professionals, who were not seeking party careers at all, into Russia’s “new economy” in the perestroika period (1986-1991) led to their domination among the ranks of businessmen in early 1990s. Their share decreased significantly after mass privatization of state enterprises that gave decisive incumbency advantage to the Soviet managers (Alexeev 1999), followed by takeovers of the boards of privatized companies by regional administrators.

competition, securing the seats in legislatures with the votes of dependent enterprise employees, etc. (Lallemand 1999, Startsev 1999, and others). By the mid-1990s every successful business had some relations to the political establishment (Kukolev 1997).

Despite the continuity on the personal level, the Russian elite is not the same today as a decade before. It has undergone significant structural changes. It has become more individualistic and competitive than it was in its Soviet *nomenklatura* phase; it is no longer bound in a network institutionalized as a single ruling party. The old elite was a sort of collective director of the country and was subject to the unified system of circulation. A characteristic feature of the Soviet elite was collective decision-making as a method of responsibility sharing (Gregory 1993), and an extremely high level of consensuality compared to other world elites (Putnam 1977). By contrast, private property, personal responsibility, and apparent competitiveness characterize the elite of today. Informal networks has replaced the party hierarchy in its role of the main consolidating mechanism.

To sum up, the Soviet elite retained its position in economic management and government administration, and at least maintained its welfare. At the same time, its internal organization has changed. It is little surprise that fewer changes took place in Russia since the demolition of the USSR than had been expected. It is more surprising why this transition started at all. It is unclear what factors necessitated the structural changes within the elite. Many authors seem to imply that the Soviet elite did not take the lead in the transformation process, but merely adapted to the new system, and possibly produced a sort of counter-revolution in mid-1990s. A minority view holds that it was the former Soviet ruling elite who initiated the transformation (Rutland 1994, Kotz 1997).³

Basic facts, cited above, invite a rational-choice explanation of the behavior of the Soviet elite and its post-communist transformation. Its decision to opt out of collectivist rule can be regarded as a natural outcome, determined by inherent features of political-economic organization of the Soviet elite in combination with exogenous factors. This is the essence of the argument in this paper. No attempt is made here to show that the Soviet elite carefully and coherently planned Russia's transition to "kapitalizm." Nor do we go into the detail of the transformation process itself. Explaining smooth transformation of the Soviet elite calls for deeper understanding of the political economy of the Soviet regime. In the following, we will try to outline a theoretical background against which to evaluate the most important choices made by the Soviet elite throughout its history.

³ Kotz (1997) argues that the "pro-capitalist shift" in the orientation of the Soviet elite came as an unintended consequence of ill-conceived Gorbachev's liberal reforms.

We will show that the abandonment of the Soviet system of rule was determined essentially by the same factors as those that directed major policy turns of the earlier decades.

The paper proceeds as follows. Section 1 introduces a model of the Soviet system as an economy ruled by a predatory elite. The focus of this model is the political-economic equilibrium in a system where the elite raises revenue from the working population using costly coercion. Section 2 develops a model of a collectivist elite that takes into account the dynamics of its internal organization. Section 3 uses the results of the preceding sections to interpret major turns in the political-economic history of the Soviet ruling elite, and the choice it made in 1991. Section 4 concludes.

1. General equilibrium under predatory rule

1.1. Defining “Soviet-type Leviathan”: coercion vs. public goods

The Soviet ruling elite – a union of political and economic administrators, imbedded in a single organization, the Communist Party – can be viewed from two perspectives. First, if we consider the position of the elite in its whole with respect to the rest of the society, it looks like an integral and homogeneous political-economic entity that uses the working population as its tax-base. There is no fundamental difference between this model of elite and “dictators” in other models. Then, if we “zoom in,” we see that the Soviet elite is far from homogeneous. Even in the level of top Party leadership, resembling a collective dictator, diversity of interests affects certain aspects of decision-making (Gregory 2001, Belova and Gregory 2002). The Soviet (or broader, a Soviet-type) elite is inherently stratified, and stability of its circulation rests on permanent upward mobility. Finally, we can see that the level of integrity of the Soviet elite varies over time and between functional branches of the elite. As we will show, the level of integrity is tightly related to the vertical structure of the elite, and both are responsible for major turns in the history of the Soviet elite. In this section, a general-equilibrium model of political economy of coercion is presented, where elite is treated as a single agent opposed to the population, while an extension, developed in the next section, assumes internal heterogeneity of the elite and focuses on mobility into and within the elite.

Let us consider a society split into two internally homogeneous groups, unequal in size and functions: elite and population. The former can be thought of as a collective ruler – hereafter the terms “state,” “rulers,” and “elite” are used interchangeably – who is rational and self-interested. Following what can be called a “Leviathan approach” to modeling state/rulers (Brennan and Buchanan 1980; Levi 1988; Olson 1993; McGuire and Olson, 1996; Grossman and Noh 1994;

Grossman 2000), we assume that rulers' problem is to maximize their net revenue raised from the population. Our model departs from this strand of literature in two important points: 1) ruling elite does not produce any public good; 2) it takes costly coercion to force the population into paying taxes. The second modification logically follows from the first one. There is no incentive for the population to pay taxes if it receives nothing in return. The first one might seem unrealistic. Indeed, rulers always engage in both predatory (parasitic) and managerial activities, the former having a strictly negative income effect on the population, and the latter resulting in welfare-improving production of public goods (Nye 1997). It is in the rulers' best interest to produce public law and order, since protection of subjects increases their taxable base (Olson 1995). Rulers also may choose to produce public goods in exchange for loyalty (Wintrobe 1998). However, it is this selfish motivation that allows excluding public goods from consideration in a basic model. They "spill over" from the rulers' coercion effort rather than being purposefully produced by benevolent rulers to improve popular welfare. On the other hand, coercion is not a prerequisite to production of public goods.

While simplifying the expenditure side of the model by assuming a purely parasitic elite, we elaborate on the revenue side by focusing on the resistance of the population, costs of coercion, and their effect on equilibrium in a system catering to the interests of a predatory elite. Existing literature largely bypasses the issue of the sources of "Leviathan's" power and that of the costs of coercion. Costly "production" of repression (as well as acquisition of voluntary loyalty of the citizens) is present in the models of dictatorship (Wintrobe 1998), where the rulers maximize *power*, which is a function of two political variables, scale of repression and loyalty of subjects. The present paper focuses distinctively on the general political-economic equilibrium and assumes a totally "materialistic" ruling elite that is interested not in political power per se but in revenue production. Coercive political power is merely an instrument for extracting revenue from the output produced by the working population. As such, it is an "indispensable evil" rather than an objective. Coercion allows the elite to raise more taxes but at a cost that is subtracted from the elite's net revenue.⁴ Moreover, coercion can force the population to work more and thus facilitate economic growth, although without improving welfare and possibly without increasing the elite's net revenue. Interplay

4 It can be said that the approach of this paper is dual to that of Wintrobe (1998): a predatory elite maximizes its revenue (budget), subject to power constraint imposed by the population's resistance, while Wintrobian dictator maximizes his political power subject to budget constraint.

of coercion costs and the impact of coercion on the economy's output determines the states of the system.

1.2. The model

The model proposed here is essentially a political-economic version of a simple market-clearing macroeconomic model. The main characteristic feature of this model is that agents are divided into two types: a parasitic ruling elite and a working population. The population produces the only economic good in this economy, \mathbf{G} , using a single input, labor. This process is represented by a production function with standard properties:

$$G = F(L), \quad dF/dL > 0, \quad d^2F/dL^2 < 0$$

The elite coerces the population to give away a part of its product. Coercion is possible because the elite is capable of producing an economic bad – let us call it *harm*, \mathbf{H} – that enters the population's utility with a negative coefficient and, therefore, has a negative price. The population is willing to give away a unit of its output (i.e. to reduce consumption) in exchange for some remission of harm, or the threat of it. In fact, harm is as composite a commodity as the output, \mathbf{G} ; it can be physical or moral; and it is irreducible to a simple monetary penalty. Flogging in public is an example of “pure harm.” It is meant to bring physical and moral suffering rather than direct or indirect monetary loss (unless it is crippling). The effects of imprisonment and death penalty can be captured only partially by imputation of a decrement in lifetime consumption. It is, therefore, more general to say that any violence and restriction of freedom is associated with some amount of harm, which is valued negatively by its recipient.⁵

In addition to harm, population's utility, U , depends on two traditional variables. The population values consumption, \mathbf{C} , and leisure; therefore, labor time, \mathbf{L} – or more generally, labor effort – is also an economic bad for the population, so that:

$$U = U(C, L, H)$$

where we assume:

$$\partial U/\partial C > 0, \quad \partial U/\partial L < 0, \quad \partial U/\partial H < 0, \quad \partial^2 U/\partial C^2 < 0, \quad \partial^2 U/\partial L^2 < 0, \quad \partial^2 U/\partial C\partial L \leq 0.$$

⁵ Moselle and Polak (2001) model the power of a King to force his agents-“bandits” into submission as an ability to inflict certain monetary loss to a bandit. Similar approach to taxation would result in a tautology: subjects pay T because rulers can take T from them.

To reduce the complexity of the problem, let us exclude from consideration the situations of permanent unrest (guerilla war) when elite(s) and population contest each other's ability to produce harm. Under a stable regime, coercion is unidirectional, and the population elects to "buy off" *all* the harm that an elite can do to it in a given state of the political-economic system – as opposed to choosing a *mix* of harm and consumption. This condition that we can call "redemption of harm" is not necessary, but it assumes quite a reasonable behavior: securing completely against harm rather than choosing "optimal suffering." Moreover, this behavior is strictly rational when marginal cost of uprising (in terms of output) is higher than the marginal rate of substitution between harm and consumption for all attainable levels of output. This combination of parameters can be maintained as long as a rational elite restricts population's access to the organizational and military technologies that can enable efficient uprising.

The "redemption of harm" condition implies that no actual harm is inflicted on the population in equilibrium. Rulers have to resort to repression only when exogenous shocks disrupt status quo balance between the population's estimate of rulers' productivity in coercion and the burden of taxation. In other words, the elite needs repression only to make its claims credible. This is consistent with a long series of historical observations. From ancient Rome to the Soviet Union and communist China, repression used to come in the form of relatively short-term campaigns rather than continuous violence, and it tended to accompany singular points in the evolution of political regimes, such as succession struggles.

Technically, redemption of harm means that the population is willing to reduce its consumption by an amount R_e that brings the same disutility as would the harm, which the elite is capable of inflicting upon the population. We can assume without reducing generality that the population's utility function is separable in harm:

$$U(C, L, H) \equiv V(C, L) - W(H),$$

Then the redemption of harm condition is:

$$V(C_F, L_F) - V(C_C, L_C) = W(H), \quad (1)$$

where C_F , L_F , C_C , L_C are consumption and labor choices by free and coerced populations respectively. The two levels of consumption differ by the amount the population uses to pay off the harm (that becomes the elite's revenue): $C_C = C_F - R_e$. Therefore, Equation 1 implicitly defines a schedule of the levels of harm, H , that the elite needs to be able to produce in order to claim certain

amounts of the population's product, R_e . Let us call this schedule a *resistance function* and consider it as a function of harm, parameterized by the level of labor effort:

$$R(H;L) = C - V^{-1}(V(C,L) - W(H)), \quad (2)$$

where V^{-1} is the inverse function of the population's utility.

Apparently, $R(0) = 0$ (no tax paid if no harm can be made), and it follows from Equation 1 that the derivative of the resistance function with respect to harm is equal to the marginal rate of substitution between harm and consumption:

$$\partial R/\partial H = dW/dH / (\partial V/\partial C) \quad (3)$$

Behavior of the resistance function at a high level of coercion/taxation depends on the structure of the population's utility function. It is reasonable to assume that dW/dH is finite, or that dV/dC tends to infinity faster than dW/dH as the residual consumption by the population approaches zero, so that the resistance function has a horizontal asymptote at the level of revenue equaling the total output by the population, $C = F(L)$ (see Figure 1). In other words, population defends the last leftovers of its output with infinite fervor. If it were not so we would too frequently observe predatory elites starving the whole nations to death.

The amount of harm, H , in equilibrium is determined by the elite's (limited) ability to make it. "Harm production" is costly. The elite has to allocate a part of the revenue, obtained from the population, to produce harm. Minimal input needed to produce a certain level of harm is given by the *harm cost function*:

$$B = B(H), \quad dB/dH > 0 \quad ^6$$

There are no "special agents" in this political-economic system. Harm is produced by the elite itself, by all its members in equal proportion. Inputs in "harm production" $B(H)$ are the costs of police and communication technology, administrative costs, etc. – all needed to maintain repressive machinery.⁷

⁶ In the diagrams throughout this paper, harm cost curves presume diminishing productivity of coercion, $d^2B/dH^2 > 0$. This is not necessary. For an interior solution to exist, resistance and coercion curves need to intersect but no specific functional behavior is required. $R(H) > B(H)$ for all H means that the elite is capable of plundering the entire output, and thus killing the population. If the reverse is true, coercive regime is unsustainable.

The elite chooses the size of the tax, R_e , in awareness of the population's resistance in order to maximize its net revenue:

$$\begin{aligned} & \max_H R_e - B(H) \\ & \text{subject to } R_e = R(H;L) \end{aligned}$$

Optimal solution is achieved when resistance and the cost of harm-production are equal at the margin:

$$\partial R / \partial H = dB / dH \quad (4)$$

Simultaneously, population chooses labor effort, given the elite's choice of tax, to maximize its utility:

$$\max_L V(F(L) - R_e, L)$$

First-order condition for this problem implies equality between marginal rate of substitution between leisure and the population's residual consumption, and marginal productivity of labor:

$$dF/dL = (\partial V / \partial L) / (\partial V / \partial C) \quad (5)$$

Combining equations 3-5, we obtain general equilibrium condition:

$$(dF/dL) / (dB/dH) = (\partial V / \partial L) / (dW/dH)$$

that links labor productivity of the population, coercion productivity of the elite, and relative disutility of the two economic bads for the population.

An example of analytical derivation of the resistance function and the equilibrium levels of coercion, taxation, and labor effort for a particular coercive political-economic system is given in Appendix.

[figure 1 about here]

Marginal costs, $B'(H)$, and marginal resistance, $R'(H)$, curves are essentially supply of and demand for coercion. The point of intersection of this curves shows the level of harm and its equilibrium "price" (tax) that clear the "market for harm". However, a graph showing the total costs and resistance curves is more convenient for visual inspection, since it renders indirect effect of

⁷ It is possible to treat our elite alternatively, as a ruler plus an army of hirelings. Costs of coercion are then the payments to the ruler's agent – army/police. It is hardly possible, however, to found a stable regime on the outsourcing of harm production. In the Soviet case, a general agreement seems to be that the elite secret police (KGB and its precursors) played a much greater role than the poorly paid criminal police or numerous volunteer "people's controllers".

labor productivity. In Figure 1, the elite is able to produce harm H^* by making input $B(H^*)$ in coercion. The population is willing to pay off this harm by forgoing consumption $R_e = R(H^*)$. Thus, the elite's net revenue is $R(H^*) - B(H^*)$ and consumption by the population is $F(L) - R(H^*)$, where $F(L)$ is the total output. The extreme sustainable state of the depicted system is at point E where the elite's gross revenue is maximized and its net revenue is zero. The level of harm H^* is optimal for the elite: the slopes of $R(H)$ and $B(H)$ are equal at this point and the elite's net revenue is maximal.

1.3. Effects of taxation and the determinants of equilibrium

Figure 1 represents accurately only the situation when labor supply is perfectly inelastic and, therefore, taxation is non-distortionary, i.e. it causes no change in the optimal labor effort choice. This is not generally the case. In Figure 2, coercion changes the optimal labor effort exerted by the population. The population chooses its labor effort by equating marginal rate of substitution between labor and consumption to the after-tax marginal return to labor effort. If the elite collects fixed tribute (lump-sum tax), i.e., $R_e = F(L) - T$, the optimal level of labor effort, L^* , is higher than that in the case of no-coercion, L_F . If taxation is proportional, i.e., $R_e = tF(L)$, the effect on optimal labor effort, L' , is indeterminate relative to L_F but $L' < L^*$ always.⁸

[figure 2 about here]

Disutility of taxation for the population in Figure 2 can be split into two effects:

- 1) "overwork effect" – a move from the utility level **a**, attained by a free population, to the indifference curve **b**, reached when the tax rate is zero and labor effort is L^* ;
- 2) "underconsumption effect" – a move from the indifference curve **b** to the indifference curve **c** that shows the actual level of utility for the population, forced to pay R_e to the rulers.

If taxation is labor-stimulating, i.e. if it causes an increase in the optimal labor effort by the population ($L^* > L_F$), resistance curves are affected in two ways. First, the "overwork effect" produces an upward *shift*. Second, a higher total output changes the *shape* of the resistance curve, by moving the asymptote, $F(L^*)$, upwards, as shown in Figure 3.

[figure 3 about here]

It is important to note that the “overwork effect” confines sustainable states of the system to the range between the points E_1 and E_2 . In other words, some positive level of coercion must be maintained always. Even if the rulers are selfless development planners, willing only to make population work harder to facilitate growth, they cannot implement this benign policy with no resort to coercion. By contrast, if taxation causes no “overwork effect” smooth transitions in the region between zero coercion and its maximal level at E are possible.

General equilibrium in a coercive economy with lump-sum taxation is presented in Figure 4. L_0 indicates labor chosen by the population in the absence of coercion; L^* is the equilibrium labor effort under coercion, where the corresponding level of coercion is given by H^* . The left part of the diagram is essentially the graph from Figure 1, inverted and rotated. The “harm” axis is placed at the ordinate of the total output, $F(L^*)$, since the reference point in this model is the “zero harm – zero revenue” situation. In Figure 4, the rulers’ input of $B(H^*) = F(L^*) - A$ in coercion yields net revenue of $A - B$, while the population consumes B .

[figure 4 about here]

The system of revenue collection that was instituted by the Soviet rulers in the 1930s, and which remained essentially unchanged until the fall of the USSR, was equivalent to a regressive taxation system with 100% taxation of inframarginal income (Olson 1995). This can be approximated as a system of lump-sum taxation. It was in fact central planning, the core of the Soviet economic system, that facilitated orderly lump-sum taxation by setting production targets for the enterprises, withdrawing planned output, covering fixed portion of costs (“planned costs”), and

8 Imposition of a proportional tax results in a flatter population consumption curve, $F(L)(1-t)$, and is equivalent to a negative productivity shock. Therefore, proportional taxation provides less incentive for the population to work and yields lower net revenues than lump-sum taxation. In addition, income (or wealth) assessment inherent in proportional taxation brings about additional (administrative) costs. For these reasons, we focus here on lump-sum taxation as the more efficient for the elite. Labor-stimulating effect of lump-sum taxation is guaranteed by an earlier made assumption about the shape of the population’s preferences: $\partial^2 V / \partial C \partial L < 0$. Although sufficient, this condition is not necessary.

permitting the producers to appropriate the remainder.⁹ This system had a particular appeal for the Soviet rulers since it stimulated higher output. However, when the tax rates were set at a very high level, they had to resort to the use of forced labor in order to provide for required labor effort.

Lump-sum taxation is a mixed blessing in a coercive economy. On the one hand, it allows raising arbitrarily high revenues from the population (constrained only by its overall productive capacity). On the other hand, it hampers stability of the political-economic system. As we could see from Figure 3, equilibrium may become progressively less stable as the parameters of the economy change, causing the range of feasible solutions ($E1'$, $E2'$) to shrink. Consequently, the probability increases that an exogenous shock, affecting coercion costs or the resistance function in an adverse for the elite direction, will make the current state of the system (R,H) unsustainable. If this happens, a jump to an equilibrium with a lower level of coercion will occur rather than a smooth adjustment. It is noteworthy that with such a development, utility of the population grows while its consumption falls. This type of behavior is similar to what happens after the collapse of a coercive command economy as modeled by Mark Harrison (2001a). In the latter model, however, the dictator abandons coercion altogether and ceases to exist, while the present model allows for a scenario with an incumbent elite surviving the transition to a lower-coercion political-economic regime. We will return to this theoretical possibility in Section 3 to interpret the choice to abandon socialist organization made by the Soviet elite.

An important issue in the behavior of a predatory elite is its reaction to an external threat. While defense is an important function of any state, it is more than just another expenditure in a predatory ruler's budget. On the one hand, defense is the only pure public good that any predatory elite has to provide. Protection from external threat is beneficial for both the elite and its subjects (unless they live on an isolated island or the population is certain that the would-be conquerors are going to establish lower taxes – both conditions are implausible). On the other hand, external threat offers a genuine justification for the rule of a predatory elite. Moreover, external threats paradoxically contribute to the internal stability of a coercive political-economic system, since the

⁹ Officially, profits emerging from over-plan production were subject to proportional taxation, but the enterprise profit tax composed a relatively low share of budget revenue until the last decade of the Soviet regime. A major part of the unplanned production could go unreported, and the government turned a blind eye on this. Belova (2001) show that a manager, caught at illegal marketing of his or her enterprise's output, was typically forgiven if the enterprise was performing at or above the planned level, i.e., if it was paying taxes in full. This can be seen as the rulers' willingness to let the population consume after-tax residual.

population's resistance decreases due to perception of taxation as being partly directed to fund defense, i.e. production of a public good. Finally, as Garfinkel (1994) showed, coexistence of dictatorial regimes results in a self-reinforcing equilibrium with high levels of international confrontation. Therefore, significant military outlays is a necessary attribute of a predatory public finance in a world populated by dictatorships.

Notwithstanding all the potential benefits of war, providing for it is costly. As long as the size of military outlays is determined primarily by the exogenous variables, military expenditures should be regarded as allocated by the elite from its net revenue. The rulers thus have an incentive to restrict military outlays or even reduce them whenever the state of affairs allows, unless they bring immediate returns.¹⁰ In the formative years of the Soviet command economy, the rulers faced an imminent threat on the part of other dictatorial regimes, primarily Germany and Japan. Two dramatic increases in the ratio of budget revenue to GDP that occurred in the late 1920s and late 1930s respectively can be explained by war expectations rising fast (although it was largely a phantom menace in the former case). Ultimate subordination of industrial policy to the task of achieving self-sufficiency in the production of arms and munitions transformed the Soviet economy of the relatively peaceful 1930s into a war economy, not unlike the Nazi economy (Temin 1991). The reverse trend is characteristic of the postwar period. Changing perceptions of military threat from the West and China could prompt the Soviet elite of 1980s to reduce the tax burden, while increasing simultaneously its net revenue at the expense of military outlays. At the same time, this policy turn made the preservation of a political regime, tightly bound by defense agenda, neither necessary nor justifiable.

2. Loyalty borrowing and elite circulation

2.1. Loyalty production in a coercive polity

Oppressive regimes always use some sort of political or economic device to prop their coercion effort with voluntary loyalty of their subjects. Some political-economic models make provisions for this option (Grossman and Noh 1994; Wintrobe 1998). The model presented above deliberately

¹⁰ Military outlays may prove to be a profitable investment if a military victory enriches the economy with reparations. For example, USSR in 1945-47 moved dozens of complete factories from East Germany, not to mention smaller requisitions. Additionally, a strong need to "catch up" with the international competitors in building self-sufficient defense industry may have a positive spillover on the productive economy, as long as the overall industrial development is required.

emphasized the parasitic nature of the ruling elite, and did not consider the possibility for the elite to produce public goods (other than defense) to induce political loyalty. However, this model can be extended to include purely material loyalty, that is, the voluntary donation of some labor effort or output by (a part of) the population. Technically, such willingness to donate is equivalent to an upward shift and flattening of the resistance curve. The population “pays” more per unit of harm than under pure coercion. The resulting equilibrium is characterized by lower coercion and, therefore, higher stability of the regime.

Elites can use two substantially different instruments to influence loyalty: ideology and elite recruitment. Ideological propaganda allows elites to influence directly the shape and position of resistance curves. A rational parasitic elite represents its selfish policies as targeted at production of public goods that would be otherwise unavailable.¹¹ Ideology is largely irrational and, quite naturally, ideologies tend to be volatile. It is too complicated a phenomenon to be discussed in passing; we leave the effects of the ideology out of the present model for the sake of simplicity.

In this section, we focus on the second principal instrument for generating loyalty: elite recruitment, or the mechanism of social promotion, which is dubbed *nomenklatura* after the Soviet system of appointment control.¹² It is of crucial importance for the following discussion that the elite is a dynamic group of people, rather than a single static dictator. Acquisition of loyalty, in the sense introduced above, is possible for the rulers if they provide opportunities for upward mobility for the population. In other words, if they recruit new elite members from the population, they can establish a system whereby potential entrants are willing to donate some extra labor effort or output in exchange for the prospect of promotion. In the Soviet-type systems, ruling parties in general and the

11 Full employment in the USSR can serve as a characteristic example: It is natural to assume that employment enters social utility function, and full employment is thus a success in public good production. Unemployment in the USSR was eliminated during the industrialization drive of late 1920s-1930s, and this fact was given due ideological prominence. In fact, the Soviet elite at that time needed to increase the population's labor effort drastically. It was committed to reach this goal by all means, not excluding the use of forced labor. Duality of elite's interest and welfare was curiously rendered in the Soviet Constitution of 1936 that both provided every citizen with a right for employment and introduced an obligation to work. Four decades later, this was replaced with a more sensible statement: a citizen had an obligation to work and the right to choose an occupation. Voluntary unemployment remained to be a legal offense.

12 Voslenskii (1984) applied the term *nomenklatura* to label the Soviet ruling elite itself. Although this use of the word became popular far beyond the area of Soviet studies, we use it in a narrower sense that is more accurate historically.

nomenklatura system of appointment control in particular provide an institutional mechanism of awarding promotion “tickets” in exchange for loyal service.¹³

A *nomenklatura*-type elite is multi-layered. Position in each layer assumes certain obligations and gives certain benefits and chances to climb farther up the ladder in return. It is not this complexity, however, that constitutes the distinguishing feature of *nomenklatura*, but the mechanism of inter-layer exchange. Aspirants to the elite positions bear costs that are redeemed upon becoming a “boss.” Other political-economic models of the Party in a Soviet-type system do not take this into account. Schnytzer and Sustersic (1998) in their study of socialist Yugoslavia assume that the party membership is a demonstration of loyalty that comes in exchange for the rents distributed to the population. Gershenson and Grossman (2001) treat admission to Party as immediate cooption to an unstructured elite. In their model, cooption is a substitute for “repression.” The optimal ratio of cooption to repression is determined by their relative costs. The costs of cooption are borne by the incumbent elite, since it is implied that the elite’s budget is fixed. Thus the direction of transfer in both models is top-down, and the high party membership signifies the stability of a regime, which comes at the expense of the elite’s welfare. We maintain here that the *nomenklatura* system rested on the reverse direction of transfers. Consequently, party membership per se is not indicative of the regime’s strength.

2.2. A two-layer model of *nomenklatura*

To elucidate the main working principle of the system in its whole, along with inherent problems, let us consider a simple model of the elite that consists of two layers: “bosses” – incumbent members of the elite proper – and “activists” – aspirants to the elite positions.¹⁴ The bosses get benefits, **B**; the working population is paid wage, **W**; and the activists get the same wage

13 In many Third-world countries and, for example, in Russia in the reign of Peter the Great (early XVIII c.), the army played a much similar role. The bureaucratic pyramid of Imperial China is another close historical analog to the Party.

14 The category of “activists” is not generally equal to “rank-and-file party members.” In the USSR before late 1930s, the whole Communist party can be roughly equated to the elite. In that period the party remained relatively small, and substantial services were required from every member, while “passive” members were systematically purged. Therefore, an “activist” is a person in an entry-level *nomenklatura* position, like a secretary of a “primary party cell” or a factory manager, who bears a considerable burden of responsibility without being adequately rewarded. Non-daring rank-and-file party members of the later period stay out of our model completely, for they were essentially buying certain small privileges (e.g. foreign travel) from the rulers with their membership fees.

as the population and provide additional services to the bosses (or “pay dues”) of value, D , in exchange for the promise to be promoted to the “boss” position after T_a years of service. Only a share of the activists, π , gets promotion; the rest get a “conciliatory” salary, C , which is higher than wages but much lower than the bosses’ benefits: $W < C \ll B$.¹⁵ It is expected that the bosses retire at the age of T_e , and the rest of the population at T_p . No income accrues to a retired person. All payments – B , W , C , and D – are per unit of time and are assumed constant.¹⁶

An individual decides to become an activist (at time 0) if the expected net life-time benefits on the elite career path exceed his or her income as a member of the working population:

$$B \pi (T_e - T_a) + C (T_p - T_a)(1 - \pi) + (W - D) T_a \geq W T_p$$

or upon rearrangement:

$$B \pi (T_e - T_a) + (T_p - T_a) [(1 - \pi) C - W] \geq D T_a \quad (6)$$

A simplifying assumption that the salaries of unlucky activists are set at the level “slightly above” the wages, so that $(1 - \pi) C = W$ equality is maintained, yields a clear choice criterion. Expected gain (per unit of time spent as activist) should exceed the costs (per unit of time in a boss position):

$$B \pi / T_a \geq D / T_b, \quad (7)$$

where $T_b = T_e - T_a$ is the length of boss tenure.

Nomenklatura promotion system is beneficial for the elite as long as it transfers resources from the population in the form of voluntary payment of dues by the activists. In other words, it partly offsets the population’s resistance to taxation. Unfortunately for the bosses, activists’ dues is not a gift but a loan. Each member of the elite must repay it by “early retirement” at time T_e , while in the absence of nomenklatura, the bosses could stay in their positions infinitely, that is, they could bequeath their positions to their kin. Under certain conditions, it is rational for the bosses to enter in the implicit “nomenklatura contract” with the activists. Assuming exponential time-discounting at a constant rate r , the elite enters the contract if:

¹⁵ This often meant settling in an administrative sine cura that gave no chance of further promotion.

¹⁶ This implies that 1) the capacity to produce harm does not bind elite's decisions, and it uses recruitment only to raise additional funds, not to increase coercion; 2) the elite is small enough, so that recruitment affects negligibly the productive capacity of the working population.

$$\int_0^{T_b} (B_0 + D N_a/N_b) e^{-rt} dt \geq \int_0^{\infty} B_0 e^{-rt} dt$$

where N_a – number of activists, N_b – number of bosses, B_0 – bosses' benefits in the absence of nomenklatura that equals per capita benefits as derived in Section 1:

$$B_0 = [R(H^*) - B(H^*)] / N_b.$$

Upon integration, we get:

$$D N_a/N_b [e^{rT_b} - 1] \geq B_0$$

Thus, the elite chooses in favor of the nomenklatura system if:

$$r \geq \log \{ [R(H^*) - B(H^*)] / D N_a + 1 \} / T_b \quad (8)$$

that is, when it is “sufficiently impatient” to prefer additional benefits supplied by the activists to infinite tenures.¹⁷ Additionally, stability of nomenklatura requires maintaining the balance between the number of activists promoted to the boss positions and the number of retiring bosses:

$$\pi N_a / N_b = T_a / T_b \quad (9)$$

Each term in the equations 6, 8, and 9 should be treated as an individual expectation, based on the announcements by the elite's “human resources department.” True information on the current values of all variables, except D , belongs to the ruling elite; D is the private knowledge of the activists. Imperfect observability of D for the elite stems from the fact that an activist typically pays dues not in cash but in labor services. In addition, individual valuations of D may vary significantly, especially if they are paid in such peculiar services as shooting the “enemies of the people.” Thus, the number of activists depends on the distribution of valuations of (actually paid) dues in the society, $f(\delta; \Theta)$, where Θ is the vector of parameters of the distribution:

$$N_a = \int_0^D f(\delta; \Theta) d\delta \quad (10)$$

Equation 10 completes the system of conditions determining the states of the nomenklatura system.

The approach introduced above can be extended to model a multi-layered elite – by assuming that promotion from any layer to the next one is given only to those who exert the highest levels of

¹⁷ The argument of log is the inverse of the share of activists' dues in the total income of bosses.

additional effort (pays the highest dues), and thus for any promotion-oriented person benefits are lower than for one who chooses to stay at the achieved level forever. We should also take into account that every member of the elite does some work for their common cause, which is paid for from the “coercion budget,” $B(H)$, and gets some share of their net revenue that increases with the hierarchical level within the elite.

2.3. Enforceability of “promotion contracts” and the role of dictatorship

The major problem with the elite circulation mechanism, based on the implicit contract between the bosses and the activists, is that it is not self-enforcing.¹⁸ This contract is beneficial to both parties at the time of signing. It is also beneficial for the elite *as a whole* to keep the promises. If they do *not* retire at T_e , the activists cheated on promotion will deny their loyalty; potential activists will lower their expectations of π and T_b/T_a , so that less new activists will be hired; both effects will increase resistance and reduce elite’s net revenue. Moreover, the cheated activists are likely to demand redemption of their deferred resistance. If the elite fails to propose a kind of “refinancing” of its debt, then an upsurge in resistance will follow. At the same time, it does not pay for any particular member of the elite with a narrow interest to keep the promise to retire.¹⁹ A member’s benefit from staying one more year in office is greater than the immediate loss from a broken promise, unless the elite is very large and the economy is very poor.²⁰

One way to mitigate the problem with the “promotion contracts” is to entrust dictatorial power to an elite member with an encompassing interest, that is, one who identifies himself with the objectives of the elite as a whole. He would be able then to use this powers to enforce “contract compliance,” i.e. to force the bosses into retirement as they reach the announced terminus of the tenure, T_e .

In the absence of a dictator, the only viable solution for a Soviet-type elite is to arrange its circulation in the fashion of a financial pyramid. Instead of “retiring the debt,” new elite positions are

18 The problem, described here is not dissimilar from those arising in the labor markets. See Carmichael (1989) for a review of literature on incentives and self-enforcement in implicit labor contracts.

19 As noted earlier, passing membership in the elite on to an offspring is equivalent to refusing to retire. A hereditary elite is essentially an infinitely-lived dictator.

20 Higher ranking members of a multi-layer elite get better chances to overstay in office, because they are protected from the pressure from below by intermediate levels of the hierarchy, and the smaller size of a higher layer makes it easier to establish mutual-protection networks. Formation of cliques causes clogging of promotion channels. Therefore, hierarchical structure can effect additional deceleration of elite turnover.

created for the activists whose “contracts” reach maturity, and yet more new activists are hired to maintain political-economic balance. Obviously, this Ponzi scheme cannot work forever, but only until the whole population is hired into activist positions. In fact, this upper limit is never reached. Elite gets disinterested in maintaining nomenklatura when opening a new elite position causes net revenue per elite head to decrease, and this decrement exceeds potential loss from the shift in resistance incurred by the breach of promotion contract by the elite. Forced retirement and pyramidal loyalty borrowing can be combined to slow down the decay of a Soviet-type elite circulation system. When the limit to elite growth is nevertheless reached, either an institutional change that reforms the elite circulation system will follow, or the incumbent elite will be overthrown by an alternative elite, which will most likely come from the most aggravated part of the population, the cheated activists.

2.4. Adverse selection in nomenklatura dynamics

Now consider the Soviet-type elite from the Paretian perspective, that is, as a top N-percentile of a society’s distribution of ability.²¹ It is most likely that an alternative elite, seizing power through a revolution, is superior to the conquered population in their abilities (at least after their rivals have been executed or forced into emigration). They certainly must dominate in their ability to produce harm. The process of elite recruitment should guarantee that the elite is not becoming less efficient, that is, that there is no adverse selection of the activists. Incumbent elite is interested in selecting those willing to yield a higher level of dues, D , and high productivity in coercion, but the self-selection condition (Equation 6) implies that the ranks of activists – and eventually the elite – are filled most readily with individuals, whose valuation of expected dues is relatively low, including those who have a greater ability to cheat supervisors by exerting less effort than called for. If we additionally assume variability of wages and positive correlation between wages and ability, then the more general self-selection criterion (Equation 5) shows that entering the elite service is most attractive for those who have low productive abilities and, consequently, low expected wage.

Therefore, the nomenklatura system is not free from an adverse selection problem. This was not a secret for the Soviet rulers. Screening of applicants, as well as monitoring of the activists and regular “cleaning of the ranks” (or “purges”), were supposed to prevent adverse selection. A special “inner party,” the Party Control Commission that was created specifically to enforce Party rules

²¹ For Pareto ([1966]), the mere existence of elites is effected by unequal distribution of ability in society, and a perfect elite would coincide with the right tail of ability distribution.

could not be highly successful, since neither the abilities of the activists, nor the true level of their dues were perfectly verifiable. As a consequence, the Soviet elite was progressively moving away from the right tail of the society's ability distribution. The rate of Soviet-type elite degeneration is accelerated if economic growth and/or restructuring provides increasing numbers of attractive "outside options" (such as higher salaries and benefits in academia, retail trade, etc.) for the more able members of the population – an effect that must have a special prominence in the USSR in the mid-1950s to 1960s and in the time of Gorbachev's *perestroika*.

Summing up, a Soviet-type elite in the absence of a dictator inevitably grows larger, older, and less apt over time. The rate of elite degeneration depends on the degree of its integration. Absolute dictatorial rule that provides for maximal integrity can hinder the adverse tendency but it lays additional costs on the members of the elite. In the present context, dictator plays essentially the role of intra-elite police that enforces the rules and promotes coordination of coercion effort. First, as it was pointed out above, a dictator is able to keep the elite away from growing explosively. Second, dictatorship can increase coordination by punishing free-riders among the elite and, consequently, increase its productivity in coercion. Third, dictator as a "stationary bandit" can limit the appetites of the elite, thus allowing for higher rates of growth or at least precluding exhaustion of the elite's tax base. Fourth, dictator can maintain a system of "fair" distribution of benefits, preventing wasteful competitive rent seeking within the elite. The three latter functions of dictatorship are beneficial for all elite members who choose to coordinate but the first one is not. Every member of an elite, coordinated by a dictator, bears shadow costs incurred by forced retirement. Principal-agent problem in the relations between the elite and the dictator augments these costs. Dictators by definition cannot be controlled, and one can become an elite's "disloyal patron" as Joseph Stalin did in the late 1930s (Rigby 1990).

For these reasons, a dictatorial solution is more likely to emerge when a high level of coordination is a vital necessity for the elite: in poorer societies (where taxation causes, other things equal, higher resistance), or when the elite needs for some reason (e.g. expected war) to increase the level of taxation and/or economy's output considerably. On the other hand, the lower the resistance of the population and the threats to the elite rule are, the more readily the elite is to choose a regime with less coordination. It will yield lower revenues for the elite as a whole but it will be less restraining for the individual elite members. It was shown earlier that this choice leads eventually to a crisis in the elite circulation.

3. Choices of the Soviet ruling elite: an interpretation

Soviet period of Russian history starts with the seizure of power in the national capital by a small and coherent group of revolutionaries, an alternative elite grown up on the margin of the privileged Imperial society. They were enthusiastically supported by near-anarchic mobs throughout provincial Russia. An uneasy alliance of “central” and “local” Bolsheviks constituted the first version of Soviet elite. It fits our model in the most straightforward way. Total nationalization effectively laid claim for the total output of Russian economy but almost no attempt was made to manage production. The only noteworthy activity of the new elite was in the sphere of coercion. Lump-sum taxation and forced labor were “invented” soon after the Bolshevik takeover, although the system of institutionalized forced labor did not reach full blossom until two decades later.

The turbulent infancy of the Soviet elite – the “War Communism” – can be seen as a disequilibrium resulting from the Bolsheviks making tax claims that were well above optimal, and above what the population believed to be consistent with the new elite’s coercion capabilities. It was quite natural for the population to underestimate Bolsheviks’ harm-productivity. It was orders of magnitude higher than that of the Empire, let alone the quasi-democratic Provisional government of 1917. As the result, some of the “available” harm was left unpaid and an outburst of violence followed (recall, no actual harm is done in equilibrium) which led to a contraction of output below any theoretical predictions. An excessive tax burden was probably not a deliberate policy choice but a consequence of uncoordinated narrow-interest foraging by local Soviet governments. Additionally, Bolsheviks in the first months of their power were “endowed with a stock of harm” accumulated by Russian soldiers, embittered by the losses in the WW I, who largely supported Bolsheviks. This stock was so large, and the new rulers were so inexperienced, that they laid claims in excess of the economy's capacity, causing the shutdown of a huge number of enterprises. Attempts to increase levy on the shrinking tax base further worsened the situation. The bottom of this Maelstrom of excessive coercion and economic destruction was hit in early 1921. The system was finally equilibrated, on the one hand, by setting a lower level of taxation and, on the other hand, by cracking down on rioting peasantry and Navy with the cruelty that left no doubt of the Bolsheviks’ productivity in coercion.

Soviet elite in its early years is characterized by a very loose structure. Extreme external threat helped to integrate the elite without much enforcement by the Party leadership. Extensive growth of elite ranks caused little conflict within the elite, since new positions were coming at low cost, largely at the expense of the overthrown elite. The early Soviet elite was strictly “Soviet” in the sense that it

was embedded in the institution, inherited from the transitional year of 1917: a confederacy of Soviets. In the years following the Bolshevik takeover, their Party was gradually losing its resemblance to a party of a democratic polity. By the early 1920s – with the creation of nomenklatura elite-circulation machine, which is credited to comrade Stalin – it became the primary institutional framework for the Soviet elite. Until late 1920s this system had low throughput, opening the way for a relatively small number of graduates of Communist universities, Party schools and other branches of “Red Ivy League,” who were filling the positions created by the growth of the economy and natural demise of “Old Bolsheviks.”²²

The situation changed dramatically in 1928, due to three factors: 1) the economy’s slowdown after the limits of reconstructive growth were reached; 2) growing war expectations;²³ and 3) insufficient (below expectations) benefits for the elite newcomers who had paid high “dues” with their service during the Civil War of 1918-21. A logical response was to increase taxes dramatically. This “tax reform” required establishing tight governmental control over industrial and agricultural production – the transition to what become known as planned economy and collective farming. A turn to outright dictatorship was one factor that allowed the Soviet elite to perform the extreme “tax reform,” as planned, and survive. Another one was rapid acceleration of the “loyalty borrowing” process, reflected in the explosive growth of party membership and various forms of promotion (*vydvizhenie*). Creation of an integrated centralized system of revenue collection increased the productivity of coercion.²⁴ A promise of fast upward mobility for the millions caused the population’s resistance to soften. Still, these measures were unable to offset altogether the effect of rising tax burden. A new wave of peasant unrest was countered with unprecedentedly harsh repression.

In 1933, the political-economic system required new equilibration. This time massive “breach of contracts” by the elite was undertaken for the first time. Purges that started in 1933 were targeted against newcomers to the Party, whose pressure for the elite positions might have become excessive – in three preceding years the party ranks grew more than twofold. Party members in the

22 Although retirement was not rare among the older generation, it was not actually the retirement in the sense of our model. An elite member, who had retired from positions of responsibility, actually remained in the elite with all the benefits that accrued.

23 See Harrison (2001b) on the effect of “War Scare” of 1927 on the Soviet industrial policy.

24 There was a significant variation in the propensity to coordinate among the Soviet elite in late 1920s and early 1930s, the lowest being among local power cliques. Stalin was apparently a representative of those, who chose to coordinate within a vertically-integrated organization, but he also had to seek support of regional bosses in the struggle for the positions in the government.

countryside, whose loyalty was in the highest demand during the years of collectivization, were purged disproportionately when the “payday” came.²⁵ The single most widespread accusation was that of “passivity” – claimed for about one quarter of all purged – that is, low “dues” in terms of our model. It is often suggested that the original idea of Party leadership was to direct the purge, started in 1933, against “shirkers” at all ranks in the Party. This was to be achieved by staffing purging commissions with rank-and-file communists, rather than local party bosses (Getty 1985). This declaration was, however, either hypocritical or unenforceable. Archival records show that purge commissions consisted mostly of local party leadership.²⁶ Since the admission of new members to the Party was suspended at the same time, the real idea behind the purges was indeed to “declare default” by purging claimants of elite positions.

By November 1936 the point was reached when further contract violation could have damaged the political-economic balance beyond repair.²⁷ Dictatorship had become sufficiently strong by that time to initiate a massive campaign of “forced retirement,” which became known as the Great Terror, complemented with a renewed policy of attracting activists to the Party. A number of facts suggests that the main objective of the Great Terror was to let the “older” activists acquire elite positions that they had “earned” by a decade or so of loyal service.²⁸ First, there is no clear pattern in the incidence of Terror, except for the hierarchical rank of the victim.²⁹ Second, the primary engine of elite turnover was “democratization of Party.” In the committee election meetings of 1937-38 rank-and-file party members were given freedom to criticize their bosses and nominate

25 Expulsion rate in 1933 was 29% among collective farmers and 46% among individual farmers. Compare this to 10% among Party staff, 12% among professionals, and 17.5% among industrial workers. (RGASPI. 17. 7. 309. 140)

26 RGASPI. Reports on the progress of the purge. 1933.

27 Although 30 percent of the Party new entrants of 1929-32 had been purged by that time, remaining 1.2 mil. members of that cohort still constituted the majority of the party (72%), one third of them being stuck in inferior ‘candidate’ position for 4-7 years.(RGASPI.17.7.379.47-51.)

28 The Great Terror was multidimensional, and it was not confined to Party ranks. We discuss here only repression against the elite, which is specific to the Great Terror.

29 Studies, collected in Getty and Manning (1993), present the most systematic estimates of the incidence of the Terror. They were unable to discover strong patterns of any kind. There is no evidence that the Terror was targeted against “Old Bolsheviks” opposed to coming personal dictatorship. Getty finding that the Civil War period entrants to the top elite were relatively more likely to be victimized is supported by the archival records for the Party in general (RGASPI. 17. 7. 379. 47-51), but this merely reflects prevailing position of this cohort in the Soviet elite of mid-1930s - 46% in the regional level in 1933. (RGASPI 17.7.229.49)

candidates to replace them.³⁰ A recurrent theme in the party press of 1938-1939 – blaming uncovered “enemies of the people” in the regional committees for obstructing promotion of “young cadres” – is consistent with the “democratization” drive of the Terror. Third, most accusations in 1937-1938 belong to an abstract “enemy of the people” category, indicative of the indifference about the crimes of ousted “bosses.” On the contrary, specific political crimes accounted for a substantial share of expulsions from the party and almost one half of all dismissals of regional party administrators in the earlier period. This makes it improbable that the Terror was essentially Stalin’s crackdown upon his political enemies and/or inept administrator’s and managers.³¹ Finally, the end of the Terror in 1939 coincided with a huge financial injection that inflated local party budgets almost twice.³² Since the role of party organizations in economic management and political control was declining at that time, this expansion can be explained only as a massive repayment of overdue debt to the activists. This appeared to be a sufficient stimulus for them to stop rebelling.

Starting in the years of the Great Terror and continuing in 1939-40, anticipation of upcoming war against Germany led the rulers to increase the military outlays and, consequently, the claims on the economy’s output. Momentary increase in required labor effort apparently could not be facilitated without turning to massive use of forced labor. Although harsh labor laws adopted at that time were never systematically enforced,³³ some forms of forced labor existed until the last years of the Soviet regime. The notorious Gulag was only a small and short-lived part of the Soviet system of

30 The wish of unsophisticated activists to get promotion was so strong that in many district committee elections more than half of all electors were nominated to the positions in the party committees. (RGASPI. Report on the party committees election of 1937.) The role of the secret police, NKVD, seems to be restricted to performing the “cleanup” of positions (as well as apartments) of ousted elite members. However, special interest of NKVD might have played a considerable role in the extent and incidence of the Terror.

31 This sort of repression was persistent throughout 1920-30s. Noteworthy, the rate of managerial crime was relatively stable throughout 1930s. (RGASPI.17.7.309.27-31.)

32 This huge increase was mostly obtained through a subsidy from the governmental “reserve fund.”(RGASPI.17.75.1.1-12. “1939 VKP(b) budget.”) Reserve fund was typically used to mend state budget and to finance extraordinary investment projects. Thus, payments to party activists were essentially an additional tax on the economy.

33 Although “breakers of labor discipline” accounted for one third of expulsions from the party in the second half of 1940 (RGASPI. 17.7.309.27), party inspectors complained that the number of unauthorized changes of workplace had grown in comparison to the time when they were not prohibited (RGASPI 17.7.).

forced labor. The most important was omnipresent indirect coercion made possible by aggregating ownership of capital, political power, and law enforcement in the hands of a unified elite.³⁴

The system, created in the 1930s, existed without fundamental change (despite a number of attempted reforms) and in a basically unchanged environment until 1980s. Labor-stimulating taxation, facilitated by the high levels of coercion, remained the basis of the Soviet system. Gradual change, however, did take place, the most pronounced trend being the diminishing integrity of the elite. As the result, progressively decreasing productivity of coercion was causing the contraction of the range of feasible states of the coercive economy and reducing its stability. Loyalty borrowing was used to keep the elite's net revenue from falling significantly. Inability of the post-Stalin oligarchic regime to commit to "nomenklatura contract" further accelerated the rate of growth of the elite's budget deficit. From 1950s to early 1980s there was no considerable purge of either the activists or the elite members of retirement age, and the size of both categories grew considerably. Upward mobility became notoriously low in the 1970s (Clark 1989, Farmer 1992).

The Soviet elite entered the 1980s with a burden of debt to the activists that put it on the verge of bankruptcy. Mikhail Gorbachev restarted the practice of forcing high-ranking party members into retirement.³⁵ The activities of the latter reached by the late 1980s the point where they must have become scarily similar to the Great Terror: increasing mobility, democratization, and de facto abandoning of the Party by its leader in favor of the position of the head of government.³⁶ These policies, however, had virtually no impact on the activists awaiting rewards for a decade, or for decades. The main beneficiaries of Gorbachev's perestroika that revitalization elite circulation were "young cadres" who had actually come to the positions of "second" or "deputy" in their forties and fifties. Low-rank elite members and aspirants to the elite positions were proposed a generous outside option in the late 1980s in the form of the freedom of small enterprise and abolition of restrictions on the size of salaries in the state sector of the economy. Apparently, to relieve the pressure on the elite from below, the size of this tax cut should have been large enough with a clear

34 Isolated industrial settlements provide the environment in which labor can be forced indirectly most efficiently: in a Siberian gold mine everyone – free or inmate – has to work on the conditions set by all-powerful local administration. The situation in a village near Moscow had been hardly different before farmers were given internal passports in the 1960s.

35 In fact, the first attempt to accelerate top elite circulation was made by Gorbachev's short-lived predecessor Andropov in 1982-1983.

36 Amidst the Great Terror, Stalin took over his right-hand man Molotov in the capacity of the chairman of the council of ministers. Gorbachev chose to make himself a new position of the President of the USSR.

consequence for the elite revenue. Additionally, by turning off the nomenklatura machine and initiating a revision of communist ideology, Gorbachev leadership undercut supply of loyalty by the population to a level threatening the existence of coercive equilibrium and, hence, the elite itself. No option was left for the elite but a thorough institutional change that would bring the system to a different equilibrium. Sufficient space for the maneuver was opened by a broad-scale détente of the late 1980s. It allowed coercion to be reduced considerably without a reduction in the elite's net revenue.

In 1990-1993, the system underwent a rapid transition, involving a sharp reduction in the rate of coercion; elimination of the elite circulation system based on loyalty borrowing, that is, the Party; and the reduction in military outlays.³⁷ An additional factor that helped the Soviet elite to transform successfully was the grant of access to international credit to post-communist Russia. The overall outcome was that of contraction of the economy's output and consumption of the population, accompanied with an increase both in the net revenue of the elite and the population's utility level, the latter resulting primarily from diminishing "overwork" effect. This explains the relative political stability during Russian transition, despite the disastrous state of the economy.

The "loyalty borrowing" model explains why and how the party machine stopped working. It does not explain why the Soviet elite's integrity was broken and why it became much more competitive (less united) than it had been before. In other words, why privatization? An alternative way to protect against the pressure from below could have been a collective defense, transformation into a closed caste. However, institutional inertia made such a turn impossible. Soviet ideology was shaped to conform to the operation of the nomenklatura loyalty-borrowing machine. Indoctrinated accordingly, the population would not accept that sort of change. It was much easier to declare that Russia was going to join the ranks of nations that accepted private property and enjoyed higher living standards. That would be a welcome change after the slowdown of the 1980s and the economic disasters of the last years of the Gorbachev's reign.

Privatization was, therefore, the only feasible transition solution. It was essentially a declaration of bankruptcy and an auctioning off of all elite positions. The rules of the auction were not fair: incumbents were given priority in the form of information, power, network relations and other

³⁷ The most important part of reduction in the military outlays came from sharp contraction of subsidies to the defense industry. Some authors estimate that up to 40% of the output of Soviet machine-building industry was consumed by the military (Gaddy 1996). In contemporary Russia, both this share and the share of machine-building as a whole in GDP is much lower.

advantages. However, it gave a chance for lots of new and old activists. Some of them won nice lots, others, who lost, had no reasonable ground to complain. Some of those who won eventually blended with the old elite, while others were eventually squeezed out. Privatization secured the revenues of the Soviet elite by converting the rights of office into property rights. But it also unleashed competitive rent-seeking which reduced coercive productivity of the elite as well as productivity of the economy because of disorganization – after all, rent seeking is a negative-sum game (Tullock 1980). In this sense, it was a coordination failure determined by past institutional development. A first-best path of transformation was not available for the Soviet elite because it was blocked by ideological constraints. However, excessive coercion had apparently been so large in the USSR that the choice to remove it allowed the elite to survive and even to reinforce its position, despite the inferiority of the economic outcome.

4. Conclusions

In this paper, we model the Soviet system as a political-economic system with two agents: a predatory (parasitic) ruling elite and a working population. The ruling elite maximizes its revenue net of coercion costs, while the population produces an economic good, choosing labor effort optimally for a given after-tax consumption. The elite's "power to tax" rests on its ability to produce economic bad ("harm"), while resistance of the population to coercion constrains this power. Coercion is indispensable in this system. Moreover, coercion should be maintained at a level above a certain threshold to guarantee workability of a command economy that is effectively an instrument of lump-sum taxation. This system maximized the Soviet elite's net revenue, although at the expense of the stability of a political-economic equilibrium against exogenous shocks. Equilibrium was normally maintained by credible threats rather than actual repression, while the major outbursts of violence against the population, observed in the Soviet history, can be interpreted as disruptions of equilibrium caused by the changes within the elite, affecting its productivity in coercion, and the external threats calling for increases in the military outlays.

Inclusion of the effects of the internal structure and dynamics of the Soviet elite opens an additional dimension of analysis. The Soviet Communist party, and the *nomenklatura* appointment system encapsulated within it, provided an instrument for "loyalty borrowing." Incumbent elite raised additional revenue through *nomenklatura* by exchanging promises to promote for voluntary dues and labor services of the "activists," aspirants to the elite positions. The "implicit contract" underlying this exchange was not self-enforcing, however, as it made no provisions for timely

retirement of the elite members. The resulting elite circulation dynamics caused unlimited elite expansion that could be deferred only by forceful expulsion of incumbent elite members. Along these lines, the “Great Terror” of 1937-1938 and collisions of the *perestroika* period can be seen as crises in the elite circulation caused by lengthening elite tenures and falling rotation rates.

Stalin’s dictatorship performed the role of a mechanism enforcing the implicit contract between the elite and the activists. Solidifying dictatorial rule could be beneficial for the Soviet elite as a whole, given significant economies of scale in coercion. However, in the absence of an extreme internal and/or external threat, the costs borne by individual elite members under dictatorial rule were excessive. This caused the postwar drift away from personal dictatorship towards ever looser oligarchic rule until collective ownership was abandoned altogether in the early 1990s. The subsequent drastic reduction in the level of coercion enabled a smooth political transition, despite the disastrous performance of the economy. As our model shows, this systemic change was welfare-improving, although the output of the economy and consumption of the population decreased. At the same time, net revenue of the elite increased due to a reduction in coercion costs and military spending.

The abrupt and largely unexpected political transformation that put an end to the Soviet Union is consistent with the *modus operandi* of its ruling elite. It can be explained by the same political-economic model that explains the major choices it was making throughout the seven decades of its history. It is, therefore, quite natural that the Soviet elite took the lead in dismantling some parts of the Soviet system. It was strong enough to keep hold on power, and rational enough to choose privatization as a method to preserve this power and legitimize a new form of it. The endogenous nature of the resulting institutional changes sets a limit to the speed and extent of transformation. Even though the new elite is not identical to its predecessor – on the contrary, its circulation has modified substantially – it has inherited strong political-economic habits and specific human capital that may not be immediately adjustable to the free market environment. Elite continuity can help to explain why the main objective of privatization – breaking the nexus between managers and politicians, as the designers of the privatization program formulated it (Boycko et al. 1995) – has not been achieved. The directors of today’s Russia used to live in the world where coercion was indispensable and they tend to recreate it under a new emblem. The dense networks of intertwining political controls and industrial interests, characteristic of contemporary Russia, can be seen as a downgraded re-implementation of the Soviet political economy of coercion.

Figures

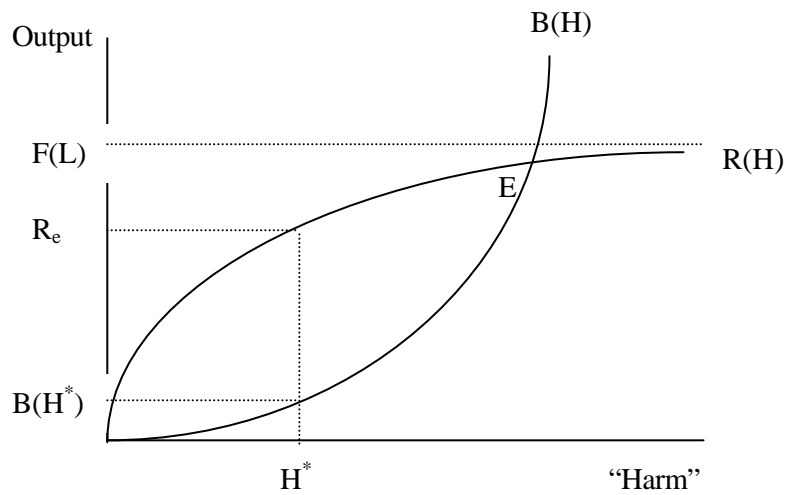


Fig. 1. Determination of optimal coercion and revenue.

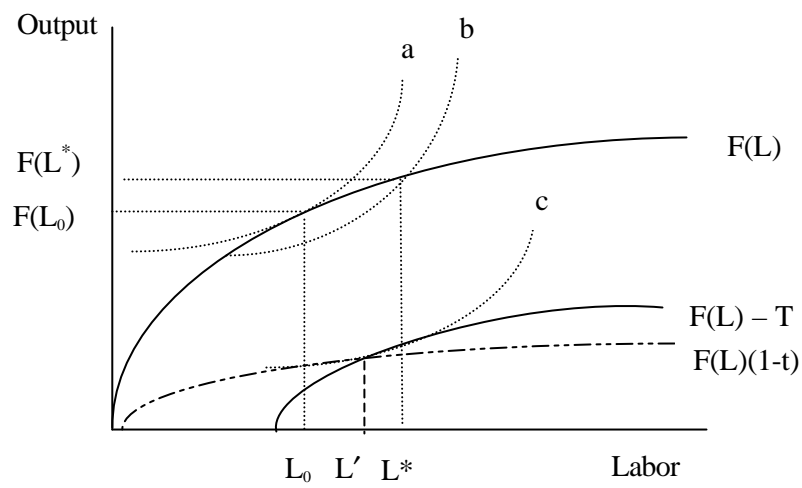


Fig. 2. Effects of taxation.

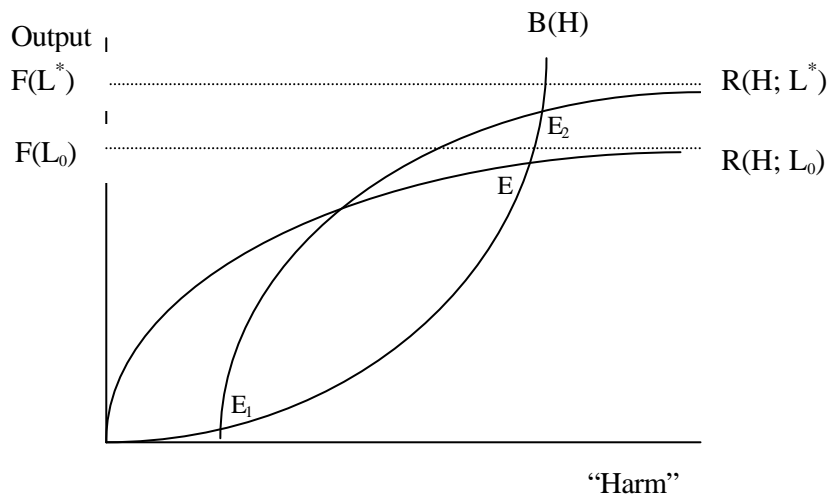


Fig. 3. Effect of labor-stimulating taxation on the resistance curves.

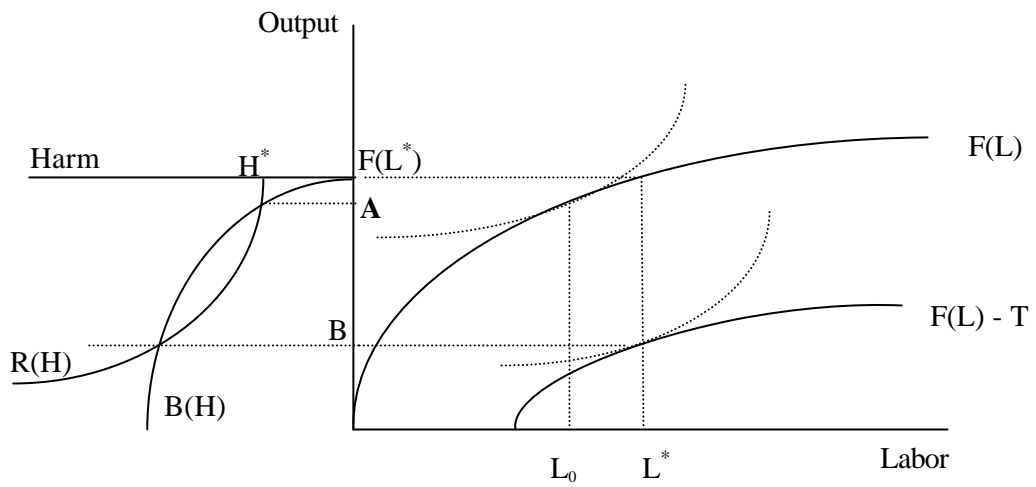


Fig. 4. General equilibrium in a coercion-based economy.

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Appendix

This Appendix provides an example of analytical derivation of the resistance function and the equilibrium levels of coercion, taxation, and labor effort for a particular coercive political-economic system.

Consider a political-economic system, where the population's preferences are given by:

$$V(C,L) = \ln(C) + \eta \ln(1-L), \quad W(H) = \ln(L);$$

the economy's production function is:

$$F(L) = \kappa L^\alpha, \quad \alpha \in (0,1);$$

and the costs of coercion (production of harm) are:

$$B(H) = bH^\beta, \quad \beta > 0.$$

Labor effort is normalized so that $L \in (0,1)$.

In this simple setting, we can derive the resistance function directly from the redemption of harm condition (Equation 1):

$$\ln(\kappa L_F^\alpha) + \eta \ln(1-L_F) - \ln(\kappa L^\alpha - R(H,L)) - \eta \ln(1-L) = \ln(H) \quad (A1)$$

Utility maximization by free population would yield the optimal labor effort:

$$L_F = \alpha / (\alpha + \eta) \quad (A2)$$

Combining and transforming (A1) and (A2), we get:

$$R(H,L) = \kappa L^\alpha - V_F / H(1-L)^\eta, \quad (A3)$$

where $V_F = \kappa [\alpha / (\alpha + \eta)]^\alpha [\eta / (\alpha + \eta)]^\eta$ – exponent of the maximum utility level attainable for the free population.

The elite has to be able to produce harm at the level exceeding the threshold level, H_0 (the point of origin of the resistance curves), in order to extract a positive revenue from the population. By the specification of $W(H)$, H_0 should exceed unity. H_0 moves to the right with the labor effort exerted by the population, since:

$$dH_0/dL = [L(\alpha + \eta) - \alpha] L^{-\alpha-1} (1-L)^{-\eta-1} > 0 \text{ as long as } L > L_F = \alpha / (\alpha + \eta).$$

First-order condition for the elite's problem (Equation 4) yields optimal level of harm:

$$H^* = [V_F / b\beta(1-L)^\eta]^{1/\beta+1} \quad (A4)$$

Substitution of (A4) into (A3) yields the optimal tax (the elite's gross revenue) as a function of the populations' labor effort choice:

$$R^*(L) = \kappa L^\alpha - \nu (1-L)^{-\beta\eta/(\beta+1)} \quad (A5)$$

where $\nu = [V_F^\beta / b\beta]^{1/\beta+1}$.

The range of feasible states of this coercive economy – $(E1', E2')$ in Figure 3 – is given by:

$$\kappa L^\alpha - \nu (1-L)^{-\beta\eta/(\beta+1)} \geq bH^\beta \quad (A6)$$

Although it is not generally possible to show that this range shrinks monotonically as L grows, it is clear that at some high value of L it degenerates into a singular point. Indeed, the second term on the left side of the inequality (A6) tends to infinity as L approaches unity, its upper boundary, while the first term remains finite. Therefore, there exists some $L_{\max} < 1$ such that (A6) holds as a strict equality. L_{\max} is the maximal labor effort that can be induced by coercion.

Optimal labor effort choice by the population can be derived from Equation 5. Substituting the tax from (A5), we get an implicit expression for the optimal labor L^* :

$$\kappa\alpha(1-L^*)^{1+\beta\eta/(\beta+1)} = \eta\nu L^{*\alpha-1} \quad (A7)$$

Discussion in Section 1 and elsewhere in this paper assumed implicitly that (A7) has a unique solution, while it is not necessarily so. It is not the purpose of this Appendix to study the properties of a particular coercive economy in detail. One property of (A7) is worth mentioning here. Solution is more likely to exist, when the power coefficient on the left side is low, that is, when the population's preference for leisure, η , is relatively low and/or when the marginal costs of coercion do not rise too fast with an increase in the level of harm (β is low). ◻