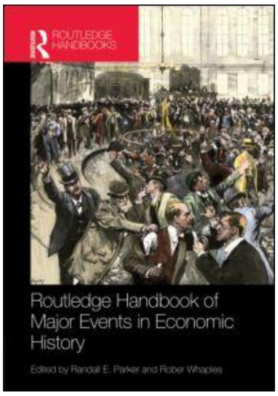

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The demise of the Soviet Union

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28
THE DEMISE OF THE SOVIET UNION

Richard E. Ericson

Introduction

For most of the twentieth century, the Soviet Union stood like a colossus over Eurasia, a political, military, and economic challenge to the West and its way of life. As discussed by Hayek (1994), the Soviet Union represented a way of organizing economic life and development that was diametrically opposed to the natural market ordering that had supported, indeed driven, Western economic development and prosperity into the early twentieth century. With its authoritarian, indeed (at least initially) totalitarian, political system and centrally planned "command" economic system, it appeared to turn a backward, illiterate, overwhelmingly rural/agricultural society into an industrialized, urbanized, scientifically advanced, military superpower in record time. From an agrarian backwater, the Soviet Union became a viable alternative model of the potential future of the social, political, and economic organization of humanity.

Apparent Soviet rates of growth were historically unprecedented, providing the world's first economic development miracle, and threatening to overtake, "bury" in Khrushchev's words, the most advanced economies. And in doing so, it provided, in the middle of the twentieth century, a model of rapid modernization and economic development, one seen as worthy of emulation by developing economies around the world.[1] It also had an impact on the development of economic policy in Western Europe, where Socialist governments introduced massive industrial nationalization and national economic planning in their democratic polities. Even in the United States, the "rationality" of the Soviet planned approach to managing economic growth, macroeconomic stability, and equity in distribution, was accepted in major textbooks and by numerous economists who called for national planning as an inevitable historical development, a part of convergence of systems to a common, rational, socially controlled form of economic organization.[2]

Yet, in the early 1990s, the Soviet Union, and its touted economic system, vanished in one of the more spectacular economic collapses in recorded history. The system, presented as a model for the future, collapsed into economic chaos, and the superpower disintegrated into fifteen largely underdeveloped countries. What happened? How should we understand this history changing event?

This chapter explores the sources and course of this remarkable event. As with all historical change, the factors behind it are both structural and conjunctural. The former relate to the nature of the system, its inherent characteristics, strengths and vulnerabilities. They created capabilities and vulnerabilities, the foundation upon which performance was based. The latter refer to the specific circumstances, decisions, and actions, in the environment created by the structural factors, that triggered the event and determined the precise timing of its occurrence. Thus it begins by discussing the nature of the command economy, and how it helps "explain" both the phenomenal successes and the growing economic failures of the Soviet economic system. That nature made the system highly stable, resistant to change, with every prospect of long-run survival, despite increasing performance problems. Yet those problems, in the face of the growing success of market capitalist systems, led the Soviet leadership to undertake measures, reforms, that proved disastrous to the viability of the system – the conjunctural factors. Spurred by diminishing success relative to the developed capitalist world, the Soviet leadership, under Communist Party General Secretary, and then President of the USSR, Mikhail S. Gorbachev, forced systemic changes that essentially destroyed the command economy. In the face of losing economic competition with the West, the Soviet economic system committed suicide.

The command economy: experiment of the century

Nature and defining characteristics

> A command economy is one in which the coordination of economic activity, essential to the viability and functioning of a complex social economy, is undertaken through administrative means – commands, directives, targets and regulations – rather than by a market mechanism. Economic agents in a command economy, in particular production organizations, operate primarily by virtue of specific directives from higher authority in an administrative/political hierarchy, that is, under the "command principle."
>
> (Ericson 2008: 1)

The Soviet "command" system, the economic engine behind Soviet power and military prowess, reflected a conscious effort to take total control over human activity and destiny. It was developed to implement the utopian dream of a "knowing" elite, the Communist Party: the creation of a fully rational society, one in which no aspect of human activity was to be left to chance, outside of social control. It reflected the socialist culmination of the enlightenment ideal of a rationally managed economy, one consistent with the scientific laws of history. And as such, it brooked no opposition to, no deviation from, the ultimate social goal as interpreted by that elite.

In pursuit of this objective, the command economy strove for total control over all economic activity. The inherent impossibility of such control forced the leadership and its implementing agencies to relinquish operational (direct) control over non-priority areas, and focus on those critical to determining the direction, structure and outcomes of material production, the physical basis of the new society. Although implementation details, even in priority areas, had to be left in the hands of poorly informed, self-interested subordinates, this aspiration led to unprecedented control over economic behavior, and ongoing efforts to reinforce and expand that control, efforts in large part defining the Soviet command economy.

This imperative of control, by a small "leading" group ultimately responsible for its fate, required the centralization of all important decisions, and hence required structures making central planning, *ex ante* coordination, and *ex post* management of economic activity both feasible and effective. This posed an increasingly overwhelming task as the economy developed and grew in size and complexity. To manage the vast amounts of information required both for planning and for the provision of operational instructions/commands to implementing agents, a complete, elaborated hierarchy, in which both information and instructions might be, respectively, aggregated to the top and disaggregated to the bottom, was found necessary. Economic activity was determined in and controlled by nested hierarchical structures, each facing a relatively simple subproblem of planning and implementation, working with economic aggregates at all but the lowest level.[3]

This simplification of the economic planning and management problems allowed effective focus on priorities and the achievement of sufficiently important goals. In doing so, however, it rendered decisions crude, consistent only (at best) with respect to planning aggregates; and systematically isolated decision makers, at all but the highest levels, from the consequences of their decisions, a source of fundamental irresponsibility in operational decision making.[4] Further, priorities were achieved at the expense of non-priority sectors and activities, which were still subject to mandatory targets and arbitrary interventions from above, but had to fend for themselves without taking resources from priority uses or disrupting more important (from the perspective of the highest authorities) activities. Hence, resulting plans, necessarily developed in haste on the basis of delayed and partial information, were always incomplete, and suffered numerous inconsistencies which, however, could not be allowed to disrupt the achievement of priorities.

The consequence of this imperative was the destruction of markets and market institutions, the foundation of any economic autonomy, and their replacement with a set of institutions antithetical to proper market functioning. Thus institutions were required for enforcing subordinate obedience both to plans and operational interventions from above, and restricting subordinate autonomy. In particular, strict control over the physical allocation of all material and human resources had to be maintained, and subordinate capabilities for unauthorized "initiative" had to be severely limited. This included rationing material inputs and access to labor and capital, and severely limiting access to, and the effective power of, "money" – the generalized command over goods and services that is the foundation of any effective economic agent autonomy in a complex social economy.

From the physical rationing of key materials and products, and the tight regulation of the incentives and parameters guiding allocation at levels of detail beyond central purview, to the severe restrictions on the flexibility/capabilities of subordinates to respond to problems, the institutions of the command economy strove to block all unauthorized initiative and force strict compliance with planned/commanded (both explicitly and implicitly) activities.[5] Thus information from planners was rationed on a need-to-know basis, liquidity was provided only when and as needed, and Soviet "money" was restricted to a mere unit of measurement and account, where possible.[6] Indeed, monetary funds were neither necessary nor sufficient for any transactions within the state sectors, and balances were subject to arbitrary confiscation or enhancement as deemed fitting by the higher economic organs. Monetary functions were also limited, but not void, outside sectors amenable to central planning and control, as indicated below (Garvy 1977, Ericson 1991, 2008). Further, all incentives were tied to service to the (party and) state as interpreted by superiors in the hierarchy, with individual wellbeing dependent on such service. And arbitrary discretion (*ex post*) was necessarily left in the hands of, in particular political (Party), superiors to alter commands in order to fix problems, to get things done.

Of course, large areas of economic activity proved too complex, or insufficiently important, to be centrally planned and directly managed. Thus households and many agricultural organizations remained outside the formal state sector, necessarily operating in a (partially) monetized environment, and hence had to be dealt with through "quasi-markets" for labor, consumers' goods, and some agricultural produce. Here money was necessarily more active than in the state-managed sectors, opening opportunities for decentralized initiative and so posing a continual threat to effective state control.[7] Hence its availability and use had to be subject to as strict monitoring and control as possible, a primary task of the Soviet dual monetary system. Yet, despite extraordinary controls built into this system (Garvy 1977) the inevitable errors in planning and surprises in implementation led to growing "liquidity" outside of centralized controls, undermining "plan discipline" and the ability to effectively manage economic activity. And this increasingly fed the growth of a second economy outside of, if largely parasitic on, the state "planned" command economy.[8]

This created a system *fundamentally different from* that of modern market economies, as can be seen in a summary of its essential characteristics (Ericson 1991).

1 A hierarchical structure of authority in which all choices must be made, and conflicts resolved, in principle, at a level superior to all sides of the issue, with sole vertical accountability for actions and outcomes.
2 Rigid, highly centralized planning of production and distribution.
3 A commitment to maximal resource utilization, implying "tautness" and pressure in planning.
4 Formal rationing, i.e. administrative allocation in physical or quasi-physical terms, of producers' goods and services.
5 Exhaustive price control, yielding multiple and contradictory systems of centrally fixed, economically inflexible, prices.
6 The lack of any liquidity or flexible response capability (e.g. reserves, excess capacity) in the system, and in particular the lack of any true money.
7 The lack of any legal alternatives to given economic relationships, and the inability of any subordinate to legally alter any of these relationships.
8 Absolute and arbitrary control by superiors of the norms, indices, and parameters of plan assignments, performance evaluation, and rewards.
9 Incentives geared to meeting the plans and desires of evaluating superiors, and not to the economic consequences of decisions taken at levels below the very top.

Characteristics (1) to (4) provided the framework for effective central control; characteristics (5) to (7) limited or eliminated subordinate autonomy; characteristics (8) and (9) gave the center the ability to steer subordinate behavior. Together these characteristics imply a summary derivative characteristic:

10 The *systematic separation* (due to the hierarchical structure) of the *loci of (four) prerequisites* for proper, efficient action in any situation: correct location, correct information, authority to act, and command over the physical means of action. In particular, the dispersion of usable information and its separation from the loci of decision making authority was critical to the nature and functioning of the system.

These characteristics determined a coherent, stable configuration of mutually supporting institutions, one that systematically rejected (rendered dysfunctional) partial reforms affecting one or more of them, as long as most remained intact.[9]

Strengths and weaknesses

This was a system well suited, indeed built, for "mass mobilization." It embedded the advantages of centralization (Grossman 1963) and was ideally suited to exploit advantages of backwardness (Gerschenkron 1962). These characteristics implied an *effectiveness* in achieving sufficiently important, large-scale and quantifiable goals and priorities, those so important that cost could be no barrier. Thus the new Soviet industrial structure, mass collectivization and urbanization, wartime mobilization, and recovery from the devastation of war and occupation were all achieved in record time (Nove 1992). Yet despite this "effectiveness," it was inherently economically inefficient.

These characteristics imply an unavoidable, deep economic inefficiency in all that was accomplished. Fine economic cost–benefit trade-offs, indeed all but the crudest aggregate trade-offs, were beyond the capability of the system. Such trade-offs require detailed and precise information of particular and changing circumstances, and of fine valuations of all relevant materials and activities, and hence require *decentralized* authority and decision making.[10] Further, they invariably, in some circumstances, indicate that some central objectives should not be pursued; cost–benefit analysis implies constraints on behavior – explicitly rejected in the Soviet approach to planning. Therefore, economic efficiency and cost had to remain distant secondary considerations, as the central authorities had neither the capability, nor truly the desire, to let them disrupt central planning and control over economic activity.

As the economy grew and became more complex, social and economic goals became less tangible, less amenable to command implementation; there were no more complete development examples to emulate. Objectives became less clear, more multifaceted, and priorities proliferated, as the development focus switched from building physical structures to intangibles such as a high rate of technological progress, progressive structural change, satisfying consumer preferences, etc. Thus the command mechanism gradually lost its ability to cope with the changing economy, displaying a growing impotence, obvious to the Party leadership by the early 1980s. Yet for decades, the mutually reinforcing characteristics of the command system persevered, despite repeated attempts to improve performance through reforms. The system remained stable, functioned coherently, until Gorbachev's *perestroika* attacked, simultaneously, a critical mass of its characteristics.

Implications for performance

Both the strengths and the weaknesses were clearly reflected in Soviet economic performance. They generated substantial achievement, particularly when it was clear in the underdeveloped economy of the 1920s through the 1950s what needed to be done. But they also generated substantial waste along the way. Structures and technologies from the advanced economies were readily adopted by forcibly mobilizing and focusing resources, both material and human, without regard to cost, to attain state priorities in record time, as all other demands on resources could be ignored or minimized. Thus the mobilization of labor (full employment) and of capital (massive investment) and the reallocation of land usage were effectively and quickly implemented. And vast military power was generated, challenging the United States, despite an economic base only 22 percent to 33 percent as large.[11] Although a rather egalitarian income distribution, with unshakable job security, was guaranteed, household incomes were kept low, if slowly and systematically increasing. Consumer choice was quite limited; consumption was not a state priority, and was sacrificed to support industrial and military development.

These characteristics also generated the negative characteristics that have come to be associated with the Soviet economy. Extraordinary waste and obvious economic inefficiencies accompanied virtually every achievement. Except for the highest priority, closely monitored projects, implementation was shoddy, with measurable quantity of output substituting for quality. The assortment of products and technologies used was extremely limited to avoid overwhelming detail in planning, sharply limiting technological quality of products. Indeed, quality and qualitative objectives proved too abstract, too ephemeral, to be commanded. Known technologies could be readily implemented and replicated, but innovation proved impossible to plan and command. Only in the military/space sector, by dint of extraordinary concentration of resources and effort, was innovation and frontier technological progress maintained.[12]

These problems were particularly prevalent and acute in the non-priority sectors: consumers' goods and services, housing, basic materials processing, and in all aspects of agricultural production, processing, and distribution. This was reflected in the low, if slowly growing, standard of living, and an increasing resort to "second economy" activities/outlets for both income and consumers' goods and services, as the "first economy" faltered in providing results outside of priority areas.[13] As the Soviet economy grew in size and complexity, there was an unavoidable, inexorable deterioration of performance, even in priority areas, with measured growth devolving to stagnation by the early 1980s. That deterioration was slowed by the growing second economy, which compensated for inefficiencies in even the priority sectors, and the 1970s rise in price of the Soviet primary export, oil, allowing import of both technology and consumers' goods.

The system managers saw these problems coming even in the 1950s – for example, Malenkov's (1954) abortive consumerism; Khrushchev's (1957–63) *SovNarKhoz* reforms; Kosygin's (1965–67) and Brezhnev's (1967–79) repeated reforms (Nove 1992). Their response, prior to Gorbachev, was however, timid, attempting to protect the *status quo* while tinkering with the structure and functioning of the economic mechanism, without changing or even challenging its basic (command-administrative) nature. And they (tacitly) allowed unofficial mechanisms (the second economy) to deal with the growing complexity, the coordination and consumption failures, of the command economy. This preserved the stability, continuity, and decline of the economic system, and the power and perquisites of its leadership.

The collapse of an economic system

Performance to 1982

The initial performance of the Soviet economic system, in terms of apparent growth of output, urbanization, education, living standards, and military power was quite impressive, even if less than Soviet claims. Abram Bergson's (1978) careful reconstructions from dubious Soviet statistics showed a doubling in national income under the first two five-year plans (1928–37) and a further near doubling by 1950, following recovery from the devastation of World War II.[14] This development occurred by virtue of a massive sustained commitment of resources, both material and human, to the industrialization and urbanization of the inherited agrarian economy. Agriculture was squeezed by collectivization, all personal consumption drastically constrained, and education and health services focused on mass training and preparation of the peasantry for industrial employment and urban life (Nove 1992). Market behavior was criminalized, removing market constraints on planners'

Table 28.1 Soviet performance: annual rates of growth (%)

Index	*1928–40*	*1940–50*	*1950–60*	*1960–70*	*1970–75*	*1975–80*	*1980–85*
GNP	5.8	2.2	5.7	5.2	3.7	2.6	2.0
Factor productivity	1.7	1.6	1.4	0.9	1.5	–0.8	–1.2
Labor productivity	1.8	1.4	4.0	3.0	2.2	1.4	1.3
Capital productivity	–2.9	3.4	–3.5	2.6	–3.9	–3.9	–4.0
GNP/capita	3.6	2.9	3.9	3.9	2.7	1.8	1.1

Source: Ofer 1987: 1778

choices, and industrial and urban development forced. This was naturally accompanied by microeconomic distortions, evident waste and inefficiencies, but the economy was rich in natural resources, largely self-sufficient before the war, and able to impose desired outcomes regardless of human and material costs.

Following the death of Stalin (March 1953) the use of violence and terror to achieve development objectives diminished. The new leadership, no longer willing to live in terror, backed away from the extreme suppression of personal consumption, the extreme exploitation of the agricultural peasantry, and the hyper-centralized organization of economic activity. This change was also triggered by an evident decline in macroeconomic performance together with serious deprivation of much of the population – they had sacrificed all to win the war, and deserved a better life! Khrushchev, criticizing the "excesses" of Stalin, initiated a cultural thaw and a decentralization of the management and control of the Soviet economy to regional authorities – the *SovNarKhoz* system.[15] These changes produced a revival of strong economic growth in the 1950s, the basis of Khrushchev's claim to Nixon that "we will bury you" by surpassing the U.S. economy in the 1980s. But this opening to decentralized initiative proved inconsistent with the core institutions of the command economy. In the absence of proper market interface, it also introduced serious economic/regional coordination problems, and an evident substantial loss of control by the central authorities over economic priorities and the course of development. This was reflected, by the end of the decade, in again diminishing growth, coupled with increasingly obvious evidence of economic waste, failed plans, a stagnating standard of living, and a growing technological lag behind the West.

Thus the radical 1957 reform was progressively "re-reformed" through 1963 to impose greater central coordination and control, and then reversed in the major Brezhnev–Kosygin economic reforms of 1965–67, following their 1964 coup which retired Khrushchev. Those reforms re-imposed the classic Soviet command economy (characterized above) with greater, but still severely limited, enterprise autonomy, restructured the (imposed) price system, and created a new centralized organ (GOSSNAB) to plan and manage materials and equipment rationing. And again there was an initial burst in economic growth, maintaining the hope of economically overtaking the West, and the U.S. in particular.

Failure of "partial reform"

By the early 1970s, however, it became clear that Soviet economic growth was declining, and economic waste/inefficiency growing, despite the hopes put into reforms to improve the functioning of the socialist economy.[16] Thus the Soviet leadership authorized a continuing series of further "reforms," each addressing a perceived inadequacy in the functioning of the economy. Although the reforms were wide-ranging, addressing administrative reorganization, planning processes and parameters, the functioning of the material supply/rationing system, incentives both within firms and above the firm level, and decentralization in implementation, they remained partial, often introduced piecemeal as experiments. And none of them challenged the nature, the essence, of the command economy – the dedication to overriding central control with its necessary consequences. Instead they tinkered with economic policies and procedures, replacing or re-reforming earlier reforms, each change anticipating noticeable improvement, and each resulting in disappointment. Reforms consistent with the nature of the command system, those enhancing hierarchical monitoring and control or benefits to higher authorities, remained in place, elaborating the structures of command, but still failing to noticeably improve performance (Kontorovich 1988, 2008).

Those reforms that challenged the command principle, that moved toward true subordinate autonomy and allowing real market interaction, threatened the viability of the command mechanism, and were systematically re-reformed to impotence, or outright reversed. Indeed, for the survival of the system, they had to be, as they resulted in breakdown of planned coordination (in the absence of markets) and the disruption and/or loss of control over economic processes, the disruption of higher objectives and priorities. This aptly named "treadmill" of reforms (Schroeder 1979) did nothing to reverse the dismal performance trends, with output growth falling to near zero and productivity growth turning negative by 1982. This resilience in the face of repeated reforms reflected the inherent unreformability of the command system, both a strength and a structural flaw that lay behind its eventual collapse.

The perceived need for "deeper" reform

By the early 1980s, it was clear to all that the response of the system to its growing economic problems was inadequate.[17] The economy and society were stagnating. Partial reforms were not working, and the top leadership of the party was incapacitated by age and unwilling to decide on any change. Both the Soviet economy and Soviet society had sunk into a deep stagnation, and were perceived by all to be falling ever further behind the developed West. There was an evident feeling of a need to shake things up, to overcome inertia and get people motivated and working again, in part by removing petty plan restrictions on, and allowing greater initiative by, subordinates and individuals.

In both the Party and educated society, massive, subsurface, discussions were taking place, questioning the way the economy functioned. Special secret studies were commissioned by the Party. One particularly influential such study was in a Novosibirsk Report by sociologist Tatiana Zaslavskaia.[18] It contained a sociological critique of the deadening impact of the command system and argued for a humane socialism, with room for individual initiative and reward. It was not opposed to socialism or central planning *per se*, but did oppose its Soviet implementation.

This debate remained muffled until Brezhnev's death (November 1982) brought it into the open. Brezhnev's successor, KGB head Yuri Andropov, pushed to implement some suggestions, launching yet another reform – the Large-Scale Experiment (Six Ministries) – that again granted managers in these ministries greater enterprise autonomy in investment decisions and in providing incentives to workers and managers, albeit within plan control figures, and greater responsibility for results of their economic activities. This was coupled with a strong discipline campaign, severely punishing absenteeism and failure to carry out directives. Both sets of measures provided an apparent boost to performance that quickly faded, and then vanished with Andropov's death (February 1984) and the appointment of Brezhnev's older colleague Konstantin Chernenko. That deadened debate and muzzled changes until he too died on March 10, 1985. He was succeeded by the next generation: a young man with a "nice smile, hiding teeth of steel"[19] was selected by system's "Board of Directors" [Politburo] – Mikhail Sergeyevich Gorbachev.

Gorbachev and perestroika

Gorbachev strove to save Soviet socialism by radically reforming the command economy. He sought to allow decentralized initiative, with associated personal risks and rewards, in order to provide incentives without sacrificing overall central control or socialist ideals. The economy was to be steered by general central directives and development policies, but no longer directly centrally administered, in pursuit of an equitable collective future that preserved the gains of socialism.[20] Thus he pursued a vision inherently incompatible with the nature of the command economy. He ultimately sought to introduce tame, manageable "socialist markets" to allow efficient implementation of the social and economic goals indicated by the party, creating a socialist market economy rather similar to that imagined of the NEP (New Economic Policy) period from 1921–29. It however took some time for him to fully formulate this vision.

Thus he began where his mentor and predecessor, Yuri Andropov, had left off, with the vigorous implementation of what were believed to be the "best" of the reforms of the prior two decades, with a new, strong emphasis on providing incentives to mobilize the effort, creativity and initiative of individuals. This reform program was accompanied by a drive to accelerate growth in economic output and productivity, both of which appeared to be turning negative by 1985. It was encapsulated in the Twelfth Five-Year (1986–1990) Plan's massive investment push that was focused on the machine building and engineering sectors.[21]

This ambitious program, launched under the slogan *Uskorenie* (Acceleration), directed a massive increase in investment, a revival and extension of Andropov's "Large-Scale Experiment," more tinkering with plan indicators and performance reward parameters, a partial decentralization of investment and price setting, and further administrative streamlining and rationalization, reallocating planning and control tasks and simplifying administrative controls. More radically, Gorbachev forced through a liberalization of foreign trade, allowing for the first time since the mid-1920s direct contact between some Soviet ministries and firms and the foreign firms with which they hoped to deal.

But the heart of the program, building on the discussion of the early 1980s, was the focus on the human factor. New rights and opportunities were offered to individuals, to economic decision makers, in the hope that they would find better ways to implement what were thought to be generally shared social goals. And new incentives, both positive and negative, were provided. The old Soviet "social contract" of security and stability of well-being in return for obedience, effort, and abdicating control over one's life, was to be replaced by a new one granting greater rights and responsibilities, and the opportunity to do better than others through one's own efforts, but without guarantees and at the risk of suffering economic failure. Thus unemployment and unexpected adverse price changes became possibilities, and private economic activity, at least at the level of individuals and families, a path to potential enrichment. To further enhance individual incentives, a wide-ranging "discipline campaign" was also launched to enforce plan, production and labor discipline and counteract "free riding" on socialist benefits. It included a crackdown on corruption, particularly in the

Table 28.2 Economic performance during *perestroika*: annual rates of growth (%)

Index	*1981–85*	*1985*	*1986*	*1987*	*1988*	*1989*	*1990*	*1991*
GNP	1.9	0.8	4.1	1.3	2.1	1.5	–3.5	–17.0
Industry	2.0	2.0	2.4	3.0	2.7	–0.6	–2.8	–7.8
Agriculture	1.2	–3.9	11.2	–3.8	–0.4	6.1	–3.6	–7.0
Investment	3.3	2.1	5.3	1.7	4.5	0.6	–6.0	–25.0
Consumption per capita	0.8	0.2	–2.1	0.3	2.9	2.5	1.4	–14.8

Source: CIA, *Handbook of Economic Statistics, CPAS 91–10001*, September 1991: 62–69. 1991 figures from OECD (1995)

national republics, substantial turnover in higher administrative ranks (a generational transfer of power), a crackdown on absenteeism, and an attack on unearned incomes (during the summer of 1986) – i.e. those beyond what the (generally local) authorities thought desirable.

This was complemented and reinforced by perhaps the most radical policy of all: *glasnost.* This was a policy of openness, reversing the traditional Russian/Soviet approach of hierarchically structuring and limiting information to only those with a need to know, limiting criticism to only those authorized to exercise it. It was aimed at mobilizing and harnessing the input and enthusiasm of society to the great task of modernizing the Soviet Union and its economy. But it opened the floodgates to historical revelation and revision, criticism of not only shortcomings in operation but of the very essence of the Socialist command economy and its leadership, past and present, and of the sacred institutions and myths of the Soviet system. And it provided information useful for "unauthorized" initiatives, for deviation from "socially desirable" activities.

The initial impact once again appeared quite positive as firms absorbed the increase in investment resources, the discipline campaign raised labor inputs, and the weather cooperated in producing a bumper crop. But all these factors rapidly faded. The price of oil, the primary source of hard currency earnings, collapsed; investment plans proved overambitious, unsupported by resources; the discipline campaign soon became disruptive of regular economic activity; and economic agents figured out how to exploit new powers and opportunities in their own interest rather than that of fulfillment of the plan. Production disruptions, shortages, and waste of materials became increasingly prevalent, and hoped-for increases in efficiency and quality of product failed to appear. Gorbachev's response to this increasingly dysfunctional impact of his reforms was to deepen and radicalize, rather than repeal them, breaking with the conservative response of his predecessors when their reforms had faltered.

Gorbachev deeply believed, as the memoir literature shows,[22] that the Soviet socialist system was reformable, if only the spirit were willing, and vested interests overcome. But that, he soon came to believe, would require more than marginal improvements (*sovershenstvovanniia*) in the economic mechanism of the Soviet economy, more than the prior tinkering with the economic system. A more radical institutional reform, preserving and strengthening Soviet socialism, was needed. At the January 1987 Plenum of the CPSU; he declared the intent to undertake such a comprehensive reform of the economic system itself; and at the June 1987 Plenum; basic documents outlining a fundamental reform and the skeleton of a new socialist market economy were approved and ordered to be implemented in the coming year.[23] This was to prove a critical conjunctural factor in the system's collapse.

This was a truly radical reform, attacking the foundations, the very logic, of the command economy. The cornerstone of the reform was the Law on State Enterprise that codified the central actor in the new decentralized, socialist market economy, the autonomous state enterprise. It was to be self-financing, negotiating many of its own contractual prices and trading with other such enterprises and foreign firms. It was also to be self-managing, operating under a self-developed plan, drawn up to be consistent, it was hoped, with social plans and state directives, and guided by state orders and stable planning and financial norms. Thus firms were free to dispose of all output above (diminishing) state orders, although most prices remained fixed, and to finance their own investment and development. Central planning was to become longer run and financial outcome oriented, rather than physical output oriented, setting basic directions and guidelines, only commanding the allocation of a few hundred structure-forming commodities, and allowing firms to fill in the details to determine, on their own, how to achieve good financial results.

Once again, unintended consequences dominated the outcomes. One major consequence was that enterprise labor collectives found themselves empowered to take what they wanted from the enterprise's earnings, leading to rapid expansion of currency in circulation and growing inflationary pressure, albeit repressed by price controls.[24] Controlled prices, together with enterprise freedom to select outputs and partners, and the planned lack of competition (sellers' market) led to increasing disruption of production and growing shortages. Facing mandatory targets for only part of their output, firms reduced production of non-mandated items, and shifted their product mix toward higher-priced products and those easiest to produce given existing capacities and reserves. This disrupted supply to other enterprises, undercutting their ability to meet state orders, contributing to a broadening output contraction through 1989, 1990 and 1991.[25]

At the same time, the intermediating administrative and political organs, which had made central control effective, had their rights and powers undercut, rendering them impotent in the face of growing economic chaos. Macroeconomic imbalances, including the first recognized Soviet budget deficits, grew together with the monetary overhang, generating unprecedented repressed inflation and shortages in consumers' and investment "markets." Again, however, there was an initial spurt of economic activity as firms rushed to exploit new opportunities, launch investments, and cut old commitments. But by the end of 1988 it became clear that this spurt in activity was unsustainable as output stagnated, and microeconomic chaos and distributional inequity grew, far exceeding the worst expectations of the central authorities. To the highest leadership, innocent of economic understanding, this looked like sabotage by bureaucrats and old hierarchical structures.

So Gorbachev "doubled down" on radical reform, launching a third phase to undercut these vested, anti-reform interests. The essence of this stage was the attempt to outflank those structures by introducing some real competition into the system without, however, giving up control over its overall development or socialist nature. Thus the door was further opened to foreign capital through liberalized joint-venture laws, currency liberalization and auctions to determine a "market" exchange rate in the hope of attracting foreign technology and know-how, backed by hard currency, to the modernization effort. This liberalization was also intended to provide effective competition for large-scale Soviet state industry. On the consumer side of the economy, a liberal Law on Cooperation was promulgated in 1988, greatly enhancing the rights and opportunities for small producers' cooperatives and greatly expanding the role of active money in the economy. Opportunities for individual labor activity, allowed since 1986, were also expanded, again enhancing the power and reach of entrepreneurial initiative and active money. These were intended to produce consumers' goods and services, and producers' services, thereby providing competition to state enterprises and absorbing labor released by state firms as they became more efficient.

Finally, some competition was introduced in the political sphere through a policy of *democratization,* aimed at undercutting entrenched political interests by increasing citizen participation in decision processes, and by mobilizing representative bodies (soviets) through contested elections of their members. These bodies were given enhanced administrative power, and legislative authority in the social and economic spheres was decentralized to these regional and local organs. This created new centers of political power – republic, regional, and local soviets – with a popular base of support outside the direct control of the party and state apparatus. And it provided a basis for effective action based on the critiques raised by the increasingly venomous un- and anti-Soviet discourse inadvertently fostered by the policy of *glasnost.*

Chaos and collapse

The primary consequence of these policies was an aggravation and deepening of the evident economic crisis. Measured productivity continued to plummet, production slowed with increasing disruptions, shortages multiplied, stores became virtually emptied of consumers' goods, and prices began an inexorable rise despite continuing controls. Overall, the reforms appeared ineffective, or dysfunctional. Foreign companies displayed much hesitation about entering the Soviet market, although increasing imports, financed by foreign borrowing, did ameliorate shortages. The introduction of domestic competition through private cooperative enterprise did have a noticeable impact, but one that rapidly got out of hand, generating massive *unintended* negative consequences. Incomes visibly differentiated creating obvious inequality; speculative and arbitrage activities flourished, often carried out by fly-by-night (pseudo-) cooperatives. Corruption became obvious, and crime against private and personal property, including fraud and extortion, flourished, with criminal gangs, second economy entrepreneurs and petty officials actively involved. Thus a firm base for the growth and legitimation of criminal organizations was laid; they were just engaging in private, cooperative business.[26]

The leadership increasingly expressed an evident dismay at these reform outcomes, as well as a deep lack of understanding of why they were having such a negative impact. Further, democratization backfired from the perspective of supporting reform. Newly empowered legislatures and their leaders were clearly interested in political power, autonomy from the center, the revival of local (ethnic/national) culture and dignity, and the control over local natural and capital resources. This led in 1989–90 to a war of laws as many regions tried to invalidate Soviet laws and impose their own laws, norms, and economic controls, particularly over valuable resources (oil, minerals and metal ores, timber, etc.). The elections that were to rally support for reform instead gave voice to dissatisfaction with reform consequences, with blame for economic stagnation and decay, and the chaos of recent years, being increasingly placed on *perestroika*. Finally, this limited democratization revealed the totality of the collapse of the authority of the Party – the only universal glue holding the command economy together.

The Soviet leadership in 1991 faced a deepening crisis, clearly reflected in disastrous economic statistics. Growing economic chaos and signs of obvious social, economic and political disintegration led to a new phase, one of retreat, with partial reversal of some reforms (e.g. worker election of managers), growing confusion, and accelerating disintegration, rather than the vigorous reassertion of central authority and wholesale reversal of reform as had occurred with earlier reforms. This failure to act decisively reflected a loss of both control

Table 28.3 Economic performance, 1991

Indicator	*% change*	*Indicator*	*% change*
Gross national product (GNP)	–17.0		
Net material product (NMP)	–15.0	Consumer prices	+196.0
Industrial output	–7.8	Producer prices	+240.0
Agricultural output	–7.0	Cash emission	+480.0
National income (used)	–16.0	Credit emission	+210.0
Consumption	–13.0	Budget deficit	over +500.0
Investment	–25.0		

Source: *Ekonomika i zhizn'*, #6, 1992

instruments and confidence of the will to act on the part of the ruling elite, aggravated by a genuine lack of understanding of what was going wrong. It also reflected growing corruption, from the temptations of private enrichment of that elite, generating divisions that further obstructed coherent action.

The system drifted through 1990 and 1991 as a great socialist transition debate unfolded, reopening the whole issue of social control of the economy. The debate subjected the centralized, political determination of economic objectives to withering attack. Even the "reformist" conception of a Socialist Market Economy, and indeed the very desirability of socialism itself, came under direct assault. And this naturally generated a reaction, a reassertion of Soviet, even Stalinist, orthodoxy by some debate participants, setting the background for major policy struggles over the needed direction of reforms.[27] Indeed, under the Pavlov government (January–August, 1991) "anti-crisis stabilization" replaced "reform" as the official policy objective, while various plans for continuing/deepening the reform were proposed and debated, without a choice being made. Among these, the most radical was the Shatalin–Yavlinsky 500-Day Plan for radical marketization with total abandonment of the command economy. The other reform plans (Abalkin, Ryzhkov, Aganbegian) all relied on various degrees of state-led development of a socialist market economy – a compromise between radical marketization and Soviet plan orthodoxy, while some political voices called for a return to discipline and rigorous central planning.[28]

Alongside these debates, the national republics sought exit from the chaos through "economic autonomy," which Gorbachev, if not most of the central party leadership, appeared willing to grant. In short order, demand grew for political autonomy and then national independence, particularly in the Baltic and Caucasian republics. Gorbachev hoped to end this flight of the republics through signing a new constitutional agreement preserving the Soviet Union, if in a far more decentralized form. A referendum to that end was held in June 1991 in which a majority of the population voted in favor of its preservation. However, government opponents of the reforms, and of the obvious weakening of the Soviet Union they engendered, acted on the eve of the signing of the new Union agreement, removing Gorbachev from power by sealing him in a Crimean state dacha, and taking formal power into the hands of their State Committee on the Emergency Situation (GKChP) August 19, 1991. This was a last gasp effort of the Soviet government to reimpose order and discipline, and save the Union.

The new regime lasted only three days, while its leaders sank into drunkenness and indecision, before succumbing under popular pressure and the spirited resistance of the recently elected President of the Russian Federated Soviet Socialist Republic, Boris N. Yeltsin. Gorbachev was returned to the Soviet Presidency, but not to power, as Yeltsin and other regional and republic leaders effectively controlled the course of events. Most republics, with Russia in the lead, moved to seize effective sovereignty in the face of an accelerating economic collapse. Within three months, the leaders of the three core Slavic republics of the Soviet Union met in Belovezhsk, outside Minsk, and agreed to dissolve the Soviet Union and create a loose confederation of sovereign states, the CIS (Commonwealth of Independent States). The failure of the August coup, Yeltsin's initiative, and the Belovezhsky agreements (CIS) effectively ended the Soviet Union and the command economy on December 25, 1991.

Why *perestroika* destroyed the Soviet system

The logic of perestroika's *failure*

Perestroika grew naturally out of decades of piecemeal, if at times wide-ranging, "reforms" aimed at improving/"perfecting" (*sovershenstvovanie*) the socialist (command-administrative[29]) system of the Soviet economy. These reforms were driven by slowly growing, but persistent, microeconomic dysfunction (evident waste, mal-coordination, etc.) and inexorably, if slowly, deteriorating economic growth. As seen above, these partial reforms had no lasting positive impact on economic performance, leaving the economy sinking toward stagnation. That stagnation, achieved as the post-war generation of Soviet leaders began dying off, set the stage for a more radical approach; partial reform/improvement of the system had not worked. Yet the system appeared completely stable, able to move forward and maintain a slow but steady rise standard of living for the indefinite future.[30]

Gorbachev and his advisors assumed that this was a result of insufficient boldness of reform, of insufficient trust in the socialist aspirations and instincts of Soviet citizens.[31] Assuming that Soviet society fully accepted this socialist vision, they sought to liberate it from petty constraints and to allow individual initiative to be mobilized in pursuit of that vision. *Perestroika* thus went beyond the prior reform paradigm; it grew, albeit unintentionally, into a fundamental attack on the logic of the system, challenging its essential defining characteristics. Knowing that the prior partial reforms had failed to improve the functioning of the system, Gorbachev and his advisors ploughed ahead with ever more radical reform, determined to impose significant change despite the escalating signals of problems from below. The authoritarian system allowed them to do so, ignoring feedback until it was too late.

Thus increasingly radical measures, challenging the foundations of the command economy, were launched one after another, if rarely brought to fulfillment. These measures disrupted the coherence of that system, yet themselves failed to comprise a coherent package of alternative economic mechanisms. Indeed, progressive Soviet economists, with their profound ignorance of economics, played a destructive role as they recommended mixing policies and institutions from progressive world experience without comprehending the institutional embeddedness of such policies in those other economies. Important decisions, by the structure of the system, could be, and were, taken without feedback from below, where "simulation" of performance and pleading of "special circumstances" clouded real performance data about the impact of the policies launched. In this distorted informational environment, the leadership lost trust in reports from below which, coupled with driving impatience, led them to rapidly revise/"improve" policies, undercutting them before they had a chance to do what they had been designed to do. And, in the name of reform, the leadership systematically abandoned the key levers of economic control of the command economy. Hierarchical structures of state planning and implementation, the rationing of resources, strict control over prices and financial transfers, and operational intervention of party organs in economic allocation and operations were abandoned, as were the key priorities at which the command economy excelled: industrial investment, producers' goods production, the military, etc. And this disorganization of the mechanisms of command implementation led to a loss of coordination in the implementation of reforms across both sectors and institutional arrangements. When the consequent economic incoherence brought further disruption and deterioration in performance, increasingly radical *political* reforms were introduced to uproot or push aside the opposition believed to lie at the root of failure of these reform attempts. These reforms, in turn, further undercut the legitimacy and ability to control that politically-inspired and politically-driven economic system.

Increasingly *perestroika* freed Soviet institutions and agents from the behavioral constraints and coordinating controls of the command economy. In effect, it granted them *de facto* license to exploit resources – political, institutional, economic and material – at their disposal in their personal interests, without the institutional constraints of either the command economy or a law-based market system and its financial infrastructure. The leadership naively assumed that reform-stimulated individual initiative would be exercised only in the interests of state and society. Individuals and firms were to exercise initiative only to make current structures, organizations, and interactions work better, and to refrain from lucrative opportunities that were disruptive of received interactions, to limit the "excessive" acquisition of personal wealth. The pursuit of any interests beyond what the leadership wanted was considered sabotage. "State" values and valuations were to be accepted by economic agents, who should only marginally adjust them in the pursuit of efficiency and effectiveness of state operations.

There was absolutely no comprehension of the extreme distortions, the explosive tensions, built into the existing singular structure of industrial and "commercial" interactions, and the bizarre relative prices that had evolved over seventy years of rigid and economically uninformed controls. Thus the natural incentives of implementing agents were destructive of the structure of the inherited system. And that was aggravated by continuing Soviet institutions that blocked market feedback mechanisms that might have channeled agent behavior in more desirable directions: the dual monetary system, rendering budget constraints vacuous; insufficiently flexible prices, with critical input prices still fixed; planned absence of alternative suppliers and users for virtually all products; total absence of market intermediaries, etc. Finally, the uncomprehending haste of the political leadership, brooking no opposition and piling uncoordinated reform upon ill thought-out reform, launched a downward spiral of economic performance as institutional and economic collapse accelerated. Only the political collapse was faster. The Soviet Union, largely for political reasons, disintegrated in the last few months of 1991, leaving all policy in a state of collapse, and fifteen new state economies in free fall.

Suicide of a system

Gorbachev's policies drove a process that led to the unraveling of the command economy, as its essential pillars were systematically, if uncomprehendingly, attacked. The social and political policy of *glasnost*, aimed at developing an informed, active Soviet citizenry, undercut legitimacy of the system and hence the willingness to both command and to obey. Political and economic "*democratization*" undercut the ability of critical political organs to direct and manage economic activity, empowered workers' collectives to manage production and incomes without responsibility for the outcomes, while "*sovietization"* created indecisive, economically incompetent, collective bodies at the regional and local levels. Finally, *ekonomicheskaia perestroika* (economic restructuring and decentralization) without real markets, prices, money, or a hard "bottom line," disorganized economic activity and its coordination, leading to a growing breakdown of economic intermediation and activity, while self-interested behavior, unanchored in market discipline or institutions, was systematically dysfunctional, disruptive of productive economic activity. The resulting systemic breakdown in 1990–91 reflected the fundamental nature of the command economy, and the truly radical scope and depth, relative to the system, of the changes introduced by Gorbachev. Indeed, they attempted a truly radical reform of an inherently unreformable system.

The system, the command economy, was unreformable as a logically consistent, self-contained entity (Ericson 1991, Kornai 1992) comprising a tight set of necessary, mutually supporting characteristics. Each component was a natural, and indeed essential, part of the overall system, organically linked to every other essential component. While the shape and form, the superficial features, of each component could vary tremendously, the essence of each was inextricably bound to the logic of command, the logic of centralized direction, control, and coordination of economic activity. Thus, reforms/changes *consistent with the logic* of the system were successfully adopted, without altering its nature or the quality of its performance. These included such things as administrative restructuring, planning refinements, incentive scheme refinements, and priority changes. Where the reforms were restorative, involved recentralization or administrative rearrangement within the hierarchical structures of command, they entered the system, elaborating its hierarchical structures to accommodate increasing size and complexity. Such reforms became a refinement or improvement of the economic mechanism of developed socialism.

However, where the reforms were contrary to command – decentralizing, or extended subordinate discretion and autonomy, reforms that attacked or sought to fundamentally change one or more essential characteristics of the system – they soon ran foul of the existing structures, introducing dysfunction: deviation from plans and priorities, mal-coordination, diversion of resources, private enrichment, unjustified differentials in performance, etc. Such reforms were *inconsistent* with the rest of the system and hence with the proper functioning of the command economy, leading to increasing disruption and breakdown. This created a clearly untenable situation, to which the authorities, in particular those mid-level economic officials responsible for maintaining balance and smooth functioning of the production process economy-wide, had in the past regularly responded by reversing or "re-reforming" the reform in question. Reforms such as introducing real decentralized trade, monetizing interaction (real money), introducing real financial incentives, allowing local control over investment or product line/assortment, etc., all attacked the foundations of the system and hence had to be eliminated, however real the problem they had been introduced to address. Thus bureaucratic resistance, sabotage of the reforms, was a rational response of those whose duty it was to implement economic plans and outcomes.[32] This is the logic of the Treadmill of Reforms – fiddling with the system without affecting its *essential nature,* without challenging its underlying logic: reforms with no essential impact survived, while those that made things worse were reversed/re-reformed, and often retried later as they attacked real problems. Thus the command economy was, in a fundamental sense, unreformable. That, however, was not understood by Gorbachev and his closest economic and political advisors.

Instead, they took a different lesson to heart, as seen in the evolution of *perestroika*. Assuming the system's reformability, and the ultimate viability, indeed superiority, of planned socialist organization of the economy, they pushed for ever greater radicalization as reform stalled. In doing so, they failed to appreciate the consequences of economic and social liberalization within command institutional structures, the impact of the incentives and opportunities created. The organizational structures of the command economy remained in place, blocking the development of new market structures, of market feedback and prices, that might have channeled decentralized activity into socially useful directions. In particular, the continuing dual monetary system allowed the hemorrhaging of both cash and credits into the hands of uncontrolled economic actors, who effectively faced no financial constraints, no "bottom line." So disproportions in activities, waste of social resources, and diversion for private usage faced no natural barriers; the market price mechanism was effectively disabled.

When liberalizations yielded negative social and economic consequences, Gorbachev and his advisors assumed that must be the result of political opposition, of sabotage by those whose power was threatened by the liberalizations. Thus political liberalization, undercutting the supposed resistance, was launched on top of social and economic liberalization. The social and economic forces liberated from direct party and administrative controls, from prior constraint on words and actions, were now free to exploit resources and arbitrage opportunities created by the shortcomings and then collapse of plans in their own personal interests. And those tasked in the command economy with maintaining social coordination and focus were now deprived of the power of immediate intervention, of effective instruments of control. In particular, the Communist Party of the Soviet Union, the lynch-pin of the system of command and control, was forcibly – by direct order of the General Secretary, the ultimate executive authority in the party – removed from economic responsibility, and was forced to compete for political authority with national social and political forces.

And that proved to be fatal to the command economy.

Concluding comments

On Christmas day, 1991, Mikhail S. Gorbachev was escorted from his Kremlin office, and the flag of the Soviet Union came down, replaced by the Russian Federation tricolor. This marked the formal end of the greatest social experiment of the twentieth century, of an epic effort to remake society and economy, indeed mankind, into a rationally planned, socially directed and controlled egalitarian world inexorably marching toward a utopian future. While that experiment had long been faltering, the Soviet leadership, and the world, accepted it as an ongoing "work in progress," a viable alternative to market capitalism that indeed was pulling, by its example, both developing and developed market economies toward an inevitable, more collectivist, planned future. Hence Gorbachev could not conceive that his reforms, his efforts to render the command economy more flexible, innovative and humane, would destroy that economic system. And neither could most outside specialists/ Sovietologists and observers.

Yet the implementation of those reforms, the increasingly radical *glasnost, perestroika* and *demokratizatsiya*, systematically undercut the foundations of the Soviet system, its authoritative party, command economy and authoritarian society. The reforms disorganized, then destroyed, existing political, economic and social institutions, leaving society and the economy in chaos by late 1991, with the leadership deadlocked in debate and gripped by misunderstandings of what was happening. The August 19, 1991 coup against Gorbachev by the leaders of the political, military and security services marked the last gasp of the dying system, an attempt to stop a process of disintegration already gone too far. Yeltsin's visible resistance and cooptation of key military units blocked the coup, freed Gorbachev from house arrest, and completely marginalized him, as Yeltsin, recently democratically elected President of the newly proclaimed autonomous Russian Federation, seized the mantle of leadership and proclaimed Russia's turn from socialism toward a normal European society and market economy. Meeting with the leaders of the other two large slavic Soviet socialist republics – Ukraine and Belarus – in Belovezhsk outside Minsk, Yeltsin joined them in dissolving the USSR and forming a new, post-Soviet Commonwealth of Independent States which was in short order joined by most of the other former Soviet republics, all of which had declared national independence from the Soviet Union.

Each of the fifteen new former Soviet states inherited a piece of the crumbling command economy, and each had its economic capabilities and activities further disrupted by the breaking of (planned) "chains" of supply and demand, as new national borders arose between suppliers and users and economic agents pursued new opportunities at the cost of old relations. Further, each was faced with the unprecedented task of building a market economy, with its myriad formal and informal institutions and culture of interaction, on the ruins of a system that had systematically attacked, and largely destroyed, all aspects of modern markets. Thus each was plunged into a deep "transitional" recession/depression without the economic institutions to deal with it. The great experiment, brought to an end by the demise of the Soviet Union, ended as tragedy for the peoples on which it had been carried out. It also posed on-going challenges for economists to understand how to resolve the problem of building successful market economies, not just in a development context, but in the face of surviving economic structures, institutions and understandings that are hostile to, and destructive of true market development. But that is a story for the twenty-first century.

Notes

1 The post-war development literature to the mid 1960s is full of praise for Soviet economic "achievements" and the Soviet model of economic development. See Wilber (1969), Spulber (1964), and Dodge and Wilber (1970).

2 Samuelson's textbook, *Economics*, in its fourth through seventh editions pointed to the advantages of Soviet economic planning. John Kenneth Galbraith's (1967) influential monograph was a leading voice in advocating this development.

3 A vast literature arose on decentralized, information/communication efficient procedures for planning that maintained central control over the economy. See Heal (1986) for a survey.

4 This is most vividly illustrated in the discussions of plan allocations, their implementation, and incentives for plan performance in Nove (1986).

5 Informal "institutions" and patterns of behavior of those forced to live within these institutions, of course, softened the impact of the command logic and structures, allowing corruption and a "second economy" to aid in managing the impossible central planning and coordination tasks required to truly implement a command economy.

6 As experience had shown that, outside of emergency war-time rationing, the direct planning of consumption allocations was an impossible task, money was given a limited "active" role in the *ex post* implementation of planned allocations of consumers' goods and services.

7 Ericson (2006) develops the threat of "active" money to the proper functioning of the command economy.

8 The "second economy" involved privately motivated and/or illegal economic activity that fed off the irrationalities of the "first" (centrally planned and administered) economy. It fed off arbitrage opportunities, production and trade opportunities created by inconsistencies/gaps in the plan, and by the inability of money and prices to play an active role in allocating resources. It thrived on theft, bribery, and the entrepreneurial seizing of opportunities created by the economic irrationalities of the planned system. It increasingly over time reallocated resources, goods and services, and created (largely hidden) pools of wealth, undermining both the functioning and the legitimacy of the "planned" economic system. See the discussions in Grossman (1977) and Alexeev (2008).

9 For a detailed discussion of how reforms inconsistent with these characteristics were undermined and reversed, see Kontorovich (1988) on the Kosygin reforms and his broader analysis in Kontorovich (2008).
10 The logic behind this is clearly laid out in Grossman (1963).
11 See Rowen and Wolf (1990).
12 See Amman, Cooper and Davies (1977).
13 The classic summary description is in Grossman (1977).
14 Bergson calculated growth in 1937 constant prices. Soviet calculations using 1926–27 constant prices showed 3.86 and 7.68 fold growth to 1937 and 1950 respectively, exploiting the Laspeyres index distortion (Gerschenkron Effect). See Ofer (1987).
15 Nove (1992). For a recent study see Kibita (2011).
16 This was particularly clear in the increasingly wasteful use of capital, evidenced (Table 28.1) by its negative productivity growth since the mid 1960s, dragging total factor productivity growth below zero from the mid 1970s.
17 Visitors to the Soviet Union at the time all noted a deep cynicism and resignation about future stagnation, in particular among the *intelligentsia*. See, for example, Smith (1984).
18 This was smuggled out of the Soviet Union and presented to the West by Phil Hanson (1984).
19 In the words of Andrei Gromyko, Soviet foreign minister and senior Politburo member, when nominating Gorbachev to be selected General Secretary of the CPSU.
20 Gorbachev (1987), especially section 3 of Chapter 2.
21 These sectors were to be the engine of acceleration by dramatically increasing the quality and technological level of equipment and machinery produced for use in these and in the other sectors of the economy, thereby drastically raising productivity and growth rates throughout the economy. For a thorough analysis, see the papers in Joint Economic Committee, U.S. Congress, 1987, *Gorbachev's Economic Plans,* Part I, The Agenda of Economic Change, pp. 1–121, especially Stanley H. Cohen, "Soviet Intensive Economic Development Strategy in Perspective," pp. 10–21.
22 See Ellman and Kontorovich (1998) for thorough discussion.
23 The *Osnovnye napravleniia* [Basic provisions] and the Law on State Enterprise were approved at the Plenum. Ten basic implementing decrees were promulgated July 17, 1987, codifying Gorbachev's vision of a Socialist Market Economy. See Ericson (1989).
24 The non-market monetary system (Garvy 1977) lacked the ability to control high-powered money, while automatically financing any planned expenditures.
25 See the discussion in Krueger (1993).
26 See Volkov (2002).
27 From the beginning, Politburo member Egor Ligachev led opposition to *perestroika* in the party, while the most vocal public statement of Stalinist nostalgia came at the beginning of this debate from a chemistry teacher Nina Andreeva in the newspaper, *Sovetskaia Rossiia,* March 13, 1988.
28 See Åslund (1991) for the details of the Soviet economic debates of the period.
29 A descriptive term introduced by Gorbachev at the January (1987) Plenum of the CPSU.
30 See the compendium of scholarly papers by leading Western experts in Joint Economic Committee (1982) and the Bergson and Levine (1983) conference volume with papers by leading Sovietologists arguing the stability and likely longevity of the Soviet economic system, despite its myriad problems.
31 See his address to the world on Soviet new thinking, Gorbachev (1987).
32 See Kontorovich (1988: 313–14) and Litwack (1991: 264).

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